

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
POST UNIVERSITY DIRECT ENTRY SCREENING
SATURDAY 18TH SEPTEMBER, 2010; 9.00AM

Time allowed: 1h 15min

INSTRUCTIONS

Read the following instructions carefully:

1. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
2. Candidates are to shade the **Question Paper Type** given to them in the appropriate space on **the Answer Sheet**.
3. Write your JAMB Registration number at the top of page 1 of your Question Papers.
4. **Attempt all questions.**
5. The use of calculators and/or similar electronic devices is **NOT** allowed.

SECTION A: ENGLISH

Read the following passage and answer the questions that follow:

That the Nigerian nation is reeling under the weight of iniquities, the foundation of which was laid by military misrule represented by Military Heads of State and their Civilian collaborators will not enjoy respite, was confirmed by the recent exposure of financial impropriety, fiscal rascality and squander mania pulsating the National Assembly.

Eleven years into Civilian Rule, we agree that no magical transformation can rid our present situation of affairs completely free of the dirty past, but one was expecting that lessons ought to have been learnt. The present leadership ought to have mended their ways and should have abandoned and jettisoned the rottenness, greed, irresponsible behaviour and large scale looting of the past. However, as the leopard can never change its spots our worst fears are confirmed by the scary findings indicating that Nigeria very much remains the erstwhile corrupt nation.

1. The word "*reeling*" in the passage means
(a) Failing (b) staggering (c) moving with unsteady steps (d) moving
2. The word foundation in the passage implies that the so-called ills are
(a) entrenched (b) salutary (c) accidental (d) outcome of nefarious system
3. "*Collaborators*" in the passage are
(a) Partners in victory (b) co-sinners (c) perpetrators (d) unintended masters
4. Enjoy respite as used in the passage means
(a) know peace (b) have recreation (c) enjoy oneself (d) have respect
5. The word "*pulsating*" in the passage means
(a) shaking (b) rocking (c) reverberating (d) causing upheavals
6. The intention of the writer of this passage may best be described as (a) vituperative (b) corrective (c) washing the Nigerian dirty linen in public (d) restorative
7. "*The leopard can never change its spots*" implies that corruption is
(a) endemic (b) a passing phase (c) part of national growth (d) accidental occurrence

8. "Scary findings" in the passage does not imply one of the following
(a) frightful discoveries (b) frightful outcomes (c) fearful findings (d) unsettling findings

Choose the option that provides the correct answer to the questions in this section

9. Many politicians in Nigeria are concerned more with illegal.....of wealth
(a) accumulation (b) acumulation (c) accumination (d) accummulation
10. Raining season comes with.....
(a) catarrh (b) catter (c) cattarrh (d) cartarh
11. School facilities deteriorate because of lack of.....
(a) maintainance (b) maintenance (c) mentainance (d) mentenance
12. The army ran out of.....
(a) arm and ammunities (b) arms and ammunities (c) arms and ammunition (d) arm and ammunition
13. We promised to make.....
(a) amend (b) ammends (c) ammend (d) amends
14. As a former female student of the University of Benin, Amina is an.....of the university.
(a) alumnus (b) alumni (c) alumna (d) alumina
15. The criminal's room is redolent.....Marijuana all the time.
(a) for (b) of (c) by (d) in
16. Lecturers Egbe and Braimoh have become.....
(a) Notary public (b) Notaries publics (c) Notaries public (d) Notary publics

Choose the option which is nearest in meaning to the underlined word or words

17. I gather from his appearance that he did not sleep at all last night (a) conclude (b) accept (c) interpret (d) imply
18. Mary was skeptical about the story her brother had told her (a) ignorant (b) uncertain (c) doubtful (d) confused
19. John said that the car belongs to his old flame
(a) his father's (b) his grandfather's (c) his former classmates (d) his former lover
20. Passuma ran with the hare and hunted with the hounds in the misunderstanding between Ejiro and Oke
(a) was insincere (b) was very fair to both sides (c) criticized both seriously (d) saw clearly what caused the misunderstanding
21. Ngozi played the Man Friday in the quarrel that ensued between Musa and Yemisi
(a) Ngozi supported Musa (b) betrayed Musa (c) was fair to both parties (d) prayed before intervening
22. Patrick is putty in Lindas's hands implies that Patrick is
(a) Too tough for Linda to handle (b) too unpredictable to Linda (c) is easily influenced by Linda
(d) loves Linda dearly

Choose the correct option in the following questions

23. A sentence can be divided into two parts.....and-----
(a) Predicate/subject (b) slaoonce/element (c) adverb/ component (d) subject/complement

24. The name *Lagos* is a.....noun.
 (a) Common (b) proper (c) countless (d) mass
25. The pronoun *we* is
 (a) 1st person singular (b) 3rd person singular (c) 3rd person plural (d) 1st person plural
26. A red-letter day implies
 (a) a day to be remembered for good (b) a day to be remembered for evil (c) a day the town is to be painted red
 (d) none of the above
27. A highly strung person is one that is
 (a) tied with many strings (b) very sensitive (c) is not easily upset (d) nervous and easily upset
28. On arriving home with his new purchase, Emmanuel found out that he had bought a pig in a poke.
 This suggests that Emmanuel
 (a) bought at the best value available (b) bought something he did not see (c) bought a pig instead of what he needed
 (d) bought something different from his need
29. Burning the candle at both ends implies
 (a) expending energy in one direction (b) going to work early everyday
 (c) dissipating energy in all directions (d) doing many things at the same time
30. Withdrawal at this stage of the screening exercise will amount to a loss of face. This suggests
 (a) taking a patriotic decision (b) a humiliating act (c) an unconditional surrender (d) a fatal mistake

SECTION B: GENERAL PAPER (LAW AND ARTS)

Choose the correct option in the following questions.

1. The historical Benin massacre took place in the year (a) 1897 (b) 1879 (c) 1914 (d) 1941
2. Who among the following is popularly referred to as the founder of modern Nigeria?
 (a) Lord Lugard (b) Bishop Ajayi Crowther (c) Dr Nnamdi Azikiwe (d) Tullman Goldie
3. The body that played the king make in the old Oyo Empire was the
 (a) Elders council (b) Hare Chiefs (c) Oyomesi council of chiefs (d) Afonja
4. In which year was the Niger Coast protectorate made the protectorate of southern Nigeria?
 (a) 1900 (b) 1914 (c) 1952 (d) 1817
5. The Royal Niger Company was founded by
 (a) James Robertson (b) Sir Arthur Richards (c) Sir Tullman Goldie (d) Sir Margery Perham
6. The title of the King of Borno before the 19th century was (a) Oba (b) Shehu (c) Mai (d) Sultan
7. Burkina Faso was formerly known as
 (a) Upper volta (b) Burkin bay (c) Burkina (d) Upper Niger
8. The current Vice-Chancellor of the University of Benin is
 (a) Professor A. A. Oshodin (b) Prof. O. G. Oshodin (c) Professor O. G. Oshodi (d) Proffessor O. G. Oshodin
9. Lagos, Nigeria became a crown colony in (a) 1861 (b) 1866 (c) 1914 (d) 1992
10. For territorial purposes, South Eastern Nigeria is replete with one of the following (a) autonomous communities
 (b) autologous divisions (c) age grade systems (d) vertical honours list
11. The trans-atlantic slave trade was abolished in all British territories in (a) 1804 (b) 1807 (c) 1914 (d) 1900

12. The longest dynasty in African history is the
(a) Seifawa dynasty (b) Olu dynasty (c) Kosoko dynasty (d) EI-Kanemi dynasty
13. Achebe's *Things Fall Apart* was written in reaction to
(a) Joyce Carrie's *Mister Johnson* (b) William Wordsworth's *Daffodils* (c) John Milton's *Paradise Lost*
(d) Charles Dicken's *Oliver Twist*
14. The title of the German translation of Achebe's *Things Fall Apart* is?
(a) Chinua (b) Achebe (c) Okonkwo (d) Acheben
15. A narrator in a prose who is also a character is known as (a) Flat character (b) Round character
(c) Omniscient character (d) Subjective narrator
16. A long heroic poem addressed to objects, animals or persons is known as (a) elegy (b) lullaby (c) epic (d) lyric
17. An introductory speech made at the beginning of a play is? (a) pun (b) plot (c) epilogue (d) prologue
18. The darkest of all shakespeare's tragedies is
(a) Romeo and Juliet (b) Hamlet (c) The Tempest (d) Macbeth
19. *Clouds come hurrying with the wind* is an example of
(a) hyperbole (b) metaphor (c) synecdoche (d) personification
20. *As jagged blinding flashes rumble, tremble and crack.....*The dominant device used in these Tmesis
(b) synecdoche (b) metaphor (c) metonymy (d) onomatopoeia

Questions 21 - 23 are based on J.P. Clark's Agbor Dancer

21. The subject matter of this poem is
(a) the value of African culture (b) the dancing drum (c) the dancer in a trance (d) ancestral lineage
22. *Fresh Foilage* in the poem is an example of
(a) alliteration (b) metaphor (c) oxymoron (d) pun
23. *Warm caress* as used in the poem depicts
(a) hatred (b) violence (c) love (d) friendship

Questions 24 - 26 are based on Robert Bolt's A Man for all Seasons

24. In the play, Thomas Moore is
(a) a round character (b) a round and flat character (c) a flat character (d) a cylindrical character
25. The setting of the play is in
(a) America (b) Asia (c) England (d) Canada
26. At the initial time, King Henry defies the church to marry
(a) Anne Boleyn (b) Queen Catherine (c) princess Anne (d) Queen Anie
27. The tower of babel signified man's attempt to
(a) be like God (b) reach Heaven (c) oppose God (d) make a name for himself
28. Who among these was commonly referred to as the mother of Israel? (a) Jezebel (b) Deborah (c) Esther (d) Ruth
29. The Christian Association of Nigeria (CAN) was established in (a) 1930 (b) 1980 (c) 1976 (d) 1924
30. The real name of Mother Theresa is
(a) Mary Gonxa (b) Agnes Gonxa Bgaxhin (c) Mary Slessor (d) Florence Nightingale
31. Paul in his letter to the Galatians, says Christians become sons of God by
(a) adoption (b) baptism (c) circumcision (d) deeds of mercy

32. Another name for Tabitha who was raised from the dead was (a) Joanne (b) Dorcas (c) Areneas (d) Naomi
33. *Would put my law within them and I will write it upon their hearts....* This statement was made by prophet (a) Jeremiah (b) Amos (c) Ezekiel (d) Hosea
34. In a proportionate drawing of the human body, what could be used as the standard unit of measure? (a) head (b) pencil (c) ruler (d) finger
35. Which of these is a good example of a three dimensional art? (a) relief carving (b) wall painting (c) a portrait on canvas (d) bronze statue
36. If a tie-dye fabric is to be combined with a lino cut print the..... (a) light colours on the fabric are applied last (b) lino cut is tied to the fabric (c) lino cut printing comes first (d) lino cut printing comes last
37. The foreigner who helped to bring the Osun Oshogbo festival to limelight is called (a) KenactC. Mary (b) H.E. Duckworth (c) Suzanne Wanger (d) U. U. Beier
38. The father of Art Education in Nigeria is (a) Aina Onubolu (b) Jimi Sholanke (c) Solomon Wangboje (d) YusufGrillo
39. What did the Egyptians find difficult to represent in art? (a) profile (b) perspective (c) human face (d) their gods
40. The art work Bida, Nigeria is famous for is? (a) Brass and Beads making (b) Bronze casting (c) Terracotta works (d) Ivory works

SECTION B: GENERAL PAPER (MANAGEMENT AND SOCIAL SCIENCES)

Choose the correct option in the following questions.

1. One of the following advocated the concept of sovereignty to garner support for the King of France (a) Thomas Hobbes (b) John Austin (c) Jean Jacques (d) Jean Bodin
2. Which of the under listed constitutional principles guarantees the right of every citizen from undue detention and imprisonment by law enforcement agencies? (a) the bill of rights (b) act of settlement (c) fundamental human rights (d) the Habeas corpus
3. One of the under listed is not necessarily a characteristic of the state (a) population (b) territorial waters (c) sovereignty (d) government
4. Indirect democracy also refers to (a) Athenian democracy (b) majority rule (c) Greek democracy (d) representative democracy
5. Which of the following constitutions was the first to declare Nigeria as a federation (a) Arthur Richards (b) John Macpherson (c) Oliver Lyttleton (d) Hugh Clifford
6. The term stratocracy is also used to refer to (a) rule by statement (b) government of technocrats (c) military rule (d) rule of the rich
7. In parliamentary system of government, the majority leader of the ruling party in parliament is also the (a) Chief whip (b) National leader of the party (c) Prime Minister (d) Defence Minister
8. The term Legal-Rational Authority was coined by (a) Adam Smith (b) Max Weber (c) Karl Marx (d) John Austin
9. The Nigerian National Assembly is made up of.....elected representatives (a) 360 (b) 396 (c) 380 (d) 469

10. The first member state of the Commonwealth of nations to become a republic is
(a) India (b) Cyprus (c) Ghana (d) Nigeria
11. In geography, the term *geoid* means
(a) round (b) earth shaped (c) circular (d) pear shaped
12. Our planetary system is made up of
(a) the earth, moon and sun (b) the milky way (c) nine planets and the sun
(d) all stars that are visible at night
13. The following planets orbit the sun in anticlockwise direction except
(a) Earth (b) Pluto (c) Uranus (d) Mars
14. Which of the following is not a fold mountain
(a) Atlas mountain (b) Himalayas mountain (c) Andes mountain (d) Vosges mountain
15. Spring equinox occurs on
(a) March 20th (b) December 22nd (c) June 21st (d) March 21st
16. Calculate the distance in kilometers between Lagos, Nigeria (Lat 6°N) and Cape town, South Africa (Lat 35°S) (a) 4500Km (b) 4551Km (c) 7820Km (d) 3219Km
17. The innermost layer of the earth is made up of the following minerals
(a) Silica and Magnesium (b) Nickel and Silica (c) Nickel and Iron (d) Silica and Aluminium
18. The largest ocean in the world is the
(a) Atlantic ocean (b) Indian ocean (c) Arctic ocean (d) Pacific ocean
19. All the following except one bathe the eastern coast of continents
(a) California current (b) Kuro-sino current (c) Alghas current (d) Cuyene current
20. The line joining places of equal sunshine is called (a) Isobar (b) Isotherm (c) Isoshine (d) Isohel
21. When a fall in the price of good "A" causes a fall in the demand for good "B", the two goods are said to be
(a) composite (b) substitutes (c) jointly demanded (d) derived demand
22. The relationship between substitute goods in cross elasticity is
(a) constant (b) positive (c) negative (d) zero
23. When elasticity is zero, the demand curve is
(a) Perfectly elastic (b) perfectly inelastic (c) fairly elastic (d) fairly inelastic
24. A characteristic of debenture is that
(a) It has no redemption date (b) interest is indeterminate (c) its yield is based on profits
(d) its yield is a fixed rate of interest
25. The most important characteristic of money is
(a) portability (b) durability (c) acceptability (d) scarcity
26. Fiduciary issue is considered to be
(a) Judiciary issue (b) the issue of notes backed by gold (c) the issue of notes not backed by gold
(d) the issue of notes by the London Goldsmiths
27. The international Day of Democracy is observed globally on
(a) 15th September (b) 1st October (c) 13th September (d) 18th October

28. Which of the following is a direct tax?
(a) surtax (b) sales tax (c) purchase tax (d) value-added-tax (VAT)
29. It has been statistically proven that in Nigeria that there is
(a) marginal propensity to save is high (b) marginal propensity to invest is high
(c) marginal propensity to consume is high (d) productivity is high
30. Which of the following defined Economics as a study of mankind in the ordinary business of life, earning and enjoying a living? (a) A.C. Pigou (b) Lionel Robbins (c) Alfred Marshal (d) John S. Mill
31. Simplify $\log_6 + \log_2 - \log_{12}$ (a) 0 (b) -1 (c) 1 (d) 4
32. Which of the following is not a measure of dispersion?
(a) mode (b) mean deviation (c) range (d) standard deviation
33. Solve the equation $m/3 + 1/2 = 3/4 + m/4$ (a) -3 (b) -2 (c) 2 (d) 3
34. A group of 10 numbers has a mean of 36 and a second group of 16 numbers has mean of 20. Find the mean of the combined group of 26.
(a) 27.15 (b) 28.15 (c) 24.15 (d) 26.15
35. Opportunity cost is the same as
(a) social cost (b) real cost (c) marginal cost (d) circulating cost
36. Given the values 2,4,6 and 8, what is the standard deviation?
(a) 3 (b) 5 (c) 4 (d) 12
37. Given the values 2,4,6 and 8, what is the variance?
(a) 16 (b) 9 (c) 25 (d) 144
38. A system whereby an employee changes both his occupation and industry is an example of mobility. (a) vertical (b) horizontal (c) occupational (d) geographical
39. Under production possibility curve, more of one commodity can be produced through
(a) factor reallocation (b) factor reduction (c) increase in available resources (d) marginal cost
40. If the population of a country is low and the Gross National Product is high, the per capita income will be
(a) average (b) low (c) high (d) unitary

SECTION B: GENERAL PAPER (BIOLOGICAL SCIENCES)

Choose the correct option in the following questions.

1. The study of detailed structure of tissues making up a particular organ is referred to as
(a) cytology (b) palaeo botany (c) entomology (d) histology
2. Which of these is an experimental animal used by Gregor Mendel
(a) *Periplaneta americana* (b) *Drosophila melanogaster* (c) *Agama agama* (d) *Homo sapiens*
3. Mycology is the study of (a) algae (b) fungi (c) viruses (d) lichens
4. Mitosis occurs in
(a) Somatic cells (b) reproductive cells (c) gametes (d) sex cells
5. The exchange of genetic materials during meiosis is referred to as
(a) reduction (b) pairing (c) synapsis (d) crossing over
6. Which of the following natural resources is not renewable?
(a) water (b) coal (c) sunlight (d) soil

7. Which of these is not a fish?
(a) tilapia (b) starfish (c) mackerel (d) salmon
8. Which of these classes of Arthropods lacks antenna
(a) arachnida (b) insecta (c) myriapida (d) crustacean
9. One of these is an echinoderm
(a) mussel (b) cyclops (c) sea urchin (d) octopus
10. Which of these is a tissue
(a) saliva (b) blood (c) heart (d) lung
11. In testing a leaf for starch, the leaf is boiled in alcohol to
(a) Change the colour to blue-black (b) remove all traces of chlorophyll (c) burst open and release the starch
(d) inactivate the enzymes
12. Which of these is a respiratory surface?
(a) gill filament (b) gill raker (c) nephridium (d) flame cells
13. A directional response to a unidirectional stimulus is referred to as
(a) taxis (b) natisms (c) tropism (d) growth movement
14. Which of the castes of termites is blind?
(a) soldier (b) worker (c) queen (d) king
15. The virus that lives in fungi is referred to as
(a) Human Immuno Virus (b) Retrovirus (c) mycophage (d) bacteriophage
16. One of the economic importances of micro-organisms is to
(a) cause disease (b) exist as unicellular organism (c) form part of living organisms (d) form part of the ecosystem
17. Which of these is a non-living thing?
(a) Agaricus (b) Zygnema (c) Diatom (d) Virus
18. In herbivorous dentition the space that separates incisors from premolars is called
(a) rumen (b) diastema (c) chyme (d) chyle
19. The development of an offspring in animals without fertilization is referred to as
(a) parthenocanpy (b) parthenogenesis (c) oogenesis (d) spermatogenesis
20. The alkynes have the general formula
(a) C_nH_{2n-1} (b) C_nH_{2n-2} (c) C_nH_{2n} (d) C_nH_{2n+2}
21. Naturally occurring radioactive substances are known to emit
(a) α , β and γ rays (b) nucleon and protons (c) Positron (d) all of the above
22. The strength of a base is determined by the extent to which it....in aqueous solution to yield hydroxyl ions.
(a) associates (b) dissolves (c) dissociates (d) agglomerates
23. One of the following compounds is formed by SP^2 hybridization
(a) ethyne (b) ethane (c) butane (d) ethene
24. The empirical equation which describes the temperature dependence of the rate constant is
(a) Arrhenius (b) Boyles (c) Gay Lussac (d) Kassac's
25. Which of the isotopes of hydrogen is radioactive? (a) Deuterium (b) Tritium (c) Protium (d) Hydrogen

26. One of the following metals is highest in the activity series
(a) sodium (b) calcium (c) aluminium (d) potassium
27. The strength of an acid is determined by the efficiency with which it acts as
(a) electron donor (b) electron acceptor (c) proton donor (d) proton acceptor
28. The rate of diffusion of a gas is inversely proportional to the square root of its
(a) volume (b) molar mass (c) density (d) weight
29. Calculate the P^H of a 0.56mol dm^{-3} aqueous solution of potassium hydroxide
(a) 10 (b) 13.75 (c) 8.2 (d) 7.8
30. The electronic configuration (atomic number) of sodium is given by
(a) $1S^2 2P^6 3S^2 2P^1$ (b) $1S^2 2P^2 2P^2 3S^1$ (c) $2S^2 2P^6 3S^2 3P^1$ (d) $1S^2 2P^4 2S^3 3S^2$
31. The agricultural practice of planting crops and trees is referred to as
(a) deforestation (b) monoculture (c) crop rotation (d) agroforestation
32. Which of these is a denitrifying bacterium
(a) Azotobacter (b) Clostridium (c) Rhizobium (d) Escherichia coli
33. A car travels at an average speed of 100Km/h . What distance does it cover in 5 minutes?
(a) 25 Km (b) 16 Km (c) 82 Km (d) 8.3 Km
34. The following are derived quantities except (a) Density (b) velocity (c) mass (d) force
35. Which of the following is a fundamental quantity? (a) length (b) area (c) velocity (d) acceleration
36. A solid of mass 8Kg slides 0.10m down a surface inclined at 30° to the surface
Calculate the work done by the solid (a) 8J (b) 6J (c) 2J (d) 4J
37. From what surface does radiation occur most rapidly?
(a) green surface (b) white surface (c) dull black surface (d) blue, black surface
38. Replenishing soil nutrients involves one of the following
(a) leaching (b) cover cropping (c) bush burning (d) overgrazing
39. Simplify $\log 6 + \log 2 - \log 12$ (a) 0 (b) -1 (c) 1 (d) 4
40. Find the area of a rectangular 18-sided polygon with side 2cm (take $\tan 10^\circ = 0.176$)
(a) 1022.28cm^2 (b) 102.228cm^2 (c) 10222.8cm^2 (d) 10.2228cm^2

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DIRECT ENTRY SCREENING EXERCISE FOR 2011/2012 SESSION
SATURDAY 15th OCTOBER, 2011 9.00AM

Time allowed 1Hr 15mins

INSTRUCTIONS

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1. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
2. Candidates should indicate **the Question Paper Type** given to them in the appropriate space in the **Answer Sheet**
3. Write your **JAMB** Registration number on the Question Paper in the space provided at the top of page 1.
4. The use of calculators and/or similar electronic devices is **NOT** allowed

SECTION A : ENGLISH

Read the following passage carefully and answer the questions that follow.

Anyone who trains animals recognizes that human and animal perception capacities are different. For most human, seeing is believing, although we do occasionally brood about whether we can believe our eyes. The other senses are largely ancillary; most of us do not know how we might go about either doubting or believing our noses. But for dogs, scenting is believing. A dog's nose is to ours as the wrinkled surface of our complex brain is to the surface of an egg. A dog who did comparative psychology might easily worry about our consciousness or lack thereof, just as we worry about the consciousness of a squid.

We who take sight for granted can draw pictures of scent, but we have no language for doing it the other way about, no way to represent something virtually familiar by means of actual scent. Most humans cannot know, with their limited noses, what they can imagine about being deaf, blind, mute, or paralyzed. The sighted can, for example, speak of a blind person as "in the darkness", but there is no corollary expression for what it is that we in relationship to scent. If we tried to coin words, we might come up with something like "scent-blind." But what would it mean? It couldn't have the sort of meaning that "colour-blind" and "tone-deaf" do, because most of us have expressed what "tone" and "colour" means in those expressions, but we don't know what "scent" means in the expression "scent blind." Scent for many of us can be only a theoretical, technical expression that we use because our grammar required that we have a noun to go in the sentences we are prompted to utter about animals' tracking. We don't have a sense of scent. What we do have is sense of smell.

So if Fido and I are sitting on a terrace, admiring the view, we inhabit worlds with radically different principles of phenomenology say that the wind is to our backs. Our world lies all before us, within a 180 degree angle. The dog's – well, we don't know, do we?

1. The phrase, " other senses are largely ancillary" is used by the author to suggest that
 - (a) Only events experienced directly can be appreciated by the senses.
 - (b) For many humans the sense of sight is the primary means of knowing about the world
 - (c) Smell is in many respects more powerful than sight.
 - (d) The perceptual capacity of a human is a function of its ability to integrate all of its senses
2. The missing phrase in the incomplete sentence
The dog's ----- well, we don't know, do we? refers to
 - (a) Colour blindness
 - (b) depth perception
 - (c) perception of the world
 - (d) concern for our perception

3. "A dog who did comparative psychology...." This expression can be described as
 (a) satirical (b) metaphysical (c) superstitious (d) metaphorical
4. From the passage the writer seems to imply that the expression "scent blind" is
 (a) comparative (b) anomalous (c) innocuous (d) ambiguous
5. Which of the following is true according to the passage
 (a) certain well-trained dogs can understand comparative psychology (b) human noses are grossly underdeveloped
 (c) the human brain is complex and has wrinkled surface (d) the description of human perception is problematic

Select the best option (from A-D) to complete each of the following sentences

6. I 've just heard the news that two of our students ----- kidnapped (a) are being (b) had been (c) being (d) have been
7. Tade ----- his clothes out to dry (a) hanged (b) has hung (c) have hung (d) has hanged
8. I can vouch for his honesty; I have always found him ----- and carefully observant of the truth.
 (a) Plausible (b) volatile (c) veracious (d) arbitrary
9. Perhaps because he feels ----- by an excess of parental restrictions and rules, at adolescence the repressed child may break out dramatically (a) nurtured (b) confined (c) librated (d) fascinated.

Choose the word that has a different Stress Pattern from the others

10. (a) result (b) ratify (c) taxi (d) famous
11. (a) ability (b) revivalist (c) quadruplicate (d) registration
12. (a) comment (b) workshop (c) technique (d) caution
13. (a) candidate (b) calculate (c) interesting (d) concerted

Choose the option which is nearest in meaning to the sentences in each of the following questions.

14. We visited the home of one boy. That's the boy I mean.
 (a) That's the boy whom we visited his home (b) That's the boy whose home we visited
 (c) That's the boy to whose home we visited (d) That's the boy whom we visited the home.
15. The dog was limping. It appeared that one of its legs might have been injured
 (a) The dog was limping as if it had an injured leg (b) The dog was limping as it had an injured leg (c) The dog was limping so it had an injured leg (d) The dog was limping so as it had an injured leg
16. I can walk that distance and have done so many times
 (a) I am used to walk that distance (b) I used to walk that distance (c) I used to walking that distance
 (d) I am used to walking that distance
17. For all he cared, his parents might have been dead for years. (a) Although concerned about his parents, he had been unable to find out if they were alive. (b) He cared for no-one except his parents, and it was possible that they had died long before (c) He did not care whether his parents were alive or had died long before (d) He was concerned about everyone, not just about his parents who might have died long before

Choose the option which is opposite in meaning to the word or phrase in italics

18. The string was *taut* (a) stretched (b) loose (c) firm (d) tight
19. The diminutive figure bounces over the track with *unfathomable* lightness
 (a) irresistibility (b) predictable (c) invigorating (d) impressive
20. The teacher announced that the class would be making a *fleeting* visit to the Zoo
 (a) long (b) routine (c) brief (d) guided

21. We intend to make the reception a *diurnal* event. (a) an annual (b) a weekly (c) a nightly (d) a short
22. The permanent Secretary left his job *under a cloud*
(a) with a clear record (b) on a sunny day (c) in disgrace (d) on a cloudy day
23. It is surprising that this politician has now turned *renegade* (a) militant (b) loyal (c) quiet (d) corrupt
24. Some equatorial areas have a *sultry* climate. (a) A temperate (b) An inclement (c) A stable (d) A hot
25. Updating the Board's brochure is an *arduous* task (a) An annual (b) An easy (c) A regular (d) a difficult
26. Ali wondered why the principal was *ambivalent* about the students' future.
(a) Decisive (b) inconsiderate (c) Anxious (d) Ambitious
27. The journalist's write-up contained a *plethora* of detail (a) Simplicity (b) Spectrum (c) Shortage (d)

Complexity

Choose the option nearest in meaning to the word or phrase in italics

28. The presence of the captain makes the sailors *ill at ease* (a) sickly (b) impatient (c) easily ill (d) uncomfortable
29. Okonkwo manages his household with a *heavy hand* (a) like a heavyweight champion (b) like a powerful dictator (c) using the cane on every occasion (d) without tolerating weaknesses
30. Ibro shows enough *liberality* with his meager income (a) prodigality (b) insensitivity (c) generosity (d) frugality
31. The press described the efforts of the government in *pejorative* terms
(a) contemptible (b) critical (c) superlative (d) palpable
32. The witness provided a *monstrous* account of the event. (a) supportive (b) tragic (c) shocking (d) verbatim
33. Adamu is rather *meddlesome* in dealing with his friends (a) impertinent (b) intimidating (c) quarrelsome (d) uncaring
34. After the meeting I read a *leer* on his face as he looked at the woman.
(a) satisfying meaning (b) bad look (c) pleasant disposition (d) poor smile
35. The judge emphasized his *morbid* desires in his judgment
(a) inordinate (b) uncritical (c) ravenous (d) unpleasant
36. The recommended novel has a *convoluted* theme.
(a) a simple (b) an attractive (c) a disgusting (d) a complicated

Choose the option that best completes the gap(s)

37. They ----- wet if they had gone out in the rain (a) would get (b) would have got (c) will have got (d) had got
38. When I came in , I ----- (a) laid on the floor (b) lie on the floor (c) lain on the floor (d) lay on the floor
39. Either the teacher or the students ----- to blame (a) is (b) are (c) has being (d) are being
40. You should anticipate and prepare for changes ----- in your office.
(a) that has taken place (b) which takes place (c) taking place (d) that would take place
41. The scholar examined ----- of the subject.
(a) three a part analysis (b) a part-three analysis (c) a three-part analysis (d) three part analysis

SECTION B : GENERAL PAPER (ARTS AND LAW)

1. The expression "He is a living dead" is an example of ---- (a) oxymoron (b) imagery (c) antithesis (d) personification
2. Romantic poetry normally deals with (a) love (b) conquest (c) nature (d) hatred

3. Oh! The painful memories of yesterday!
 Oh! The bitter agony of today!
 In spite of your haughty looks ---
 Still hope springs alive in me
 For life is but a phase!
 The mood of the speaker is that of (a) Joy (b) Sadness (c) Pain (d) Hope
4. "If winter comes, can spring be far behind?" (Shelley, "Ode to the west wind".)
 The literary device used here is ----- (a) a poetic license (b) an apostrophe (c) rhetoric (d) an allegory
5. Identify the odd literary device from the options below ----- (a) enjambment (b) alliteration (c) rhyme (d) plot
6. A protagonist who has a disastrous end is a ---- (a) tragic hero (b) flat character (c) round character (d) Comic character
7. "I listened as the car screeched and squelched its tyres on the road and mangy dogs roared and howled before I took another step". The dominant device in the above extract is
 (a) Onomatopoeia (b) Oxymoron (c) enjambment (d) Pun
8. Pun as a literary device deals with -----
 (a) arrangement of words (b) Playing on words (c) placing two opposite phrases (d) placing words side by side
9. When youth and blood are warmer
 Time still succeed the former
 That age is best which is the first
 But being spent, the worse, the worst
 The rhyme scheme in the above extract is ----- (a) aabb (b) abab (c) abba (d) bbaa
10. The denouement of a play or story is also the same as its -----
 (a) climax (b) resolution (c) catharsis (d) conflict
11. Which of the following terms is exclusive to drama? ----- (a) Dialogue (b) plot (c) Protagonist (d) soliloquy
12. The arrangement of incidents in a story is called ----- (a) plot (b) theme (c) arrangement (d) incidents
13. Pick out the odd item. (a) The Man Died (b) Anthills of the Savannah (c) The concubine (d) Another Raft
14. When a literary piece of writing is said to be a verisimilitude, it means that the story is -----
 (a) not true to life (b) accessible (c) not accessible (d) true to life
15. What narrative technique is used by the author of an autobiographical?
 (a) second person (b) omniscient (c) third person (d) first person
16. The feeling and attitude of a writer are conveyed through ----- (a) style (b) tone (c) theme (d) setting
17. The title of the king of ancient Kanem-Borno Empire was the (a) Oba (b) Shehu (c) Mai (d) Sarki
18. Which of the following sources of history is most reliable in historical documentation?
 (a) Oral tradition (b) Written documents (c) Myths (d) Legends
19. The state of Katsina, Kano and Sokoto are located in the ----- geographical zone of Nigeria
 (a) Sudan savannah (b) Mangrove swamp (c) Fresh water (d) Guinea forest
20. In which of these kingdoms did the Queen's mother play important political role?
 (a) Benin (b) Old Oyo (c) Nupe (d) Kanem-Borno
21. Bayajjida is recorded to have had a stay in ----- in the course of his migration.
 (a) Karem-Borno (b) Nupe (c) Igala (d) Kano

22. Which trade replaced the transatlantic slave trade?
 (a) Legitimate trade (b) Trade in gold (c) Trade in gin (d) Trade in the new world
23. One of the following is not the 19th Century European explorers of the River Niger
 (a) Mungo Park (b) Huph Clapperton (c) Richard Lander (d) Granville Sharp
24. The Northern and Southern protectorates of Nigeria were amalgamated in
 (a) 1914 (b) 1900 (c) 1917 (d) 1915
25. The first territory of Nigeria to fall to the British was
 (a) Benin empire (b) Old Oyo empire (c) Kano (d) Lagos
26. The first protectorate that was established by the British in Nigeria was the
 (a) Oil Rivers protectorate (b) Niger Coast protectorate (c) Protectorate of Southern Nigeria
 (d) Northern protectorate
27. One of the following was not a British Colony (a) Nigeria (b) Senegal (c)Gambia (d) Ghana
28. The National Congress of British West Africa was formed in 1920 at
 (a) Banjul – Gambia (b) Lagos – Nigeria (c) Accra –Ghana (d) Dakar – Senegal
29. ----- formed the Universal Negro Improvement Association
 (a) Marcus Garrey (b) E.W. Blyden (c) Casely Hayford (d) W.E.B. Du Bois
30. Dea masks from Ivory Coast are connected with (a) good rainfall (b) good harvest (c) fertility (d) circumcision
31. What is mural design ? (a) collage design (b) stage design (c) relief design (d) wall decoration
32. An Egyptian mummy is (a) stone statue (b) a saraphagus (c) an embalmed corpse (d) an old mother
33. When we say that a colour is soluble in oil we mean that
 (a) it is found in oil (b) it floats when put in oil (c) it gets its colour from oil (d) it can dissolve in oil
34. Who among the following was consecrated and appointed a prophet before he was born?
 (a) Joel (b) Jeremiah (c) Nahemiah (d) Josiah
35. The parable of the wheat and the tares illustrates that
 (a) Both good an evil live in the world (b) It is impossible to overcome enemies (c) the wheat cannot grow where there are weeds (d) the kingdom of God is already established on earth
36. Authority means (a) an automatic right to be obeyed (b) legitimate right to be obeyed (c) a civic right to obey others (d) a civic right to be obeyed
37. Which of the following factors limits universal adult suffrage? (a) Wealth (b) Age (c) Education (d) Heredity
38. The World Health Organisation (WHO) is an agency of the (a) Organisation of African Unity (OAU)
 (b) Economic Community of West African State (ECOWAS) (c) Commonwealth of Nations
 (d) United Nations Organisation (UNO)
39. The economic and social Council of the United Nations Organisation (UNO) is made up of
 (a) 25 members (b) 26 members (c) 27 members (d) 28 members

SECTION B: GENERAL PAPER (MANAGEMENT AND SOCIAL SCIENCES)

1. The equation $\frac{MUA}{MUB} = \frac{PA}{PB}$ indicates (a) demand and supply equilibrium (b) diminishing maximal utility (c) consumer sovereignty (d) utility maximization
2. At every point on an indifference curve, the (a) level of utility is decreasing (b) level of utility is increasing (c) level of utility is the same (d) level of utility is zero
3. Air is essential to life but commands no price. Diamond is not essential to life but commands high price, this is a paradox of (a) scarcity (b) consumption (c) value (d) availability
4. The theory that bad money has a tendency to drive out good money was propounded by (a) Thomas Gresham (b) Thomas Malthus (c) John Maynard Keynes (d) Adams Smith
5. The official minimum rate which the Central Bank discount first class bills, is known as (a) cash reserve ratio (b) bank rate (c) open market operations (d) moral suasions
6. Merchant Banks perform all the following functions except (a) underwriting of shares (b) raising of capital for Industries (c) provision of credits for oversea trading (d) provision of current account facilities
7. The stock exchange is a market for the buying and selling of (a) new shares (b) secondary shares (c) treasury bills (d) foreign exchange
8. The principle of derivation under revenue allocation refers to (a) what a State gets from the Federal Government as allocation (b) the contribution of an area to national Income (c) the total interest of an area (d) the total need of an area
9. Which of these cost will not appear in the accounts book? (a) total cost (b) explicit cost (c) implicit cost (d) marginal cost
10. Which of the following represents the selling price of a commodity? (a) average cost (b) average revenue (c) total cost (d) total revenue
11. The demand curve of the monopolist (a) slope downwards from left to right (b) is perfectly elastic (c) is perfectly inelastic (d) slopes upwards from left to right
12. Both for the monopolist and perfect competitor, profit is maximized at the point where (a) $MR > MC$ (b) $MR < MC$ (c) $TR > TC$ (d) $MR = MC$
13. The present privatization policy in Nigeria is aimed at (a) poverty alleviation (b) increasing efficiency in production (c) reducing income inequality (d) reducing the prices of goods and services
14. The universe is studded with stars and planets which occur in groups called (a) Nebulas (b) Milky way (c) Orbits (d) Satellites
15. The earth has an Equatorial circumference of (a) 40,084 km (b) 12,761 km (c) 39,951 km (d) 12,719 km
16. Which of the following statement is geographically incorrect? (a) The Spring Equinox occurs March 21st at the tropic of Cancer (b) The Autumnal Equinox occurs September 23rd at the Equator (c) The winter solstice occurs December 22nd at the tropic of Capricorn (d) The Summer solstice occurs June 22nd at the tropic of Capricorn
17. A football match is billed to kick off in Tokyo, Japan (Long 135⁰E) 10.00 am on Saturday 4th Dec. What

time should a concerned fan in Vancouver, North America time tune in his TV set for the live march?

- (a) 5 pm on Saturday 4th Dec. (b) 5 am on Saturday 5th Dec. (c) 5 pm on Friday 3rd Dec
(d) 5 am on Saturday 4th Dec

18. Which of the following is NOT an example of a volcanic mountain? (a) Mt Kilimanjaro in East Africa
(b) Mt Monadnock in USA (c) Mt Cameroon in West Africa (d) Mt Merapi in Sumatra
19. Earthquakes are most likely to occur in regions of crustal instability as listed below except
(a) Japan (b) China (c) West Coast of USA (d) Central Africa
20. Which of these conditions is favourable for the formation of deltas?
(a) Renewed down-cutting (b) Early deposition of load from the middle course
(c) Absence of large lakes along the river's course (d) Formation of pronounced meanders
21. Which of the following is NOT a necessary condition for the formation of Deserts?
(a) Latitudinal location of 15 – 30° North and South (b) Presence of off-shore trade winds
(c) Presence of on-shore trade winds (d) Absence of precipitation
22. Which of the following is NOT a type submergent coast?
(a) Ria Coasts (b) Dalmatian Coast (c) Uplifted Lowland Coast (d) Fiord Coast
23. Given that $\log_{10}^5 = 0.699$ and $\log_{10}^3 = 0.477$, find \log_{10}^{15} without using Mathematical tables
(a) 1.076 (b) 2.43 (c) 1.176 (d) 1.23
24. A bottle of malt cost three times as much as a bottle of mirinda. If 5 bottles of malt and 4 bottles of mirinda cost ₦380.00 altogether how much does a bottle of malt cost?
(a) ₦90 (b) ₦80 (c) ₦60 (d) ₦40
25. For what value(s) of k is the expression $(2k - 4) / (2k^2 - 8)$ undefined?
(a) $k = 2$ (b) $k = 4$ (c) $k = \pm 2\sqrt{2}$ (d) $k = \pm 2$
26. if $16(4)^{2x} = (1/2)^x$, find the value of x
(a) -3 (b) -4/5 (c) -4/3 (d) 4/3
27. Given that one of the roots of the equation $2x^2 + (K+2)x + K = 0$ is 2, find the value of K
(a) -4 (b) -2 (c) -1 (d) -1/4
28. A quantity q varies inversely as m and n varies directly as q^3 . Express n in terms of m given that n = 1 when m = 2.
(a) $n = 8m^3$ (b) $n = 2/m^{1/4}$ (c) $n = m^{1/2}$ (d) $n = 8/m^3$
29. if $f(y) = 2y + 4$ and $g(y) = 6y + 7$ where $g(y) > 0$ for what range of values of y is $\frac{f(y)}{g(y)} < 1$?
(a) $y > -12$ (b) $y > -3/4$ (c) $y > -4/3$ (d) $y > -7/6$
30. A regular polygon with $(2k+1)$ sides has each interior angle equal to 144° . The value of k is
(a) $4\frac{1}{2}$ (b) 5 (c) 8 (d) 10
31. if $\tan \theta = 5/12$, then the value of $\sin \theta - \cos \theta$ is (a) 5/13 (b) 7/13 (c) 12/13 (d) -7/13
32. An airplane flies 100km on a bearing of 330° and then flies 300km. How far west of the starting point is the plane? (a) 400km (b) 350km (c) 300km (d) 200km
33. Evaluate $(56000 \times 0.07) / 0.014$ leaving your answer in standard form

- (a) 2.8×10^7 (b) 2.8×10^5 (c) 2.8×10^4 (d) 2.8×10^{-3}
34. Authority means (a) an automatic right to be obeyed (b) legitimate right to be obeyed
(c) a civic right to obey others (d) a civic right to be obeyed
35. Which of the following factors limits universal adult suffrage?
(a) Wealth (b) Age (c) Education (d) Heredity
36. Under the British colonial administration the Executive Council was purely
(a) a judicial body (b) an advisory body (c) charged with making laws (d) a tax collecting agency
37. Production and distribution of goods and services are controlled by the state in
(a) Capitalism (b) Mixed economy (c) Socialism (d) Communalism
38. The World Health Organisation (WHO) is an agency of the (a) Organisation of African Unity (OAU)
(b) Economic Community of West African State (ECOWAS) (c) Commonwealth of Nations
(d) United Nations Organisation (UNO)
39. The economic and social Council of the United Nations Organisation (UNO) is made up of
(a) 25 members (b) 26 members (c) 27 members (d) 28 members

SECTION B : GENERAL PAPER (ENGINEERING AND PHYSICAL SCIENCES)

1. The reaction of zinc with copper (ii) ions in aqueous solution can be represented as follows: $\text{Cu}^{2+}(\text{aq}) + \text{Zn}(\text{s}) \longrightarrow \text{Cu}(\text{s}) + \text{Zn}^{2+}(\text{aq})$. Which of the following is the most complete description of this reaction.
(a) Copper (ii) ions are being reduced (b) Copper (ii) ions and zinc are being reduced
(c) Copper (ii) ions and zinc are being oxidized (d) Copper (ii) ions being reduced and zinc oxidized
2. How many moles of HCl will be required to react with potassium heptaoxodichromate (vi) to produce 3 moles of Chlorine? (a) 14 (b) 12 (c) 11 (d) 10
3. Phosphorous burns in oxygen according to the equation $\text{P}_4 + 5\text{O}_2 \longrightarrow \text{P}_4\text{O}_{10}$. How many litres of oxygen will be required at s.t.p. for complete oxidation of 12.4g of phosphorus ? (P = 31, O =16)
(a) 5.20 (b) 11.20 (c) 2.24 (d) 6.20
4. The following reactions are stages in important industrial processes :
- I $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g}) \Delta H$ is negative
II $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g}) \Delta H$ is negative
III $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{NO}(\text{g}) \Delta H$ is positive
- Which of the above forward reactions is favoured by (i) a decrease in the concentration of the product and (ii) an increase in temperature ?
(a). I (b) II (c) III (d) I and III
5. If 1 mole of aluminum contains 6×10^{23} atoms of aluminum, how many atoms are contained in 0.9g of aluminum? [Al = 27] (a) 0.25×10^{22} (b) 0.12×10^{22} (c) 7.5×10^{22} (d) 2.0×10^{22}
6. Zinc displaces copper from an aqueous solution of copper (ii) salt because
(a) Copper is a transition element (b) Copper is a moderately reactive metal
(c) Zinc is more reactive than copper (d) Zinc reacts with both acids and alkalis
7. 30cm^3 of hydrogen was collected over water at 27°C and 780mmHg. If the vapour pressure of water at

the temperature of the experiment was 10mmHg, calculate the volume of the gas at 760mmHg and 7°C

- (a) 40cm³ (b) 37.5cm³ (c) 28.4cm³ (d) 25.2cm³

8. Which of the following reactions is correct as written?

- (a) $\text{FeCl}_2 + 3\text{NH}_4\text{OH} \longrightarrow \text{Fe}(\text{OH})_3 + 3\text{NH}_4\text{Cl}$
(b) $\text{PbNO}_3 + \text{H}_2\text{S} \longrightarrow \text{PbS} + 2\text{HNO}_3$
(c) $\text{NaOH} + \text{H}_2\text{SO}_4 \longrightarrow \text{NaHSO}_4 + \text{H}_2\text{O}$
(d) $2\text{NH}_4\text{NO}_3 \longrightarrow \text{N}_2 + 2\text{H}_2\text{O}$

9. Fats and Oils are

- (a) addition products of long-chain fatty acids and alkali (b) addition products of long-chain fatty acids and glycerol
(c) condensation products of long-chain fatty acids and glycerol
(d) condensation products of formaldehyde and glycerol

10. which of the following is NOT a redox reaction?

- (a) $2\text{HNO}_2 + 2\text{HI} \longrightarrow 2\text{H}_2\text{O} + 2\text{NO} + \text{I}_2$ (b) $\text{Zn} + \text{H}_2\text{SO}_4 \longrightarrow \text{ZnSO}_4 + \text{H}_2$
(c) $\text{Ca}(\text{HCO}_3)_2 \longrightarrow \text{CaCO}_3 + \text{H}_2\text{O} + \text{CO}_2$ (d) $4\text{FeO} + \text{O}_2 \longrightarrow 2\text{Fe}_2\text{O}_3$

11. Given that $\log_{10}^5 = 0.699$ and $\log_{10}^3 = 0.477$, find \log_{10}^{15} without using Mathematical tables

- (a) 1.076 (b) 2.43 (c) 1.176 (d) 1.23

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13. For what value(s) of k is the expression $(2k - 4) / (2k^2 - 8)$ undefined?

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14. if $16(4)^{2x} = (1/2)^x$, find the value of x

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15. Given that one of the roots of the equation $2x^2 + (K+2)x + K = 0$ is 2, find the value of K

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16. A quantity q varies inversely as m and n varies directly as q³. Express n in terms of m given that n = 1 when m = 2. (a) $n = 8m^3$ (b) $n = 2/m^{1/3}$ (c) $n = m^{1/2}$ (d) $n = 8/m^3$

17. if $f(y) = 2y + 4$ and $g(y) = 6y + 7$ where $g(y) > 0$ for what range of values of y is $f(y)/g(y) < 1$?

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18. A regular polygon with $(2k+1)$ sides has each interior angle equal to 144° . The value of k is

- (a) $4\frac{1}{2}$ (b) 5 (c) 8 (d) 10

19. if $\tan \theta = 5/12$, then the value of $\sin \theta - \cos \theta$ is (a) 5/13 (b) 7/13 (c) 12/13 (d) -7/13

20. An airplane flies 100km on a bearing of 330° and then flies 300km. How far west of the starting point is the plane? (a) 400km (b) 350km (c) 300km (d) 200km

21. Evaluate $(56000 \times 0.07) / 0.014$ leaving your answer in standard form

- (a) 2.8×10^7 (b) 2.8×10^5 (c) 2.8×10^4 (d) 2.8×10^{-3}

22. Write $2 - x + x^2 - 4x^3$, in descending order

- (a) $-x + x^2 - 4x^3 + 2$ (b) $-4x^3 + x^2 - x + 2$ (c) $2 + x^2 + x - 4x^3$ (d) $x^2 + x + 2 - 4x^3$

23. The angle of depression of a boat from the top of the a cliff 10m high is 30° . How far is the boat from the foot of the cliff?
- (a) $\frac{5\sqrt{3}}{3}m$ (b) $5\sqrt{3}m$ (c) $10\sqrt{3}m$ (d) $\frac{10\sqrt{3}}{3}m$
24. A man was able to save N50.00 of his salary in a particular year. After this, every year he saved N20.00 more than the preceding year. How long did it take him to save N4,370
- (a) 23 years (b) 19 years (c) 62 years (d) 216 years
25. Find the sum to infinity of the following series $3+ 2 + 4/3 + 8/9 + 16/27 + \dots$
- (a) 1270 (b) 190 (c) 18 (d) 9
26. Which of the following statement(s) is (are) correct? I. A shell of uniform charge attracts or repels a charged particle that is outside the shell as if all the shell's charges were concentrated at its center II. If a charged particle is located inside a shell of uniform charge, there is no net electrostatic force on the particle from the shell III. The SI unit of charge is the Ampere IV. The SI unit of current is the Coulomb
- (a) I and III (b) I and IV (c) I and II (d) None of the above
27. Choose the correct statement(s) (a) A positively charged particle produces a positive electric potential (b) A negatively charged produces a negative electric potential (c) A positively charged particle produces a negative electric potential (d) A negatively charged particle produces a positive electric potential
28. Does the capacitance of a capacitor increase, decrease or remain the same when the potential across it is tripled
- (a) decrease (b) increase (c) remain the same (d) All of the above
29. A parallel plate capacitor whose capacitance is 13.5 pF is charged to a potential difference 12.5V between the plates, find the potential energy stored (a) 1055 pJ (b) 1100pJ (c) 1070 pJ (d) 11055 pJ
30. A coil has an inductance of 53 mH and a resistance of 0.35 Ω . If a 12 V emf is applied across the coil, how much energy is stored in the magnetic field after the current is built up to equilibrium (a) 30 J (b) 31 J (c) 29 J (d) 35 J
31. A force of 16 N is applied to a 5 kg block that is at rest on a smooth, horizontal surface. What is the velocity of the block at time $t = 5$ seconds? (a) 16 m/s (b) 20 m/s (c) 50 m/s (d) 4 m/s
32. A force of magnitude F acts on an object of mass 40 g initially at rest at a point O. If the speed of the object after moving through 50 m from point O is 500 m/s, what is the value of the force (a) 250 N (b) 18 N (c) 100 N (d) 25 N
33. For a body of mass M through vertically upwards with a velocity U, at what height will its potential energy equal to its kinetic energy? (a) $h = \frac{U^2}{g}$ (b) $h = \frac{U^2}{4g}$ (c) $h = \frac{2U^2}{g}$ (d) $h = \frac{U^2}{2g}$
34. In what range of temperature is the expansion of water anomalous
- (a) -8°C to -76°C (b) -4°C to 0°C (c) 0°C to 4°C (d) -10°C to -4°C
35. Which of the following properties of matter CANNOT be utilized for temperature measurement? (a) Length of a liquid column (b) volume of a gas at constant pressure (c) resistance of a metallic wire (d) current produced in a photoelectric effect
36. If the refractive index of glass is 1.5, what is the critical angle at the air-glass interface?
- (a) $\sin^{-1}(\frac{1}{2})$ (b) $\sin^{-1}(\frac{2}{3})$ (c) $\sin^{-1}(\frac{3}{4})$ (d) $\sin^{-1}(\frac{8}{9})$

37. An electron (charge $1.6 \times 10^{-19}\text{C}$) initially at rest is accelerated from a plate at zero volt to another plate at 60 kV. The kinetic energy acquired by the electron at the second plate is
 (a) $9.6 \times 10^{-15}\text{J}$ (b) $2.7 \times 10^{-24}\text{J}$ (c) $3.8 \times 10^{23}\text{J}$ (d) $2.7 \times 10^{-21}\text{J}$
38. The World Health Organisation (WHO) is an agency of the (a) Organisation of African Unity (OAU)
 (b) Economic Community of West African State (ECOWAS) (c) Commonwealth of Nations
 (d) United Nations Organisation (UNO)
39. The economic and social Council of the United Nations Organisation (UNO) is made up of
 (a) 25 members (b) 26 members (c) 27 members (d) 28 members

SECTION B : GENERAL PAPER (BIOLOGICAL SCIENCES)

1. A characteristic that distinguishes bryophytes from flowering plants is the (a) absence of vascular tissues
 (b) ability to grow in moist habitats (c) possession of true stem and leaves (d) ability to reproduce asexually
2. Which of the following structures is common to euglena, white blood cells and amoeba?
 (a) vacuole (b) cell membrane (c) chloroplast (d) cell wall
3. Which of the following statements about the lymphatic system is **NOT** correct?
 (a) The flow of lymph is assisted by muscular movement (b) Lymph flows only in one direction due to the presence of valves (c) Lymph is emptied into the blood circulatory system through a vein (d) Lymph vessels are usually larger than the arteries
4. The bacteria type that are arranged in clusters are the (a) staphylococci (b) streptococci (c) bacilli (d) vibrio
5. The mammalian lung is made air tight by the
 (a) pleural cavity (b) pleural membrane (c) bronchioles (d) diaphragm
6. Insectivorous plants trap and kill their prey to derive (a) nitrogen (b) zinc (c) calcium (d) phosphorus
7. During ovulation, an egg is released from the (a) Graafian follicle (b) fallopian tube (c) uterus (d) corpus luteum
8. The following are useful effects of micro organisms except (a) production of vaccines (b) decaying of meat
 (c) curing of tobacco (d) tanning of leather
9. Vitamin C which is water soluble is (a) riboflavin (b) pyridoxine (c) ascorbic acid (d) cobalamin
10. The following are examples of dry indehiscent fruits except (a) legume (b) caryopsis (c) samara (d) cypsela
11. Which of the following is not an example of entomophilous flower?
 (a) *Delonix regia* (b) *Hibiscus esculentum* (c) *Allamanda* (d) *Zea mays*
12. Which of the following vertebrates has the simplest structured heart?
 (a) *Rattus rattus* (b) *Tilapia zilli* (c) *Bufo* (d) *Homo sapiens*
13. Which of these microbial diseases is not air-borne?
 (a) Influenza (b) Measles (c) Diphtheria (d) Tuberculosis
14. The function of digestive enzymes is to
 (a) acidify food (b) quicken absorption (c) enhance food breakdown (d) emulsify fats
15. Which of the following is not regarded as micronutrient or trace element essential for plant growth?
 (a) Molybdenum (b) Boron (c) Zinc (d) Silicon

16. In photosynthesis, the following processes are part of the light reaction except
 (a) formation of glucose using energy from NADPH (b) splitting of water into its components
 (c) utilization of the energy in the electron transfer chain to form ATP
 (d) absorption of radiant energy by chlorophyll
17. Which of the following sets of organisms represents the correct trend from simple to complex structural organization? 1. Mollusc 2. Platyhelminthes 3. Nematodes 4. Protozoon (a) 4→1→2→3 (b) 1→2→3→4
 (c) 1→2→4→3 (d) 4→2→3→1
18. The reaction of zinc with copper (ii) ions in aqueous solution can be represented as follows: $\text{Cu}^{2+}(\text{aq}) + \text{Zn}(\text{s}) \longrightarrow \text{Cu}(\text{s}) + \text{Zn}^{2+}(\text{aq})$. Which of the following is the most complete description of this reaction.
 (a) Copper (ii) ions are being reduced (b) Copper (ii) ions and zinc are being reduced
 (c) Copper (ii) ions and zinc are being oxidized (d) Copper (ii) ions being reduced and zinc oxidized
19. How many moles of HCl will be required to react with potassium heptaoxodichromate (vi) to produce 3 moles of Chlorine? (a) 14 (b) 12 (c) 11 (d) 10
20. Phosphorous burns in oxygen according to the equation $\text{P}_4 + 5\text{O}_2 \longrightarrow \text{P}_4\text{O}_{10}$. How many litres of oxygen will be required at s.t.p. for complete oxidation of 12.4g of phosphorus? (P = 31, O =16)
 (a) 5.20 (b) 11.20 (c) 2.24 (d) 6.20
21. The following reactions are stages in important industrial processes :
 I $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g}) \Delta H$ is negative
 II $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g}) \Delta H$ is negative
 III $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{NO}(\text{g}) \Delta H$ is positive
 Which of the above forward reactions is favoured by (i) a decrease in the concentration of the product and (ii) an increase in temperature ?
 (a). I (b) II (c) III (d) I and III
22. If 1 mole of aluminum contains 6×10^{23} atoms of aluminum, how many atoms are contained in 0.9g of aluminum? [Al = 27] (a) 0.25×10^{22} (b) 0.12×10^{22} (c) 7.5×10^{22} (d) 2.0×10^{22}
23. Zinc displaces copper from an aqueous solution of copper (ii) salt because
 (a) Copper is a transition element (b) Copper is a moderately reactive metal
 (c) Zinc is more reactive than copper (d) Zinc reacts with both acids and alkalis
24. Which of the following statement(s) is (are) correct? I. A shell of uniform charge attracts or repels a charged particle that is outside the shell as if all the shell's charges were concentrated at its center II. If a charged particle is located inside a shell of uniform charge, there is no net electrostatic force on the particle from the shell III. The SI unit of charge is the Ampere IV. The SI unit of current is the Coulomb
 (a) I and III (b) I and IV (c) I and II (d) None of the above
25. Choose the correct statement(s) (a) A positively charged particle produces a positive electric potential
 (b) A negatively charged produces a negative electric potential (c) A positively charged particle produces a negative electric potential (d) A negatively charged particle produces a positive electric potential
26. Does the capacitance of a capacitor increase, decrease or remain the same when the potential across it is tripled (a) decrease (b) increase (c) remain the same (d) All of the above

27. A parallel plate capacitor whose capacitance is 13.5 pF is charged to a potential difference 12.5V between the plates, find the potential energy stored (a) 1055 pJ (b) 1100pJ (c) 1070 pJ (d) 11055 pJ
28. A coil has an inductance of 53 mH and a resistance of 0.35 Ω . If a 12 V emf is applied across the coil, how much energy is stored in the magnetic field after the current is built up to equilibrium
(a) 30 J (b) 31 J (c) 29 J (d) 35 J
29. A force of 16 N is applied to a 5 kg block that is at rest on a smooth, horizontal surface. What is the velocity of the block at time $t = 5$ seconds? (a) 16 m/s (b) 20 m/s (c) 50 m/s (d) 4 m/s
30. Given that $\log^5_{10} = 0.699$ and $\log^3_{10} = 0.477$, find \log^{15}_{10} without using Mathematical tables
(a) 1.076 (b) 2.43 (c) 1.176 (d) 1.23
31. A bottle of malt cost three times as much as a bottle of mirinda. If 5 bottles of malt and 4 bottles of mirinda cost ₦380.00 altogether how much does a bottle of malt cost?
(a) ₦90 (b) ₦80 (c) ₦60 (d) ₦40
32. For what value(s) of k is the expression $(2k - 4) / (2k^2 - 8)$ undefined?
(a) $k = 2$ (b) $k = 4$ (c) $k = \pm 2\sqrt{2}$ (d) $k = \pm 2$
33. if $16(4)^{2x} = (1/2)^x$, find the value of x (a) -3 (b) -4/5 (c) -4/3 (d) 4/3
34. Given that one of the roots of the equation $2x^2 + (K+2)x + K = 0$ is 2, find the value of K
(a) -4 (b) -2 (c) -1 (d) -1/4
35. A quantity q varies inversely as m and n varies directly as q^3 . Express n in terms of m given that $n = 1$ when $m = 2$.
(a) $n = 8m^3$ (b) $n = 2/m^{1/3}$ (c) $n = m^{1/2}$ (d) $n = 8/m^3$
36. if $f(y) = 2y + 4$ and $g(y) = 6y + 7$ where $g(y) > 0$ for what range of values of y is $\frac{f(y)}{g(y)} < 1$?
(a) $y > -12$ (b) $y > -3/4$ (c) $y > -4/3$ (d) $y > -7/6$
37. A regular polygon with $(2k+1)$ sides has each interior angle equal to 144° . The value of k is
(a) $4\frac{1}{2}$ (b) 5 (c) 8 (d) 10
38. The World Health Organisation (WHO) is an agency of the (a) Organisation of African Unity (OAU)
(b) Economic Community of West African State (ECOWAS) (c) Commonwealth of Nations
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UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2012/2013
SATURDAY 25th AUGUST, 2012 9.00AM

Time allowed 1hr

INSTRUCTIONS

Read the following instructions carefully

1. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
2. Candidates should indicate **the Question Paper OPTION** given to them in the appropriate space in the **Answer Sheet**
3. Write your **JAMB** Registration numbers on the Question Paper in the space provided at the top of page 1.
4. The use of calculators and/or similar electronic devices is **NOT** allowed

SECTION I: ENGLISH

Read the following passage and answer the questions that follow.

The endeavour to maintain proper standards of fairness in journalism must be pursued. It is fatally easy for the journalist to deviate from the strength path. There is his natural desire to 'make a story', and insidious temptation to twist facts to square with his paper's policy. Both are as indefensible as the framing of misleading headlines for the sake of effect. The conscientious journalist must check any tendency to bias, and guard against the dangers inherent in personal antipathies or friendships, and in traditional opposition between rival schools of thought. When a political opponent, whose stupidity habitually provokes attack, make an effective speech, honesty requires that he be given credit for it. Where personal relationships might make it easier and more congenial to keep silent than to criticize, the journalist must never forget his duty to the public and the supreme importance of recording the truth.

1. When may a journalist have to act against his own inclination?
(a) When his friends act stupidly. (b) When he becomes weak and decrepit
(c) When his enemies make a mistake (d) when his political opponents frame misleading
2. A journalist would be able to uphold the tenets of his profession if (a) he seeks publicity (b) he tries to achieve popularity (c) he resists temptation to bias (d) he can manipulate his story to please his employers
3. Insidious (line 2) means (a) Subtle (b) wicked (c) natural (d) unusual
4. A dutiful journalist must (a) read widely (b) have political acumen (c) make no enemies but friends
(d) be able to recognise merit wherever found
5. The duty of the Journalist to the public entails (a) giving credit to his political enemies (b) Keeping quiet when necessary (c) trying to make a story (d) telling the truth

Read the following passage carefully and answer the questions that follow.

I began work at the smithy on the Monday morning. My wages were half a crown a week. My hours were from six in the morning till six at night, with an hour's break for lunch. My boss, Boeta Dick, was a tall, bent, reedy consumptive. He had a parched yellow skin, drawn tight over his jutting bones. His cheeks were so sunken it was as though he were permanently sucking them in. His eyes were far back in his head. He coughed violently, and besides his seat was a bucket of sand into which he spat. Changing the sand daily was the only part of my job I hated. The smithy was divided into two parts. At

one end were the machines that cut shaped, and put the tins together . The men who worked on the machines were on a regular weekly wage. At the other end was a row of small furnaces, each with its own bellows and pile of fuel. Here at each furnace, a man sat soldering the seams of the tins as they came from the machines. The solderers were on piece-work. To average two or three pounds a week they had to do a mountainous amount of soldering. Each solder had a boy to cart the tins from the machines to him, then to smear the seams of each tin with sulphur powder so that they lead too easily, and, after checking, to cart the tins out of the yard where the Lorries collected them.

6. The boss, Boeta Dick, can be described as being (a) skinny (b) hard working (c) ambitious (d) a Chinese
7. Boeta Dick spat in the bucket because
(a) he was sick (b) he had a dirty habit (c) he coughed (d) the smithy smelled badly
8. Without the solderers in the smithy (a) no work can be done (b) the boss will go into debt
(c) the products cannot be completed (d) the boss will be unhappy
9. The solderers received (a) occasional money for their work (b) too much for their work
(c) just enough for their work (d) not so much as their work demanded
10. Sulphur powder was added to (a) beautify the tin (b) complete the manufacture (c) strengthen the tin
(d) satisfy the boss.

Fill in the blank in the following sentences making use of the best of the five options

11. The Chairman ruled the impertinent speaker...
(a) according to order (b) out of order (c) contrary to order (d) disorderly
12. The way to stop some frivolous publications is to the press (a) gag (b) shackle (c) fetter (d) handcuff
13. He bought a typewriter with a view to type (a) to learning (b) to learn (c) to be learning (d) to be learnt
14. Had he know in advance, he ... (a) should prepare for the interview (b) was going to prepare for the interview
(c) would have prepared for the interview (d) will have been preparing for the interview
15. As a pioneer, he the institution from his own resources (a) found and funded (b) founded and funded
(c) was finding and funding (d) Had found and funded
16. If one day we would talk about it for weeks (a) a lion would be coming into this room
(b) a lion was coming into this room (c) a lion came into this room (d) a lion is coming into this room
17. Some people think that are potentially a nuisance (a) parent in law (b) parents in law (c) parents in laws
(d) parent in laws
18. several bad air crashes recently (a) There is (b) They are (c) There were (d) There have been
19. Have you paid your taxes up to date? The tax collector inquired if (a) you have paid your taxes up to date
(b) I had paid my taxes up to date (c) I paid my taxes up to date (d) have I paid my taxes up to date
20. The passenger waited patiently whilst they transferred his from the taxi to the bus (a) properties
(b) baggages (c) Luggage (d) Luggages

Choose the option nearest in meaning to the underline word(s) or phrase(s)

21. Ngozi and Ekaete were fast friends when we were in the secondary school
(a) friends who run very quickly together (b) friends who go without food for a long time together
(c) friends who are not easily separated from each other. (d) friends who spend too much time and energy on pleasure and excitement
22. The policeman looked at the face of the robber and saw tell-tale signs of dyed-in-the-wool convict

- (a) hardened (b) remorseless (c) heady (d) hardhearted
23. The senior prefect had to carry the can because he refused to identify the culprit (a) dispose the can of refuse (b) accept responsibility (c) be made one of the scape-goats (d) bear the brunt
24. Adah has not been regular at lectures because she has been off colour
 (a) gloomy (b) trying to hide her bleached skin (c) slightly sick (d) upset
25. The builder's taste reflected superfluous grandeur
 (a) excellent (b) superlative (c) expensive (D) too much

Choose the most appropriate option opposite in meaning to the underline word(s)

26. The lecturer was merely obfuscating the issue with his endless examples.
 (a) complicating (b) clarifying (c) confusing (d) summarizing
27. Such measures end up exacerbating the pain (a) aggravating (b) increasing (c) eliminating (d) alleviating
28. The elderly often fulminate against the apparent indolence
 (a) protest bitterly about (b) complain seriously about (c) promote vigorously (d) commend warmly
29. We should discourage further investment on existing factories (a) productive (b) prosperous (c) prospective (d) precious
30. Nigeria is gradually experiencing economic recession (a) birth (b) discovery (c) recovery (d) destruction

In each of the questions below choose the word that does not have the same vowel sound as the others

31. (a) Even (b) People (c) Wind (d) Key
32. (a) Log (b) Toil (c) Enjoy (d) Rejoice
33. (a) Bale (b) plait (c) saint (d) gate
34. (a) Fight (b) Die (c) Rice (d) Granite

SECTION II : GENERAL PAPER (ARTS AND LAW)

1. A Nigeria citizen can only be deprived of his citizenship if he is (a) condemned to death (b) convicted by a court of law (c) an armed robber (d) married to foreigner
2. The following are the key factors which influence Nigeria's foreign relations except (a) peaceful co-existence (b) economic dependence (c) non- interference (d) respect for territorial integrity
3. General Muritala Muhammed was assassinated in a Col Dimka led coup on
 (a) 29/5/1975 (b) 13/2/1996 (c) 14/3/1976 (d) 23/4/1976
4. The Minister of the Federal Capital Territory of Nigeria is
 (a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke
5. The sun's surface temperature is approximately (a) 9000⁰C (b) 6000⁰C (c) 600⁰C (d) 7500⁰C
6. The circumference of the earth is approximately (a) 10,761 km (b) 12,803 km (c) 40,084 km (d) 150, 000 km
7. The approximate distance of the earth from the sun is
 (a) 57,600,000 km (b) 107,200,000 km (c) 148,800,000 km (d) 772,800,000 km
8. Which of the following material is not associated with painting
 (a) intaglio (b) lithograph (c) Squeegee (d) armature

9. A painting process that is applied on a zinc, plastic and aluminium is called print
(a) intaglio (b) lithograph (c) relief (d) silkscreen
10. An artist who specializes in book cover illustrations and poster designs is called
(a) cartoonist (b) an advertiser (c) a designer (d) a graphist
11. That striking effect on any piece of design could be credited to (a) balance and proportion
(b) dominance and emphasis (c) form and space (d) rhythm and variety .
12. The law of corban among the Jews is the practice of
(a) dedicating their lives to the service of God (b) dedicating their properties to God
(c) dedicating their first born male to God (d) training into levitical priesthood
13. Jesus commended the healed leper to go and show himself to the priest because
(a) Leprosy is a contagious disease (b) the priest is the leper's spiritual leader (c) he had been sending anybody
healed to the priest (d) the law demanded it.
14. The figurative device that gives human attribute to inanimate things is called
(a) metonym (b) euphemism (c) Personification (d) simile
15. Which of the following statement best describes comedy?
(a) a play which is boring (b) a play in which the hero is a clown (c) a play which makes us weep
(d) a play which makes us laugh
16. Poetry is essentially different from drama because (a) it involves many characters
(b) it uses many words (c) it uses heroes and heroines (d) it is an elevated language
17. Dramatic irony entails (a) appraisal of the audience (b) a satirical statement (c) a statement that means
more than is evident to the speaker (d) a hilarious statement
18. The persons who take part in a play are sometimes referred to as
(a) dramatis personae (b) comedians (c) audience (d) dramatists
19. The main distinguishing feature of literature is that (a) it is relevant to life (b) It tells untrue stories
(c) It deals with exciting events (d) It presents fictional accounts of human experience
20. "Though nothing can bring the hour of splendour in the grass, of glory in the flower; we will grieve not, rather
find strength in what remains behind (William Wordsworth). The above lines convey a sense of
(a) nostalgia (b) dejection (c) uneasy acceptance (d) deep distress
21. "O murderous slumber layest thou thy ladder mace upon my boy that plays thee music?"
The quoted lines above is an example of (a) simile (b) allusion (c) metonymy (d) personification
22. Pick the odd one out (a) rhyme (b) repetition (c) paragraphs (d) metre
23. "if winter comes can spring be far behind?" The literary device used above is
(a) apostrophe (b) rhetoric (c) poetic (d) allegory
24. Point of view is a technique that is commonly associated with.....
(a) characterization (b) narrative (c) plot (d) atmosphere
25. *Rome and Juliet* is a tragedy because
(a) it has five acts (b) Juliet is beautiful (c) it ends unhappily (d) it is set in Verona
26. In T.S. Eliot's "The Journey of the Magi" the journey is difficult because they left in
(a) summer (b) spring (c) winter (d) the night

27. In the poem "Bat" it is ironical that while the poet hates bat, it is a symbol of in China
 (a) peace (b) Joy (c) Love (d) happiness
28. In "Give me the Minstrel's seat", the poem dwells mostly on
 (a) Love (b) kinship (c) hatred (d) companionship
29. The two most important governors of the four Kanem Borno Provinces were the
 (a) Yerima and Waziri (b) Waziri and Galadima (c) Yerima and Galadima (d) Kaigama and Yerima
30. Who among the following founded second Kanem-Borno empire?
 (a) Mai Idris Aloomo (b) Mai Ali Ghaje (c) Mai Idris (d) Mai Umme Jilmi
31. Which of the under-mentioned peoples of Nigeria practised a decentralised political system in pre-colonial times? (a) Bini (b) Igbo (c) Hausa (d) Yoryba
32. Arochukwu is associated with the (a) long juju (b) trans Atlantic slave trades (c) trans Sahara trade (d) early settlement of the whitemen in Igbo land
33. The eldest of the Hausa State is (a) Katsina (b) Kano (c) Biram (d) Rano
34. Is the title of the Commander-in- Chief of the army in Old Oyo empire
 (a) Galadima (b) Etsu (c) Are- Onatakanfo (d) Kaigama
35. The ruling Mai of Borno during the Fulani jihad against the empire was
 (a) Mai Dunam (b) Mai Ahmed (c) Mai Idris (d) Mai Idris Aloomo
36. Alhaji Umar belonged to the----- Islamic brotherhood
 (a) Quadiriyya (b) Tijaniyya (c) Sonusiyya (d) Wahhabiyya
37. Which of the 19th century Islamic jihads in West Africa prepared inspiration for the other jihads?
 (a) The Sokoto jihad (b) The Massina jihad (c) The Takulor jihad (d) The Bambara jihad
38. Which of the following mostly accounted for the revenue of the Niger Delta States before 1807? (a) Trade in palm oil (b) trade in slaves (c) industrial production of goods and services (d) tributes from weaker states
39. Which of the 19th century Yoruba civil wars is commonly referred to as the sixteen year war?
 (a) the Owu-Ife war (b) the Ijaye- Ibadan war (c) the Kirinji war (d) the Ijebu war
40. Which of the following is not one of the new towns that emerged as a result of the 19th century Yoruba civil wars (a) Modakeke (b) Ife (c) Abeokuta (d) Ibadan
41. The first court of Equity to be established in Niger Delta was at
 (a) New Calabar (Kalabari) (b) Akassa (c) Old Calabar (d) Bonny
42. One can identify a rigid constitution by its (a) amendment procedure (b) nature and scope (c) length (d) sources
43. The ratio of the price of a loaf of bread to the price of a packet of sugar in 1975 was $r : f$. In 1980 the price of a loaf went up by 25% and that of a packet of sugar by 10%. Their new ratio is now.
 (a) $40r : 50t$ (b) $44r : 50t$ (c) $50r : 44t$ (d) $55r : 44t$
44. Find a two-digit number such that three times the tens digit is 2 less than twice the units digit, and twice the number is 20 greater than the number obtained by reversing the digits.
 (a) 24 (b) 42 (c) 74 (d) 47
45. The difference between the length and width of a rectangle is 6cm and the area is 135cm^2 . What is the length ?
 (a) 25cm (b) 18cm (c) 15cm (d) 24cm
46. Tunde and Shola can do a piece of work in 18 days. Tunde can do it alone in x days. Whilst Shola takes 15 days

longer to do it alone. Which of the following equations is satisfied by x?

- (a) $x^2 - 5x - 18 = 0$ (b) $x^2 - 20x + 360 = 0$ (c) $x^2 - 21x - 270 = 0$ (d) $x^2 + 42x - 190 = 0$

SECTION II : GENERAL PAPER (MANAGEMENT AND SOCIAL SCIENCES)

1. A Nigeria citizen can only be deprived of his citizenship if he is (a) condemned to death (b) convicted by a court of law (c) an armed robber (d) married to foreigner
2. The following are the key factors which influence Nigeria's foreign relations except (a) peaceful co-existence (b) economic dependence (c) non- interference (d) respect for territorial integrity
3. One can identify a rigid constitution by its
(a) amendment procedure (b) nature and scope (c) length (d) sources
4. Judicial independence means that (a) judges are above the law (b) judges can do no wrong
(c) the judiciary is responsible to the people (d) judges are not influenced in the discharge of their duties
5. The concept of decentralization includes all the following elements except (a) deconcentration (b) devolution
(c) delimitation (d) delegation
6. The practice of two or more sovereign states uniting for security and external affairs is called
(a) totalitarianism (b) confederalism (c) republicanism (d) sectionalism
7. The advantage a firm enjoys by producing a wide range of goods is called (a) research economies (b) market economies (c) financial economies (d) risk bearing economies
8. A shift in the production possibility boundary could result from
(a) unemployment (b) inflation (c) changes in production techniques (d) changes in production pattern
9. Long-run production is called
(a) internal economies of scale (b) external economies of scale (c) increasing return to scale
(d) returns to scale
10. The size of the working population is not determined by (a) size of the population (b) age structure
(c) statutory age of entry (d) specialisation
11. Production of goods is continuous due to financing by the (a) government (b) retailers (c) consumers
(d) wholesalers
12. The slope of the demand curve does not reflect
(a) changes in weather (b) the law of diminishing marginal utility (c) substitution effect (d) income effect
13. What is the equilibrium price and quantity if $Q_d = 80 - p$, $Q_s = 20 + 4p$
(a) 10 and 30 (b) 12 and 68 (c) 12 and 86 (d) 68 and 12
14. The present high rate of inflation in Nigeria can be attributed to
(a) increasing supply (b) increasing budget surplus (c) increasing cost of production (d) increasing tax rates
15. The shape of the average cost curve shows that as production increases (a) marginal cost steadily increases
(b) average cost increases (c) total cost decreases (d) average cost decreases and then increases
16. An individual that needs a loan of ₦1 million to be paid back within 6 years should visit (a) money market
(b) foreign exchange market (c) factor market (d) capital market

17. The demand curve of the monopolist (a) is perfectly elastic (b) slopes downward from left to right
(c) is perfectly inelastic (d) slopes upward from right to left
18. The expression ‘‘Terms of Trade’’ is used to describe
(a) the quantity of export (b) the direction of foreign trade
(c) terms of purchase on deferred payment basis (d) the rate at which exports exchange for import
19. By balance of visible trade we mean
(a) import and export of goods (b) balance of current account in the BOP
(c) import and export of services (d) balance of capital account in the BOP
20. Suppose x varies inversely as y , y varies directly as the square of t and $x = 1$ when $t = 3$
Find x when $t = 1/3$ (a) 81 (b) 27 (c) $1/9$ (d) $1/27$
21. If $\sin x$ equals $\cos x$, what is x in radians? (a) $x/2$ (b) $x/3$ (c) $x/4$ (d) $x/6$
22. The ratio of the price of a loaf of bread to the price of a packet of sugar in 1975 was $r : f$. In 1980
the price of a loaf went up by 25% and that of a packet of sugar by 10%. Their new ratio is now.
(a) $40r : 50f$ (b) $44r : 50f$ (c) $50r : 44f$ (d) $55r : 44f$
23. Find a two-digit number such that three times the tens digit is 2 less than twice the units digit,
and twice the number is 20 greater than the number obtained by reversing the digits.
(a) 24 (b) 42 (c) 74 (d) 47
24. Find the value of x satisfying $x/2 - 1/3 < 2x/5 + 1/6$ (a) $x < 5$ (b) $x > 7\frac{1}{2}$ (c) $x < 7\frac{1}{2}$ (d) $x < -5$
25. Two cars X and Y start at the same point and travel towards a point P which is 150km away.
If the average speed of Y is 60km per hour and X arrives at P 25 minutes earlier than Y. What is the
average speed of X? (a) $51\frac{2}{3}$ km per hour (b) 72 km per hour (c) $37\frac{1}{2}$ km per hour (d) 66 km per hour
26. What is the area between two concentric circles of diameters 26cm and 20cm?
(a) 100π (b) 169π (c) 69π (d) 9π
27. The difference between the length and width of a rectangle is 6cm and the area is 135cm^2 .
What is the length? (a) 25cm (b) 18cm (c) 15cm (d) 24cm
28. $0.0001432/1940000 = K \times 10^n$ where $1 < k < 10$ and n is a whole number. The values of k and n are
(a) 7.381 and -11 (b) 2.34 and 10 (c) 3.871 and 2 (d) 7.831 and -11
29. P varies directly as the square of q and inversely as r .
If $p = 36$ when $q = 3$ and $r = 4$, find p when $q = 5$ and $r = 2$ (a) 72 (b) 100 (c) 90 (d) 200
30. A straight line $y = mx$ meets the curve $y = x^2 - 12x + 40$ in two distinct points. If one of them is (5,5)
find the other. (a) (5,6) (b) (8,8) (c) (8,5) (d) (7,7)
31. Tunde and Shola can do a piece of work in 18 days. Tunde can do it alone in x days. Whilst Shola takes
15 days longer to do it alone. Which of the following equations is satisfied by x ?
(a) $x^2 - 5x - 18 = 0$ (b) $x^2 - 20x + 360 = 0$ (c) $x^2 - 21x - 270 = 0$ (d) $x^2 + 42x - 190 = 0$
32. If $f(x) = 2(x-3) + 3(x-3) - 4$ and $g(y) = \sqrt{5 + y}$ find $g[f(3)]$ and $f[g(4)]$
(a) 3 and 4 (b) -3 and 4 (c) -3 and -4 (d) 3 and -4
33. Find a factor which is common to all three binomial expressions $4a^2 - 9b^2$, $8a^3 + 27b^3$, $(4a + 6b)^2$
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34. General Muritala Muhammed was assassinated in a Col Dimka led coup on
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36. The sun's surface temperature is approximately (a) 9000°C (b) 6000°C (c) 600°C (d) 7500°C
37. The circumference of the earth is approximately
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40. Earthquake shocks are recorded by a delicate instrument called
(a) radar (b) clinometers (c) altimeter (d) seismograph
41. The term 'geoid' means (a) earth shaped (b) spherical shaped (c) round shaped (d) orange shaped
42. The axis of the earth is inclined to the plane of its ecliptic at angle of (a) $23\frac{1}{2}^{\circ}$ (b) $66\frac{1}{2}^{\circ}$ (c) 90° (d) 66°
43. The density of the upper part of the lithosphere is (a) 1.2gm/cc (b) 2.7gm/cc (c) 3.0gm/cc (d) 1.7gm/cc
44. According to Koppan's climatic classification 'AW' stands for
(a) desert climate (b) equatorial climate (c) Tropical continental climate (d) Mediterranean climate
45. Which of the following pairs of organisms are photosynthetic?
(a) Amoeba and paramecium (b) Volvox and Rhizopus (c) Chlamydomonads and Euglena
(d) Nostoc and Plasmodium
46. Which of the following is NOT classified as terrestrial habitat?
(a) Desert (b) Afro-Alpine (c) Littoral zone (d) Forest

SECTION II : GENERAL PAPER (ENGINEERING AND PHYSICAL SCIENCES)

1. Suppose x varies inversely as y , y varies directly as the square of t and $x=1$ when $t=3$
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 (a) $4a + 6b$ (b) $4a - 6b$ (c) $2a + 5b$ (d) $2a - 3b$
15. Taking the period of daylight on a certain day to be from 5.30am to 7.00pm. calculate the periods of daylight and of darkness on that day.
 (a) $187^\circ 30'$, $172^\circ 30'$ (b) $135^\circ 225^\circ$ (c) $202^\circ 30'$, $157^\circ 30'$ (d) $195^\circ 165^\circ$
16. A heavy object is suspended from a string and lowered into water so that it is completely submerged. The object appears lighter because (a) the density of water is less than that of the object. (b) the pressure is low just below the water surface (c) it experiences an upthrust (d) the tension in the string neutralizes part of the weight
17. Which of the following is a derived unit? (a) Kilogramme (b) metre (c) Kelvin (d) Newton
18. When a box of mass 45kg is given an initial speed of 5ms^{-1} it slides along a horizontal floor a distance of 3m before coming to rest. What is the coefficient of the kinetic friction between the box and the floor? ($g = 10\text{ms}^{-2}$)
 (a) $5/6$ (b) $5/12$ (c) $1/3$ (d) $2/3$
19. When two objects P and Q are supplied with the same quantity of heat, the temperature change in P is observed to be twice that of Q. The mass of P is half that of Q. The ratio of the specific heat capacity of P to Q is
 (a) 1 : 4 (b) 4 : 1 (c) 1 : 1 (d) 2 : 1
20. A man clapping his hands at regular intervals observes that the echo of a clap coincides with the next clap. If the reflecting cliff is 160m away and the speed of sound is 320ms^{-1} , what is the frequency of the clapping?
 (a) 1 Hz (b) 2 Hz (c) 4 Hz (d) 8 Hz
21. 22,000 J of heat is required to raise the temperature of 1.5kg of paraffin from 20°C . Calculate the specific heat capacity of paraffin (a) $1466\text{JKg}^{-1}\text{C}^{-1}$ (b) $2933\text{JKg}^{-1}\text{C}^{-1}$ (c) $4400\text{JKg}^{-1}\text{C}^{-1}$ (d) $5866\text{JKg}^{-1}\text{C}^{-1}$
22. In which of the following are the substances arranged in descending order of their thermal conductivities?
 (a) Copper, steel, glass (b) Steel, Copper, glass (c) steel, glass, Copper (d) Copper, glass, steel
23. The resistance of a wire of length 0.8m and area $2 \times 10^{-7}\text{m}^2$ is found to be 40ohms.
 Calculate the resistivity of the material. (a) $1 \times 10^{-7}\Omega\text{m}$ (b) $1 \times 10^{-5}\Omega\text{m}$ (c) $1 \times 10^{-8}\Omega\text{m}$ (d) $1 \times 10^{-6}\Omega\text{m}$

24. In a wet Lechanch cell, which of the following is used as a positive and negative pole respectively
 (a) Carbon rod and zinc rod (b) carbon rod and lead rod (c) Lead rod and carbon rod (d) zinc rod and carbon rod
25. A transformer is rated 240V. If the primary coil is 5000turns and the secondary voltage is 12, determine the number of turns in the secondary (a) 300 (b) 350 (c) 250 (D) 400
26. Which of the following is correct (a) Power is appropriate to current (b) power is energy multiplied by time
 (c) Power is inversely proportional to voltage (d) Power is independent on resistance
27. A 40KW electric cable is used to transmit electricity through a resistor of resistance 2Ω at 800V. The power loss as internal energy is (a) 280KW (b) 320KW (c) 40KW (d) 300 KW
28. The complex salt formed when aluminium dissolves in Sodium hydroxide solution is? (a) $\text{Na}_3\text{Al}(\text{OH})_4$
 (b) $\text{Na}_2\text{Al}(\text{OH})_3$ (c) $\text{NaAl}(\text{OH})_3$ (d) $\text{NaAl}(\text{OH})_4$
29. In the redox reaction represented by the following equation $\text{Cu}^{2+}_{(\text{aq})} + \text{Zn}_{(\text{s})} \longrightarrow \text{Cu}_{(\text{s})} + \text{Zn}_{(\text{aq})}$
 (a) The oxidation number of copper increases (b) Copper (ii) ion is reduced to copper atom
 (c) Zinc atom is reduced to Zn ion (d) Copper (ii) ion donates electrons to Zinc atom
30. A current of 40 amperes was passed through Copper (ii) tetraoxosulphate (vi) solution for one hour using copper electrode. What was the mass of copper deposited (a) 32g (b) 48g (c) 64g (d) 48g
31. Which of the following compounds will form a solution if exposed to the air (a) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ (b) NaNO_3
 (c) CuSO_4 (d) CaCl_2
32. Under high pressure real gases do not obey gas law because their molecules (a) have become more energetic (b) have become less energetic (c) have become smaller in size (d) decompose into atoms
33. Which of the following statement is an exception in the assumption of the Kinetic theory of gases?
 (a)Gases are composed of many elastic particles (b) The particles are of negligible size
 (c) The particles are in constant random motion (d) The particles are of negligible mass
34. Fats and oils are (a) addition products of long-chain fatty acids and glycerol (b) Condensation products of long-chain fatty acids and glycerol (c) Addition products of long-chain fatty acids and alkali (d) None of the above
35. $\text{Zn} + 2\text{HCl} \longrightarrow \text{ZnCl}_2 + \text{H}_2$ The rate of the above reaction will be greatly increased if
 (a) The zinc is in the powder form (b) a greater volume of the acid is used (c) a smaller volume of the acid is used (d) The reaction vessel is immersed in an ice-bath
36. A sample orange Juice is suspected to have been contaminated with a yellow dye. Which of the following method can be used to detect the dye? (a) Decantation (b) chromatography (c) Distillation (d) Filtration
37. In the reaction represented by the equation $2\text{FeCl}_3 + \text{SO}_2 + 2\text{H}_2\text{O} \longrightarrow 2\text{FeCl}_2 + \text{H}_2\text{SO}_4 + 2\text{HCl}$ the oxidation number of Sulphur changes from (a) +2 to +6 (b) +4 to +6 (c) 0 to +6 (d) -2 to +4
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45. The term 'geoid' means (a) earth shaped (b) spherical shaped (c) round shaped (d) orange shaped
46. The axis of the earth is inclined to the plane of its ecliptic at angle of (a) 23½° (b) 66½° (c) 90° (d) 66°

SECTION II : GENERAL PAPER (BIOLOGICAL SCIENCES)

1. The developed part of the embryo that makes contact with the uterine wall is known as the
 (a) chorion (b) amnion (c) placenta (d) umbilical cord
2. The menstrual cycle is controlled by
- (a) ovum maturation (b) copulation (c) ovulation (d) gonadotropins and ovarian hormones
3. Which of the following statement is not true of vegetative reproduction? (a) Offspring obtain food reserve from their parents (b) colonisation of new area is slow (c) New varieties are not produced (d) None of the above
4. The following are scientists who contributed to the cell theory except
 (a) Robert Brown (b) Felix du Jardin (c) Robert Hooke (d) Matthias Schleiden
5. Which of the following statement is correct? (a) Excretory structure of organisms vary in complexity (b) Urine is the only excretory product of animal (c) Nephridium is the excretory organ in insects (d) In insects, the Malpighan tubules takes part in feeding only
6. Which of the following groups embraces the rest? (a) Class (b) Kingdom (c) Phylum (d) Species
7. Which of the following pairs of organisms are photosynthetic? (a) Amoeba and paramecium (b) Volvox and Rhizopus (c) Chlamydomonas and Euglena (d) Nostoc and Plasmodium
8. Which of the following statement about mutation is true? (a) The genotype is not affected (b) The genotype is affected (c) The phenotype is not affected (d) It cannot be induced by artificial mean
9. Which of the following is NOT classified as terrestrial habitat?
 (a) Desert (b) Afro-Alpine (c) Littoral zone (d) Forest
10. A dry indehiscent fruit containing one seed and possessing a hairy pappus is described
 (a) a nut (b) a berry (c) an achene (d) a drupe
11. The bicuspid valve is located between the----- (a) left auricle and left ventricle (b) right auricle and right ventricle (c) left and right auricle (d) left and right ventricle
12. Which of the following organisms will have the highest biomass
 (a) small fish (b) Hawk (c) Phytoplankton (d) Tadpole
13. The passage of nerve impulse across a synapse is facilitated by the secretion of
 (a) insulin (b) thyroxine (c) acetylcholine (d) progesterone
14. The concave shape of bird's wing during flight ensures that the greater pressure under the wings will
 (a) lift the bird so that it can remain airborne (b) enables the pectoral muscle to contract (c) change the direction of the bird (d) counter the effect of gravity

15. The site for the production of ATP in a cell is --
 (a) cytoplasm (b) mitochondria (c) Golgi body (d) ribosome
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(a) Gases are composed of many elastic particles (b) The particles are of negligible size
(c) The particles are in constant random motion (d) The particles are of negligible mass
42. Fats and oils are (a) addition products of long-chain fatty acids and glycerol (b) Condensation products of long-chain fatty acids and glycerol (c) Addition products of long-chain fatty acids and alkali (d) None of the above
43. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$ The rate of the above reaction will be greatly increased if
(a) The zinc is in the powder form (b) a greater volume of the acid is used (c) a smaller volume of the acid is used (d) The reaction vessel is immersed in an ice-bath
44. A sample orange Juice is suspected to have been contaminated with a yellow dye. Which of the following method can be used to detect the dye?
(a) Decantation (b) chromatography (c) Distillation (d) Filtration
45. General Murital Muhammed was assassinated in a Col Dimka led coup on
(a) 29/5/1975 (b) 13/2/1996 (c) 14/3/1976 (d) 23/4/1976
46. The Minister of the Federal Capital Territory of Nigeria is
(a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke

EDUCATION CANDIDATES
UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
POST UNIVERSITY DIRECT ENTRY SCREENING
SATURDAY 18TH SEPTEMBER, 2010; 9.00AM

Time allowed: 1h 15min

INSTRUCTIONS

Read the following instructions carefully:

1. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
2. Candidates are to shade the **Question Paper Type** given to them in the appropriate space on **the Answer Sheet**.
3. Write your JAMB Registration number at the top of page 1 of your Question Papers.
4. **Attempt all questions.**
5. The use of calculators and/or similar electronic devices is **NOT** allowed.

SECTION A: ENGLISH

Read the following passage and answer the questions that follow:

That the Nigerian nation is reeling under the weight of iniquities, the foundation of which was laid by military misrule represented by Military Heads of State and their Civilian collaborators will not enjoy respite, was confirmed by the recent exposure of financial impropriety, fiscal rascality and squander mania pulsating the National Assembly.

Eleven years into Civilian Rule, we agree that no magical transformation can rid our present situation of affairs completely free of the dirty past, but one was expecting that lessons ought to have been learnt. The present leadership ought to have mended their ways and should have abandoned and jettisoned the rottenness, greed, irresponsible behaviour and large scale looting of the past. However, as the leopard can never change its spots our worst fears are confirmed by the scary findings indicating that Nigeria very much remains the erstwhile corrupt nation.

1. The word "*reeling*" in the passage means
(a) Failing (b) staggering (c) moving with unsteady steps (d) moving
2. The word foundation in the passage implies that the so-called ills are
(a) entrenched (b) salutary (c) accidental (d) outcome of nefarious system
3. "*Collaborators*" in the passage are
(a) Partners in victory (b) co-sinners (c) perpetrators (d) unintended masters
4. Enjoy respite as used in the passage means
(a) know peace (b) have recreation (c) enjoy oneself (d) have respect
5. The word "*pulsating*" in the passage means
(a) shaking (b) rocking (c) reverberating (d) causing upheavals
6. The intention of the writer of this passage may best be described as (a) vituperative (b) corrective (c) washing the Nigerian dirty linen in public (d) restorative
7. "*The leopard can never change its spots*" implies that corruption is
(a) endemic (b) a passing phase (c) part of national growth (d) accidental occurrence

8. "Scary findings" in the passage does not imply one of the following
(a) frightful discoveries (b) frightful outcomes (c) fearful findings (d) unsettling findings

Choose the option that provides the correct answer to the questions in this section

9. Many politicians in Nigeria are concerned more with illegal.....of wealth
(a) accumulation (b) acumulation (c) accumination (d) accummulation
10. Raining season comes with.....
(a) catarrh (b) catter (c) cattarrh (d) cartarh
11. School facilities deteriorate because of lack of.....
(a) maintainance (b) maintenance (c) mentainance (d) mentenance
12. The army ran out of.....
(a) arm and ammunities (b) arms and ammunities (c) arms and ammunition (d) arm and ammunition
13. We promised to make.....
(a) amend (b) ammends (c) ammend (d) amends
14. As a former female student of the University of Benin, Amina is an.....of the university.
(a) alumnus (b) alumni (c) alumna (d) alumina
15. The criminal's room is redolent.....Marijuana all the time.
(a) for (b) of (c) by (d) in
16. Lecturers Egbe and Braimoh have become.....
(a) Notary public (b) Notaries publics (c) Notaries public (d) Notary publics

Choose the option which is nearest in meaning to the underlined word or words

17. I gather from his appearance that he did not sleep at all last night (a) conclude (b) accept (c) interpret (d) imply
18. Mary was skeptical about the story her brother had told her (a) ignorant (b) uncertain (c) doubtful (d) confused
19. John said that the car belongs to his old flame
(a) his father's (b) his grandfather's (c) his former classmates (d) his former lover
20. Passuma ran with the hare and hunted with the hounds in the misunderstanding between Ejiro and Oke
(a) was insincere (b) was very fair to both sides (c) criticized both seriously (d) saw clearly what caused the misunderstanding
21. Ngozi played the Man Friday in the quarrel that ensued between Musa and Yemisi
(a) Ngozi supported Musa (b) betrayed Musa (c) was fair to both parties (d) prayed before intervening
22. Patrick is putty in Lindas's hands implies that Patrick is
(a) Too tough for Linda to handle (b) too unpredictable to Linda (c) is easily influenced by Linda
(d) loves Linda dearly

Choose the correct option in the following questions

23. A sentence can be divided into two parts.....and-----
(a) Predicate/subject (b) slaoonce/element (c) adverb/ component (d) subject/complement

24. The name *Lagos* is a.....noun.
 (a) Common (b) proper (c) countless (d) mass
25. The pronoun *we* is
 (a) 1st person singular (b) 3rd person singular (c) 3rd person plural (d) 1st person plural
26. A red-letter day implies
 (a) a day to be remembered for good (b) a day to be remembered for evil (c) a day the town is to be painted red
 (d) none of the above
27. A highly strung person is one that is
 (a) tied with many strings (b) very sensitive (c) is not easily upset (d) nervous and easily upset
28. On arriving home with his new purchase, Emmanuel found out that he had bought a pig in a poke.
 This suggests that Emmanuel
 (a) bought at the best value available (b) bought something he did not see (c) bought a pig instead of what he needed
 (d) bought something different from his need
29. Burning the candle at both ends implies
 (a) expending energy in one direction (b) going to work early everyday
 (c) dissipating energy in all directions (d) doing many things at the same time
30. Withdrawal at this stage of the screening exercise will amount to a loss of face. This suggests
 (a) taking a patriotic decision (b) a humiliating act (c) an unconditional surrender (d) a fatal mistake

SECTION B: GENERAL PAPER (EDUCATION)

Choose the correct option in the following questions.

1. Home economics is the study of
 (a) humans and their environment (b) humans and their productive system
 (c) humans and their culture (d) humans and their environment for better living
2. Home management is an aspect of home economics dealing with
 (a) Management of both human and material resources for better life (b) Managing only humans
 (c) Managing only material resources (d) Managing family dependants
3. The study of nutrition is
 (a) nutrients and their deficiency (b) nutrients and their consumption
 (c) nutrients and their composition (d) the composition of foods, function and utilization
4. Protein deficiency in children is known as
 (a) kwasoki (b) kwashiokor (c) kwamasi (d) kwahobi
5. One of these is not an energy food
 (a) yogurt (b) garri (c) milk (d) meat
6. Marasmus is a deficiency of
 (a) Protein and energy (b) energy only (c) protein only (d) protein and vitamin
7. Flame retarded treatment of a fabric means that the fabric means that the fabric cannot
 (a) fade (b) crease (c) shrink (d) burn

8. A three course meal include the following
 (a) Appetizer→ Main→ Wine (b) Main→ Dessert→ Wine (c) Wine→ Main→ Dessert
 (d) Appetizer→ Main → Dessert
9. Buying of goods without prior planning is called
 (a) Think buying (b) like buying (c) impulse buying (d) stop buying
10. A person employed to sell or buy on behalf of someone is called
 (a) retailer (b) sales agent (c) wholesaler (d) bulk buyer
11. Elijah challenged the people of Israel to a contest on mount (a) Hebron (b) Horeb (c) Carmel (d) Sinai
12. Another name for Tabitha who was raised from the dead was (a) Joanne (b) Dorcas (c) Aeneas (b) Naomi
13. Which of the following does not relate to the new life in Christ
 (a) circumcision (b) grace of God (c) faith (d) baptism
14. The first Christian martyr was
 (a) Peter (b) Stephen (c) Philip (d) James
15. The number of stone jars that were filled with water which later turned into wine was
 (a) 6 (b) 9 (c) 12 (d) 3
16. After the flood that destroyed the world, god made a new beginning with the family of
 (a) Adam (b) Noah (c) Moses (d) Abraham
17. Which of these is not a fish
 (a) tilapia (b) starfish (c) mackerel (d) salmon
18. Which of these is a tissue
 (a) Saliva (b) blood (c) heart (d) Lung
19. Which of these is an agricultural classification of plants
 (a) cereals (b) spermatophyta (c) perenial (d) ephemeral
20. Mitosis occurs in
 (a) Somatic cells (b) reproductive cells (c) gamates (d) sex cells
21. Which of the castes of termites is blind?
 (a) soldier (b) worker (c) queen (d) king
22. Pulmonary respiration is the respiration between the heart and the (a) Veins (b) lungs (c) arteries (d) liver
23. A directional response to a unidirectional stimulus is referred to as
 (a) taxism (b) natism (c) tropism (d) growth movement
24. The agricultural practice of planting crops and trees is referred to as
 (a) deforestation (b) monoculture (c) agroforestory (d) crop rotation
25. The pathogen of avian flu is
 (a) bacteria (b) fungi (c) algae (d) virus
26. In chemistry the reaction between an acid and a base results in (a) salt (b) gas (c) water (d) solids
27. The sheet of muscle that separates the thoracic cavity from the abdominal cavity is known as
 (a) biceps (b) diaphragm (c) triceps (d) cadilac
28. An image which cannot be caught on a screen is called
 (a) real image (b) half image (c) virtual image (d) parallel image

29. Lightning conductors work on the principle of
(a) force field (b) electrostatic force (c) electrophorous (d) point action
30. A polythene strip rubbed with fur acquires
(a) negative charge (b) positive charge (c) electrical neutrality (d) no charge
31. Simplify $\log_6 + \log_2 - \log_2$ (a) 0 (b) -1 (c) 1 (d) 4
32. The log of a number is the power to which the.....is raised in order to obtain the number
(a) base (b) root (c) reciprocal (d) the first integer
33. Macro Economics is a study of economic science from the stand point of view of
(a) Individual producers or consumers (b) companies or firms (c) production factors of unit (d) aggregate economy
34. In which of the following economic systems is the consumer referred to as *The King*
(a) planned economy (b) regulated economy (c) market economy (d) socialist economy
35. In the history of economic thought, the concept of division of labour is usually associated with
(a) J.M. Keynes (b) Adam Smith (c) Lionel Robins (d) David Richards
36. Demand for a factor of production is a
(a) competitive demand (b) derived demand (c) composite demand (d) Joint demand
37. The smallest planet in the solar system is
(a) Uranus (b) Neptune (c) Venus (d) Mercury
38. Solar eclipse means
(a) When the sun comes between the moon and the earth (b) When the stars are between the sun and the earth
(c) When the moon comes between the sun and the earth (d) When the earth comes between the sun and the moon
39. Graphite is a metamorphic rock produced from
(a) coal (b) limestone (c) graphite (d) clay
40. Calculate the distance in kilometers between Lagos, Nigeria (Lat 6°N) and Cape town, South Africa (Lat 35°S)
(a) 4500Km (b) 4551Km (c) 7820Km (d) 3219Km

EDUCATION CANDIDATES
UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE FOR 2011/2012 SESSION
SATURDAY 15th OCTOBER, 2011 9.00AM

Time allowed 1Hr 15mins

INSTRUCTIONS

Read the following instructions carefully

5. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
6. Candidates should indicate **the Question Paper Type** given to them in the appropriate space in the **Answer Sheet**
7. Write your **JAMB** Registration number on the Question Paper in the space provided at the top of page 1.
8. The use of calculators and/or similar electronic devices is **NOT** allowed

SECTION A : ENGLISH

Read the following passage carefully and answer the questions that follow.

Anyone who trains animals recognizes that human and animal perception capacities are different. For most human, seeing is believing, although we do occasionally brood about whether we can believe our eyes. The other senses are largely ancillary; most of us do not know how we might go about either doubting or believing our noses. But for dogs, scenting is believing. A dog's nose is to ours as the wrinkled surface of our complex brain is to the surface of an egg. A dog who did comparative psychology might easily worry about our consciousness or lack thereof, just as we worry about the consciousness of a squid.

We who take sight for granted can draw pictures of scent, but we have no language for doing it the other way about, no way to represent something virtually familiar by means of actual scent. Most humans cannot know, with their limited noses, what they can imagine about being deaf, blind, mute, or paralyzed. The sighted can, for example, speak of a blind person as "in the darkness", but there is no corollary expression for what it is that we in relationship to scent. If we tried to coin words, we might come up with something like "scent-blind." But what would it mean? It couldn't have the sort of meaning that "colour-blind" and "tone-deaf" do, because most of us have expressed what "tone" and "colour" means in those expressions, but we don't know what "scent" means in the expression "scent blind." Scent for many of us can be only a theoretical, technical expression that we use because our grammar required that we have a noun to go in the sentences we are prompted to utter about animals' tracking. We don't have a sense of scent. What we do have is sense of smell.

So if Fido and I are sitting on a terrace, admiring the view, we inhabit worlds with radically different principles of phenomenology say that the wind is to our backs. Our world lies all before us, within a 180 degree angle. The dog's – well, we don't know, do we?

1. The phrase, "other senses are largely ancillary" is used by the author to suggest that
 - (a) Only events experienced directly can be appreciated by the senses.
 - (e) For many humans the sense of sight is the primary means of knowing about the world
 - (f) Smell is in many respects more powerful than sight.
 - (g) The perceptual capacity of a human is a function of its ability to integrate all of its senses

2. The missing phrase in the incomplete sentence

The dog's ----- well, we don't know, do we? refers to

(a) Colour blindness (b) depth perception (c) perception of the world (d) concern for our perception

3. "A dog who did comparative psychology...." This expression can be described as

(a) satirical (b) metaphysical (c) superstitious (d) metaphorical **Tem**

4. From the passage the writer seems to imply that the expression "scent blind" is

(a) comparative (b) anomalous (c) innocuous (d) ambiguous

5. Which of the following is true according to the passage

(a) certain well-trained dogs can understand comparative psychology (b) human noses are grossly underdeveloped
(c) the human brain is complex and has wrinkled surface (d) the description of human perception is problematic

Select the best option (from A-D) to complete each of the following sentences

6. I 've just heard the news that two of our students -----kidnapped (a) are being (b) had been (c) being (d) have been

7. Tade ----- his clothes out to dry (a) hanged (b) has hung (c) have hung (d) has hanged

8. I can vouch for his honesty; I have always found him ----- and carefully observant of the truth.

(a) Plausible (b) volatile (c) veracious (d) arbitrary

9. Perhaps because he feels ----- by an excess of parental restrictions and rules, at adolescence the repressed child may break out dramatically (a) nurtured (b) confined (c) librated (d) fascinated.

Choose the word that has a different Stress Pattern from the others

10. (a) result (b) ratify (c) taxi (d) famous

11. (a) ability (b) revivalist (c) quadruplicate (d) registration

12. (a) comment (b) workshop (c) technique (d) caution

13. (a) candidate (b) calculate (c) interesting (d) concerted

Choose the option which is nearest in meaning to the sentences in each of the following questions.

14. We visited the home of one boy. That's the boy I mean.

(a) That's the boy whom we visited his home (b) That's the boy whose home we visited (c) That's the boy to whose home we visited (d) That's the boy whom we visited the home.

15. The dog was limping. It appeared that one of its legs might have been injured

(a) The dog was limping as if it had an injured leg (b) The dog was limping as it had an injured leg (c) The dog was limping so it had an injured leg (d)The dog was limping so as it had an injured leg

16. I can walk that distance and have done so many times (a) I am used to walk that distance (b) I used to walk that distance (c) I used to walking that distance (d) I am used to walking that distance

17. For all he cared, his parents might have been dead for years. (a) Although concerned about his parents, he had been unable to find out if they were alive. (b) He cared for no-one except his parents, and it was possible that they had died long before (c) He did not care whether his parents were alive or had died long before (d) He was concerned about everyone, not just about his parents who might have died long before

Choose the option which is opposite in meaning to the word or phrase in italics

18. The string was *taut* (a) stretched (b) loose (c) firm (d) tight

19. The diminutive figure bounces over the track with *unfathomable* lightness
(a) irresistibility (b) predictable (c) invigorating (d) impressive

20. The teacher announced that the class would be making a *fleeting* visit to the Zoo
(a) long (b) routine (c) brief (d) guided
21. We intend to make the reception a *diurnal* event. (a) an annual (b) a weekly (c) a nightly (d) a short
22. The permanent Secretary left his job *under a cloud*
(a) with a clear record (b) on a sunny day (c) in disgrace (d) on a cloudy day
23. It is surprising that this politician has now turned *renegade* (a) militant (b) loyal (c) quiet (d) corrupt
24. Some equatorial areas have a *sultry* climate. (a) A temperate (b) An inclement (c) A stable (d) A hot
25. Updating the Board's brochure is an *arduous* task (a) An annual (b) An easy (c) A regular (d) a difficult
26. Ali wondered why the principal was *ambivalent* about the students' future.
(a) Decisive (b) inconsiderate (c) Anxious (d) Ambitious
27. The journalist's write-up contained a *plethora* of detail
(a) Simplicity (b) Spectrum (c) Shortage (d) Complexity

Choose the option nearest in meaning to the word or phrase in italics

28. The presence of the captain makes the sailors *ill at ease* (a) sickly (b) impatient (c) easily ill (d) uncomfortable
29. Okonkwo manages his household with a *heavy hand*
(a) like a heavyweight champion (b) like a powerful dictator (c) using the cane on every occasion
(d) without tolerating weaknesses
30. Ibro shows enough *liberality* with his meager income
(a) prodigality (b) insensitivity (c) generosity (d) frugality
31. The press described the efforts of the government in *pejorative* terms
(a) contemptible (b) critical (c) superlative (d) palpable
32. The witness provided a *monstrous* account of the event. (a) supportive (b) tragic (c) shocking (d) verbatim
33. Adamu is rather *meddlesome* in dealing with his friends
(a) impertinent (b) intimidating (c) quarrelsome (d) uncaring
34. After the meeting I read a *leer* on his face as he looked at the woman.
(a) satisfying meaning (b) bad look (c) pleasant disposition (d) poor smile
35. The judge emphasized his *morbid* desires in his judgment
(a) inordinate (b) uncritical (c) ravenous (d) unpleasant
36. The recommended novel has a *convoluted* theme.
(a) a simple (b) an attractive (c) a disgusting (d) a complicated

Choose the option that best completes the gap(s)

37. They ----- wet if they had gone out in the rain (a) would get (b) would have got (c) will have got (d) had got
38. When I came in , I ----- (a) laid on the floor (b) lie on the floor (c) lain on the floor (d) lay on the floor
39. Either the teacher or the students ----- to blame (a) is (b) are (c) has being (d) are being
40. You should anticipate and prepare for changes ----- in your office.
(a) that has taken place (b) which takes place (c) taking place (d) that would take place
41. The scholar examined ----- of the subject.
(a) three a part analysis (b) a part-three analysis (c) a three-part analysis (d) three part analysis

SECTION B: GENERAL PAPER

1. One of the following is not necessary in school administration (a) planning (b) control (c) supervision (d) adaptation
2. The central essence of democratizing education is to increase (a) teachers' roles (b) curriculum content (c) access (d) imbalance
3. The national policy on education came into existence in (a) 1982 (b) 1977 (c) 1976 (d) 1969
4. The main feature of the Junior Secondary School in Nigeria is the (a) use of mother tongue (b) comprehensive nature (c) unified curriculum (d) pre-vocational content
5. The implementation of UPE in Nigeria started in (a) 1974 (b) 1975 (c) 1976 (d) 1979
6. Cognitive learning is a major feature of
(a) informal schools (b) formal schools (c) non-formal schools (d) private schools
7. The first school in Nigeria was established in (a) 1955 (b) 1905 (c) 1860 (d) 1842
8. Functional education is ultimately (a) lifelong (b) qualitative (c) adaptive (d) political
9. The use of electronics in teaching is referred to as
(a) computerization (b) on-line instruction (c) pedagogonics (d) interneting
10. Education in Sparta was noted for its (a) gracefulness (b) democracy (c) sportsmanship (d) militancy
11. Both cognitivists and behaviourists schools agree on
(a) changes in the cognitive structure (b) the learner being a passive organism (c) behaviour change as the most significant aspect in learning (d) provision of suitable environment for learning
12. A system which accepts information from its interfacing system and is capable of adapting to new circumstances is ---
(a) communicating system (b) a closed system (c) a receiving system (d) an open system
13. At the base of the cone of experience, direct purposeful experiences can be enhanced by the use of
(a) real objects or specimen (b) pictures, maps and photography (c) TV, CCTV and VCR (d) radio and audio cassettes
14. The SMCR Model of communication was developed by (a) Shannon and Weaver (b) David Berlo (1969)
(c) Harold Lasswell (d) Robert Gayne (1965)
15. The model of communication which explains human communication using the principles of telecommunication was developed by
(a) David Berlo (1969) (b) Harold Lasswell (c) Shannon and Weaver (1948) (d) Robert Gayne (1965)
16. One of the following is not a teacher's professional duties which extend beyond formal teaching
(a) Accompanying students on field trips (b) Organisation of school functions (c) Preparing homework, assignment and assessment (d) Supervision of extracurricular activities
17. Students with IQ between ---- are classified as slow learners (a) 65 and 70 (b) 70 and 75 (c) 70 and 85 (d) 80 and 85
18. A ---- test can be used to identify gifted and talented learners (a) Scholastic Aptitude (b) Verbal Aptitude
(c) Quantitative Aptitude (d) Vocational inventory
19. A learning technique which focuses on memorization of materials so that learners can recall exactly the same way it was read or heard is (a) dialogic learning (b) rote learning (c) cognitive learning (d) non-formal learning
20. The three domains of learning suggested by Benjamin Bloom are ---
(a) tangential, dialogic and rote (b) informal, formal and non-formal (c) cognitive, psychomotor and affective
(d) cognitive, tangential and dialogic
21. Which of the following is not a material illustration? (a) Diagrams (b) models (c) specimen (d) actual objects

22. In multiple choice items, the alternatives refer to (a) stem and distractors (b) stem and key (c) key and answers (d) key and distractors
23. A discipline model where there is absence of any degree of imposition of external standard or control on individual conduct is referred to as ---- (a) authoritarian (b) democratic (c) Laissez-faire (d) theocratic
24. A test can fulfil any of the following functions except (a) motivate students to study (b) determine how much the students have learned (c) a war between the teacher and students (d) determine the student's special ability
25. The major aim of observation in an observational technique is to see and describe human behaviour in a (a) natural setting (b) Hawthorne setting (c) structured setting (d) unstructured setting
26. The reliability of a test instrument is usually expressed as a coefficient ranging from (a) -3 to +3 (b) -2 to +2 (c) -1 to +1 (d) +1 to 0
27. In a test-retest method of establishing reliability the correlation coefficient obtained is called the coefficient of (a) stability (b) equivalence (c) consistency (d) objectivity
28. Which of the following is an example of an inferential statistics? (a) Mean (b) Variance (c) Standard deviation (d) Chi-square
29. The following are major subfields of modern psychology except (a) educational psychology (b) principal psychology (c) comparative psychology (d) developmental psychology
30. One of the following belongs to the group of psychologists known as the behaviourists (a) Sigmund Freud (b) Carl Rogers (c) B.F. Skinner (d) Jean Piaget
31. The various subfields of psychologists are in agreement that age and maturation to a large extent determine (a) effectiveness of learning outcomes (b) ineffectiveness of learning outcomes (c) solid economic status (d) success in life
32. The various personality theories are grouped under the following except (a) psychological (b) behavioural (c) psychodynamic (d) humanistic
33. In Maslow's hierarchy of needs which one of these needs is at the bottom? (a) safety needs (b) physiological needs (c) needs for self actualization (d) aesthetic needs
34. Given that $\log^5_{10} = 0.699$ and $\log^3_{10} = 0.477$, find \log^{15}_{10} without using Mathematical tables (a) 1.076 (b) 2.43 (c) 1.176 (d) 1.23
35. A bottle of malt cost three times as much as a bottle of mirinda. If 5 bottles of malt and 4 bottles of mirinda cost ₦380.00 altogether how much does a bottle of malt cost? (a) ₦90 (b) ₦80 (c) ₦60 (d) ₦40
36. A characteristic that distinguishes bryophytes from flowering plant is the (a) absence of vascular tissues (b) ability to grow in moist habitats (c) possession of true stem and leaves (d) ability to reproduce asexually
37. Which of the following structures is common to euglena, white blood cells and amoeba? (a) vacuole (b) cell membrane (c) chloroplast (d) cell wall
38. The World Health Organisation (WHO) is an agency of the (a) Organisation of African Unity (OAU) (b) Economic Community of West African State (ECOWAS) (c) Commonwealth of Nations (d) United Nations Organisation (UNO)
39. The economic and social Council of the United Nations Organisation (UNO) is made up of (a) 25 members (b) 26 members (c) 27 members (d) 28 members

EDUCATION CANDIDATES

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2012/2013
SATURDAY 25th AUGUST, 2012 9.00AM

Time allowed 1hr

INSTRUCTIONS

Read the following instructions carefully

1. Use **HB pencil** to shade your answers. Ensure that any shading in error is thoroughly erased.
2. Candidates should indicate **the Question Paper OPTION** given to them in the appropriate space in the **Answer Sheet**
3. Write your **JAMB** Registration numbers on the Question Paper in the space provided at the top of page 1.
4. The use of calculators and/or similar electronic devices is **NOT** allowed

SECTION I: ENGLISH

Read the following passage and answer the questions that follow.

The endeavour to maintain proper standards of fairness in journalism must be pursued. It is fatally easy for the journalist to deviate from the strength path. There is his natural desire to 'make a story', and insidious temptation to twist facts to square with his paper's policy. Both are as indefensible as the framing of misleading headlines for the sake of effect. The conscientious journalist must check any tendency to bias, and guard against the dangers inherent in personal antipathies or friendships, and in traditional opposition between rival schools of thought. When a political opponent, whose stupidity habitually provokes attack, make an effective speech, honesty requires that he be given credit for it. Where personal relationships might make it easier and more congenial to keep silent than to criticize, the journalist must never forget his duty to the public and the supreme importance of recording the truth.

1. When may a journalist have to act against his own inclination?
(a) When his friends act stupidly. (b) When he becomes weak and decrepit
(c) When his enemies make a mistake (d) when his political opponents frame misleading
2. A journalist would be able to uphold the tenets of his profession if (a) he seeks publicity (b) he tries to achieve popularity (c) he resists temptation to bias (d) he can manipulate his story to please his employers
3. Insidious (line 2) means (a) Subtle (b) wicked (c) natural (d) unusual
4. A dutiful journalist must (a) read widely (b) have political acumen (c) make no enemies but friends (d) be able to recognise merit wherever found
5. The duty of the Journalist to the public entails (a) giving credit to his political enemies (b) Keeping quiet when necessary (c) trying to make a story (d) telling the truth

Read the following passage carefully and answer the questions that follow.

I began work at the smithy on the Monday morning. My wages were half a crown a week. My hours were from six in the morning till six at night, with an hour's break for lunch. My boss, Boeta Dick, was a tall, bent, reedy consumptive. He had

a parched yellow skin, drawn tight over his jutting bones. His cheeks were so sunken it was as though he were permanently sucking them in. His eyes were far back in his head. He coughed violently, and besides his seat was a bucket of sand into which he spat. Changing the sand daily was the only part of my job I hated. The smithy was divided into two parts. At one end were the machines that cut shaped, and put the tins together. The men who worked on the machines were on a regular weekly wage. At the other end was a row of small furnaces, each with its own bellows and pile of fuel. Here at each furnace, a man sat soldering the seams of the tins as they came from the machines. The solderers were on piece-work. To average two or three pounds a week they had to do a mountainous amount of soldering. Each solder had a boy to cart the tins from the machines to him, then to smear the seams of each tin with sulphur powder so that they lead too easily, and, after checking, to cart the tins out of the yard where the Lorries collected them.

6. The boss, Boeta Dick, can be described as being (a) skinny (b) hard working (c) ambitious (d) a Chinese
7. Boeta Dick spat in the bucket because (a) he was sick (b) he had a dirty habit (c) he coughed (d) the smithy smelled badly
8. Without the solderers in the smithy (a) no work can be done (b) the boss will go into debt (c) the products cannot be completed (d) the boss will be unhappy
9. The solderers received (a) occasional money for their work (b) too much for their work (c) just enough for their work (d) not so much as their work demanded
10. Sulphur powder was added to (a) beautify the tin (b) complete the manufacture (c) strengthen the tin (d) satisfy the boss.

Fill in the blank in the following sentences making use of the best of the five options

11. The Chairman ruled the impertinent speaker... (a) according to order (b) out of order (c) contrary to order (d) disorderly
12. The way to stop some frivolous publications is to the press (a) gag (b) shackle (c) fetter (d) handcuff
13. He bought a typewriter with a view to type (a) to learning (b) to learn (c) to be learning (d) to be learnt
14. Had he know in advance, he ... (a) should prepare for the interview (b) was going to prepare for the interview (c) would have prepared for the interview (d) will have been preparing for the interview
15. As a pioneer, he the institution from his own resources (a) found and funded (b) founded and funded (c) was finding and funding (d) Had found and funded
16. If one day we would talk about it for weeks (a) a lion would be coming into this room (b) a lion was coming into this room (c) a lion came into this room (d) a lion is coming into this room
17. Some people think that are potentially a nuisance (a) parent in law (b) parents in law (c) parents in laws (d) parent in laws
18. several bad air crashes recently (a) There is (b) They are (c) There were (d) There have been
19. Have you paid your taxes up to date? The tax collector inquired if (a) you have paid your taxes up to date (b) I had paid my taxes up to date (c) I paid my taxes up to date (d) have I paid my taxes up to date
20. The passenger waited patiently whilst they transferred his from the taxi to the bus (a) properties (b) baggages (c) Luggage (d) Luggages

Choose the option nearest in meaning to the underline word(s) or phrase(s)

21. Ngozi and Ekaete were fast friends when we were in the secondary school (a) friends who run very quickly together (b) friends who go without food for a long time together

- (c) friends who are not easily separated from each other. (d) friends who spend too much time and energy on pleasure and excitement
22. The policeman looked at the face of the robber and saw tell-tale signs of dyed-in-the-wool convict
(a) hardened (b) remorseless (c) heady (d) hardhearted
23. The senior prefect had to carry the can because he refused to identify the culprit (a) dispose the can of refuse (b) accept responsibility (c) be made one of the scape-goats (d) bear the brunt
24. Adah has not been regular at lectures because she has been off colour
(a) gloomy (b) trying to hide her bleached skin (c) slightly sick (d) upset
25. The builder's taste reflected superfluous grandeur
(a) excellent (b) superlative (c) expensive (D) too much

Choose the most appropriate option opposite in meaning to the underline word(s)

26. The lecturer was merely obfuscating the issue with his endless examples.
(a) complicating (b) clarifying (c) confusing (d) summarizing
27. Such measures end up exacerbating the pain (a) aggravating (b) increasing (c) eliminating (d) alleviating
28. The elderly often fulminate against the apparent indolence
(a) protest bitterly about (b) complain seriously about (c) promote vigorously (d) commend warmly
29. We should discourage further investment on existing factories (a) productive (b) prosperous (c) prospective (d) precious
30. Nigeria is gradually experiencing economic recession (a) birth (b) discovery (c) recovery (d) destruction

In each of the questions below choose the word that does not have the same vowel sound as the others

31. (a) Even (b) People (c) Wind (d) Key
32. (a) Log (b) Toil (c) Enjoy (d) Rejoice
33. (a) Bale (b) plait (c) saint (d) gate
34. (a) Fight (b) Die (c) Rice (d) Granite

SECTION II : GENERAL PAPER (EDUCATION ARTS)

1. Education can bring about the following except (a) national disaster (b) self-realisation (c) individual efficiency (d) citizenship effectiveness
2. The Headquarters of NECO is at (a) Abuja (b) Lagos (c) PortHarcourt (d) Minna
3. Which of these agencies is responsible for managing Colleges of Education in Nigeria? (a) NCCE (b) NCEE (c) NUC (d) NCE
4. The first primary school in Nigeria was established at (a) Akpe (b) Abeokuta (c) Badagary (d) Onitsha
5. One of the greatest threat to education in Nigeria (a) unemployment (b) quality decline (c) mass failure (d) examination malpractice
6. Teaching in Nigeria is not yet a profession because (a) teachers are not well motivated (b) Government is not serious (c) Education is on the concurrent list (d) entry into the field is unregulated
7. The major forms of instructional technology is i. the teacher ii. the learner iii. Content of instruction iv. Method of instruction v. evaluation of instruction (a) i and ii (b) i – iii (c) i – iv (d) i – v

8. A system that does not accept new information from the environment and remain detached is called a/an
 (a) simple system (b) closed system (c) open system (d) disengaged system
9. The teacher's status in the society can be enhanced through the following except
 (a) improved working condition (b) better pay/professional salaries (c) overseas training courses
 (d) improved career structures
10. A chart is a ---- (a) flat- two dimensional aid (b) flat three- dimensional aid (c) flat four-dimensional aid
 (d) diagram of illustrations
11. A table which identifies the objectives and skills which are to be tested and the relative weight of the test items is
 (a) table of specification (b) a table of test (c) a table of objectives (d) table of skills
12. Which of this school record shows the main events of the institution in a chronological order? (a) Diary (b) log book
 (c) vote book (d) attendance register
13. The recommended students' population in a single classroom by the Federal Government should not
 (a) exceed 1:30 or at most a maximum of 1:35 (b) exceed 1:35 or at most a maximum of 1:40 (c) exceed 1:40 or at
 most a maximum of 1:45 (d) exceed 1:45 or at most a maximum of 1:50
14. A master plan for building a test which indicates the content, the educational objectives and the number of items in each
 category and on the entire test is known as (a) the bloom taxonomy of education (b) a test blue print (c) operational
 definitions (d) educational testing service
15. One of the following is a major factor responsible for personality development
 (a) religion (b) school (c) peer group (d) hereditary
16. In any learning situation, incentives are very important. Which of the following is not a good incentive in classroom
 situation? (a) Feedback of test result (b) Judicious praise (c) blame (d) use of grades
17. General Murital Muhammed was assassinated in a Col Dimka led coup on
 (a) 29/5/1975 (b) 13/2/1996 (c) 14/3/1976 (d) 23/4/1976
18. The Minister of the Federal Capital Territory of Nigeria is
 (a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke
19. A Nigeria citizen can only be deprived of his citizenship if he is (a) condemned to death (b) convicted by a court of law
 (c) an armed robber (d) married to foreigner
20. The following are the key factors which influence Nigeria's foreign relations except
 (a) peaceful co-existence (b) economic
 dependence (c) non- interference (d) respect for territorial integrity
21. The two most important governors of the four Kanem Borno Provinces were the
 (a) Yerima and Waziri (b) Waziri and Galadima (c) Yerima and Galadima (d) Kaigama and Yerima
22. The eldest of the Hausa State is (a) Katsina (b) Kano (c) Biram (d) Rano
23. Is the title of the Commander-in- Chief of the army in Old Oyo empire
 (a) Galadima (b) Etsu (c) Are- Onatakanfo (d) Kaigama
24. The ruling Mai of Borno during the Fulani jihad against the empire was
 (a) Mai Dunam (b) Mai Ahmed (c) Mai Idris (d) Mai Idris Alooma
25. Alhaji Umar belonged to the----- Islamic brotherhood (a) Quadiriyya (b) Tijaniyya (c) Sonusiyya (d) Wahhabiyya
26. Which of the 19th century Islamic jihads in West Africa prepared inspiration for the other jihads? (a) The Sokoto jihad

- (b) The Massina jihad (c) The Takulor jihad (d) The Bambara jihad
27. Which of the following mostly accounted for the revenue of the Niger Delta States before 1807?
 (a) Trade in palm oil (b) trade in slaves (c) industrial production of goods and services (d) tributes from weaker states
28. Which of the 19th century Yoruba civil wars is commonly referred to as the sixteen year war?
 (a) the Owu-Ife war (b) the Ijaye- Ibadan war (c) the Kirinji war (d) the Ijebu war
29. Which of the following is not one of the new towns that emerged as a result of the 19th century Yoruba civil wars
 (a) Modakeke (b) Ife (c) Abeokuta (d) Ibadan
30. The first court of Equity to be established in Niger Delta was at
 (a) New Calabar (Kalabari) (b) Akassa (c) Old Calabar (d) Bonny
31. The law of corban among the Jews is the practice of
 (a) dedicating their lives to the service of God (b) dedicating their properties to God
 (c) dedicating their first born male to God (d) training into levitical priesthood
32. Jesus commended the healed leper to go and show himself to the priest because
 (a) Leprosy is a contagious disease (b) the priest is the leper's spiritual leader (c) he had been sending anybody
 healed to the priest (d) the law demanded it.
33. Which of the following material is not associated with painting (a) intaglio (b) lithograph
 (c) Squeegee (d) armature
34. A painting process that is applied on a zinc, plastic and aluminium is called print
 (a) intaglio (b) lithograph (c) relief (d) silkscreen
35. An artist who specializes in book cover illustrations and poster designs is called
 (a) cartoonist (b) an advertiser (c) a designer (d) a graphist
36. The figurative device that gives human attribute to inanimate things is called
 (a) metonym (b) euphemism (c) Personification (d) simile
37. Which of the following statement best describes comedy? (a) a play which is boring (b) a play in which the hero is a
 clown (c) a play which makes us weep (d) a play which makes us laugh
38. Poetry is essentially different from drama because (a) it involves many characters (b) it uses many words
 (c) it uses heroes and heroines (d) it is an elevated language
39. Dramatic irony entails (a) appraisal of the audience (b) a satirical statement (c) a statement that means more
 than is evident to the speaker (d) a hilarious statement
40. The persons who take part in a play are sometimes referred to as (a) dramatis personae (b) comedians
 (c) audience (d) dramatists
41. The main distinguishing feature of literature is that (a) it is relevant to life (b) It tells untrue stories
 (c) It deals with exciting events (d) It presents fictional accounts of human experience
42. "Though nothing can bring the hour of splendour in the grass, of glory in the flower; we will grieve not, rather find
 strength in what remains behind (William Wordsworth). The above lines convey a sense of
 (a) nostalgia (b) dejection (c) uneasy acceptance (d) deep distress
43. "O murderous slumber layest thou thy ladder mace upon my boy that plays thee music?" The quoted
 lines above is an example of (a) simile (b) allusion (c) metonymy (d) personification
44. Pick the odd one out (a) rhyme (b) repetition (c) paragraphs (d) metre

45. "if winter comes can spring be far behind?" The literary device used above is
- (a) apostrophe (b) rhetoric (c) poetic (d) allegory
46. Point of view is a technique that is commonly associated with.....
- (a) characterization (b) narrative (c) plot (d) atmosphere

SECTION II: GENERAL PAPER (EDUCATION BIOLOGICAL SCIENCES)

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17. Suppose x varies inversely as y , y varies directly as the square of t and $x=1$ when $t=3$
Find x when $t = 1/3$ (a) 81 (b) 27 (c) $1/9$ (d) $1/27$
18. If sine x equals cosine x , what is x in radians? (a) $x/2$ (b) $x/3$ (c) $x/4$ (d) $x/6$
19. The ratio of the price of a loaf of bread to the price of a packet of sugar in 1975 was $r : f$. In 1980 the price of a loaf went up by 25% and that of a packet of sugar by 10%. Their new ratio is now.
(a) $40r : 50t$ (b) $44r : 50t$ (c) $50r : 44t$ (d) $55r : 44t$
20. Find a two-digit number such that three times the tens digit is 2 less than twice the units digit, and twice the number is 20 greater than the number obtained by reversing the digits.
(a) 24 (b) 42 (c) 74 (d) 47
21. Find the value of x satisfying $x/2 - 1/3 < 2x/5 + 1/6$ (a) $x < 5$ (b) $x > 7\frac{1}{2}$ (c) $x < 7\frac{1}{2}$ (d) $x < -5$
22. The developed part of the embryo that makes contact with the uterine wall is known as the (a) chorion (b) amnion (c) placenta (d) umbilical cord
23. The menstrual cycle is controlled by
(a) ovum maturation (b) copulation (c) ovulation (d) gonadotropins and ovarian hormones
24. Which of the following statement is not true of vegetative reproduction? (a) Offspring obtain food reserve from their parents (b) colonisation of new area is slow (c) New varieties are not produced (d) None of the above
25. The following are scientists who contributed to the cell theory except (a) Robert Brown (b) Felix du Jardin (c) Robert Hooke (d) Matthias Schleiden
26. Which of the following statement is correct? (a) Excretory structure of organisms vary in complexity (b) Urine is the only excretory product of animal (c) Nephridium is the excretory organ in insects (d) In insects, the Malpighian tubules takes part in feeding only
27. Which of the following groups embraces the rest? (a) Class (b) Kingdom (c) Phylum (d) Species
28. Which of the following pairs of organisms are photosynthetic? (a) Amoeba and paramecium (b) Volvox and Rhizopus (c) Chlamydomonas and Euglena (d) Nostoc and Plasmodium
29. Which of the following statement about mutation is true? (a) The genotype is not affected (b) The genotype is affected (c) The phenotype is not affected (d) It cannot be induced by artificial mean
30. Which of the following is NOT classified as terrestrial habitat? (a) Desert (b) Afro-Alpine (c) Littoral zone (d) Forest
31. A dry indehiscent fruit containing one seed and possessing a hairy pappus is described
(a) a nut (b) a berry (c) an achene (d) a drupe
32. The bicuspid valve is located between the----- (a) left auricle and left ventricle (b) right auricle and right ventricle (c) left and right auricle (d) left and right ventricle
33. Which of the following organisms will have the highest biomass (a) small fish (b) Hawk (c) Phytoplankton (d) Tadpole
34. The passage of nerve impulse across a synapse is facilitated by the secretion of (a) insulin (b) thyroxine (c) acetylcholine (d) progesterone
35. The concave shape of bird's wing during flight ensures that the greater pressure under the wings will (a) lift the bird so that it can remain airborne (b) enables the pectoral muscle to contract (c) change the direction of the bird (d) counter the effect of gravity
36. The site for the production of ATP in a cell is -- (a) cytoplasm (b) mitochondria (c) Golgi body (d) ribosome

37. Under high pressure real gases do not obey gas law because their molecules (a) have become more energetic (b) have become less energetic (c) have become smaller in size (d) decompose into atoms
38. Which of the following statement is an exception in the assumption of the Kinetic theory of gases? (a) Gases are composed of many elastic particles (b) The particles are of negligible size (c) The particles are in constant random motion (d) The particles are of negligible mass
39. Fats and oils are (a) addition products of long-chain fatty acids and glycerol (b) Condensation products of long-chain fatty acids and glycerol (c) Addition products of long-chain fatty acids and alkali (d) None of the above
40. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$ The rate of the above reaction will be greatly increased if (a) The zinc is in the powder form (b) a greater volume of the acid is used (c) a smaller volume of the acid is used (d) The reaction vessel is immersed in an ice-bath
41. A heavy object is suspended from a string and lowered into water so that it is completely submerged. The object appears lighter because (a) the density of water is less than that of the object. (b) the pressure is low just below the water surface (c) it experiences an upthrust (d) the tension in the string neutralizes part of the weight
42. Which of the following is a derived unit? (a) Kilogramme (b) metre (c) Kelvin (d) Newton
43. When a box of mass 45kg is given an initial speed of 5ms^{-1} it slides along a horizontal floor a distance of 3m before coming to rest. What is the coefficient of the kinetic friction between the box and the floor? ($g = 10\text{ms}^{-2}$) (a) $5/6$ (b) $5/12$ (c) $1/3$ (d) $2/3$
44. When two objects P and Q are supplied with the same quantity of heat, the temperature change in P is observed to be twice that of Q. The mass of P is half that of Q. The ratio of the specific heat capacity of P to Q is (a) 1 : 4 (b) 4 : 1 (c) 1 : 1 (d) 2 : 1
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46. The Minister of the Federal Capital Territory of Nigeria is (a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke

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16. In any learning situation, incentives are very important. Which of the following is not a good incentive in classroom situation? (a) Feedback of test result (b) Judicious praise (c) blame (d) use of grades
17. The difference between the length and width of a rectangle is 6cm and the area is 135cm^2 . What is the length ? (a) 25cm (b) 18cm (c) 15cm (d) 24cm
18. $0.0001432/1940000 = K \times 10^n$ where $1 < k < 10$ and n is a whole number. The values of k and n are (a) 7.381 and -11 (b) 2.34 and 10 (c) 3.871 and 2 (d) 7.831 and -11
19. P varies directly as the square of q and inversely as r. If $p = 36$ when $q = 3$ and $r = 4$, find p when $q = 5$ and $r = 2$ (a) 72 (b) 100 (c) 90 (d) 200
20. A straight line $y = mx$ meets the curve $y = x^2 - 12x + 40$ in two distinct points. If one of them is (5,5) find the other. (a) (5,6) (b) (8,8) (c) (8,5) (d) (7,7)
21. Tunde and Shola can do a piece of work in 18 days. Tunde can do it alone in x days. Whilst Shola takes 15 days longer to do it alone. Which of the following equations is satisfied by x? (a) $x^2 - 5x - 18 = 0$ (b) $x^2 - 20x + 360 = 0$ (c) $x^2 - 21x - 270 = 0$ (d) $x^2 + 42x - 190 = 0$
22. If $f(x) = 2(x-3) + 3(x-3) - 4$ and $g(y) = 5 + y$ find $g[f(3)]$ and $f[g(4)]$ (a) 3 and 4 (b) -3 and 4 (c) -3 and -4 (d) 3 and -4
23. Find a factor which is common to all three binomial expressions $4a^2 - 9b^2$, $8a^3 + 27b^3$, $(4a + 6b)^2$ (a) $4a + 6b$ (b) $4a - 6b$ (c) $2a + 5b$ (d) $2a - 3b$
24. Taking the period of daylight on a certain day to be from 5.30am to 7.00pm. calculate the periods of daylight and of darkness on that day. (a) $187^\circ 30'$, $172^\circ 30'$ (b) $135^\circ 225^\circ$ (c) $202^\circ 30'$, $157^\circ 30'$ (d) $195^\circ 165^\circ$
25. Earthquake shocks are recorded by a delicate instrument called (a) radar (b) clinometers (c) altimeter (d) seismograph
26. The term 'geoid' means (a) earth shaped (b) spherical shaped (c) round shaped (d) orange shaped

27. The axis of the earth is inclined to the plane of its ecliptic at angle of (a) $23\frac{1}{2}^{\circ}$ (b) $66\frac{1}{2}^{\circ}$ (c) 90° (d) 66°
28. The density of the upper part of the lithosphere is (a) 1.2gm/cc (b) 2.7gm/cc (c) 3.0gm/cc (d) 1.7gm/cc
29. According to Koppan's climatic classification "AW" stands for (a) desert climate (b) equatorial climate (c) Tropical continental climate (d) Mediterranean climate
30. General Murital Muhammed was assassinated in a Col Dimka led coup on (a) 29/5/1975 (b) 13/2/1996 (c) 14/3/1976 (d) 23/4/1976
31. The Minister of the Federal Capital Territory of Nigeria is (a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke
32. The advantage a firm enjoys by producing a wide range of goods is called (a) research economies (b) market economies (c) financial economies (d) risk bearing economies
33. A shift in the production possibility boundary could result from (a) unemployment (b) inflation (c) changes in production techniques (d) changes in production pattern
34. Long-run production is called (a) internal economies of scale (b) external economies of scale (c) increasing return to scale (d) returns to scale
35. The size of the working population is not determined by (a) size of the population (b) age structure (c) statutory age of entry (d) specialisation
36. Production of goods is continuous due to financing by the (a) government (b) retailers (c) consumers (d) wholesalers
37. The slope of the demand curve does not reflect (a) changes in weather (b) the law of diminishing marginal utility (c) substitution effect (d) income effect
38. What is the equilibrium price and quantity if $Q_d = 80 - p$, $Q_s = 20 + 4p$ (a) 10 and 30 (b) 12 and 68 (c) 12 and 86 (d) 68 and 12
39. The present high rate of inflation in Nigeria can be attributed to (a) increasing supply (b) increasing budget surplus (c) increasing cost of production (d) increasing tax rates
40. The shape of the average cost curve shows that as production increases (a) marginal cost steadily increases (b) average cost increases (c) total cost decreases (d) average cost decreases and then increases
41. A Nigeria citizen can only be deprived of his citizenship if he is (a) condemned to death (b) convicted by a court of law (c) an armed robber (d) married to foreigner
42. The following are the key factors which influence Nigeria's foreign relations except (a) peaceful co-existence (b) economic dependence (c) non- interference (d) respect for territorial integrity
43. One can identify a rigid constitution by its (a) amendment procedure (b) nature and scope (c) length (d) sources
44. Judicial independence means that (a) judges are above the law (b) judges can do no wrong (c) the judiciary is responsible to the people (d) judges are not influenced in the discharge of their duties
45. The concept of decentralization includes all the following elements except (a) deconcentration (b) devolution (c) delimitation (d) deligation
46. The practice of two or more sovereign states uniting for security and external affairs is called (a) totalitarianism (b) confederalism (c) republicanism (d) sectionalism

SECTION II: GENERAL PAPER (EDUCATION / PHYSICAL SCIENCES)

1. Education can bring about the following except (a) national disaster (b) self-realisation (c) individual efficiency (d) citizenship effectiveness
2. The Headquarters of NECO is at (a) Abuja (b) Lagos (c) PortHarcourt (d) Minna
3. Which of these agencies is responsible for managing Colleges of Education in Nigeria? (a) NCCE (b) NCEE (c) NUC (d) NCE
4. The first primary school in Nigeria was established at (a) Akpe (b) Abeokuta (c) Badagary (d) Onitsha
5. One of the greatest threat to education in Nigeria (a) unemployment (b) quality decline (c) mass failure (d) examination malpractice
6. Teaching in Nigeria is not yet a profession because (a) teachers are not well motivated (b) Government is not serious (c) Education is on the concurrent list (d) entry into the field is unregulated
7. The major forms of instructional technology is i. the teacher ii. the learner iii. Content of instruction iv. Method of instruction v. evaluation of instruction (a) i and ii (b) i – iii (c) i – iv (d) i – v
8. A system that does not accept new information from the environment and remain detached is called a/an (a) simple system (b) closed system (c) open system (d) disengaged system
9. The teacher's status in the society can be enhanced through the following except (a) improved working condition (b) better pay/professional salaries (c) overseas training courses (d) improved career structures
10. A chart is a ---- (a) flat- two dimensional aid (b) flat three- dimensional aid (c) flat four-dimensional aid (d) diagram of illustrations
11. A table which identifies the objectives and skills which are to be tested and the relative weight of the test items is (a) table of specification (b) a table of test (c) a table of objectives (d) table of skills
12. Which of this school record shows the main events of the institution in a chronological order? (a) Diary (b) log book (c) vote book (d) attendance register
13. The recommended students' population in a single classroom by the Federal Government should not (a) exceed 1:30 or at most a maximum of 1:35 (b) exceed 1:35 or at most a maximum of 1:40 (c) exceed 1:40 or at most a maximum of 1:45 (d) exceed 1:45 or at most a maximum of 1:50
14. A master plan for building a test which indicates the content, the educational objectives and the number of items in each category and on the entire test is known as (a) the bloom taxonomy of education (b) a test blue print (c) operational definitions (d) educational testing service
15. One of the following is a major factor responsible for personality development (a) religion (b) school (c) peer group (d) hereditary
16. In any learning situation, incentives are very important. Which of the following is not a good incentive in classroom situation? (a) Feedback of test result (b) Judicious praise (c) blame (d) use of grades
17. Suppose x varies inversely as y , y varies directly as the square of t and $x = 1$ when $t = 3$
Find x when $t = 1/3$ (a) 81 (b) 27 (c) $1/9$ (d) $1/27$
18. If sine x equals cosine x , what is x in radians? (a) $x/2$ (b) $x/3$ (c) $x/4$ (d) $x/6$
19. The ratio of the price of a loaf of bread to the price of a packet of sugar in 1975 was $r : f$. In 1980 the price of a loaf went up by 25% and that of a packet of sugar by 10%. Their new ratio is now.

- (a) 40r : 50t (b) 44r : 50t (c) 50r : 44t (d) 55r : 44t
20. Find a two-digit number such that three times the tens digit is 2 less than twice the units digit, and twice the number is 20 greater than the number obtained by reversing the digits.
(a) 24 (b) 42 (c) 74 (d) 47
21. Find the value of x satisfying $x/2 - 1/3 < 2x/5 + 1/6$ (a) $x < 5$ (b) $x > 7\frac{1}{2}$ (c) $x < 7\frac{1}{2}$ (d) $x < -5$
22. Two cars X and Y start at the same point and travel towards a point P which is 150km away. If the average speed of Y is 60km per hour and X arrives at P 25 minutes earlier than Y. What is the average speed of X? (a) $51\frac{3}{9}$ km per hour (b) 72km per hour (c) $37\frac{1}{2}$ km per hour (d) 66km per hour
23. What is the area between two concentric circles of diameters 26cm and 20cm?
(a) 100π (b) 169π (c) 69π (d) 9π
24. The difference between the length and width of a rectangle is 6cm and the area is 135cm^2 . What is the length?
(a) 25cm (b) 18cm (c) 15cm (d) 24cm
25. The Minister of the Federal Capital Territory of Nigeria is (a) Bala Muhammed (b) Yusuf Suleiman (c) Idris Umar (d) Mohammed Bello Adoke
26. A heavy object is suspended from a string and lowered into water so that it is completely submerged. The object appears lighter because (a) the density of water is less than that of the object. (b) the pressure is low just below the water surface (c) it experiences an upthrust (d) the tension in the string neutralizes part of the weight
27. Which of the following is a derived unit? (a) Kilogramme (b) metre (c) Kelvin (d) Newton
28. When a box of mass 45kg is given an initial speed of 5ms^{-1} it slides along a horizontal floor a distance of 3m before coming to rest. What is the coefficient of the kinetic friction between the box and the floor? ($g = 10\text{ms}^{-2}$)
(a) $5/6$ (b) $5/12$ (c) $1/3$ (d) $2/3$
29. When two objects P and Q are supplied with the same quantity of heat, the temperature change in P is observed to be twice that of Q. The mass of P is half that of Q. The ratio of the specific heat capacity of P to Q is
(a) 1 : 4 (b) 4 : 1 (c) 1 : 1 (d) 2 : 1
30. A man clapping his hands at regular intervals observes that the echo of a clap coincides with the next clap. If the reflecting cliff is 160m away and the speed of sound is 320ms^{-1} , what is the frequency of the clapping?
(a) 1 Hz (b) 2 Hz (c) 4 Hz (d) 8 Hz
31. 22,000 J of heat is required to raise the temperature of 1.5kg of paraffin from 20°C . Calculate the specific heat capacity of paraffin (a) $1466\text{JKg}^{-1}\text{C}^{-1}$ (b) $2933\text{JKg}^{-1}\text{C}^{-1}$ (c) $4400\text{JKg}^{-1}\text{C}^{-1}$ (d) $5866\text{JKg}^{-1}\text{C}^{-1}$
32. In which of the following are the substances arranged in descending order of their thermal conductivities?
(a) Copper, steel, glass (b) Steel, Copper, glass (c) steel, glass, Copper (d) Copper, glass, steel
33. The resistance of a wire of length 0.8m and area $2 \times 10^{-7}\text{m}^2$ is found to be 40ohms. Calculate the resistivity of the material. (a) $1 \times 10^{-7}\Omega\text{m}$ (b) $1 \times 10^{-5}\Omega\text{m}$ (c) $1 \times 10^{-8}\Omega\text{m}$ (d) $1 \times 10^{-6}\Omega\text{m}$
34. The complex salt formed when aluminium dissolves in Sodium hydroxide solution is?
(a) $\text{Na}_3\text{Al}(\text{OH})_4$ (b) $\text{Na}_2\text{Al}(\text{OH})_3$ (c) $\text{NaAl}(\text{OH})_3$ (d) $\text{NaAl}(\text{OH})_4$
35. In the redox reaction represented by the following equation $\text{Cu}^{2+}_{(\text{aq})} + \text{Zn}_{(\text{s})} \longrightarrow \text{Cu}_{(\text{s})} + \text{Zn}_{(\text{aq})}$
(a) The oxidation number of copper increases (b) Copper (ii) ion is reduced to copper atom
(c) Zinc atom is reduced to Zn ion (d) Copper (ii) ion donates electrons to Zinc atom
36. A current of 40 amperes was passed through Copper (ii) tetraoxosulphate (vi) solution for one hour using copper

- electrode. What was the mass of copper deposited (a) 32g (b) 48g (c) 64g (d) 48g
37. Which of the following compounds will form a solution if exposed to the air
(a) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ (b) NaNO_3 (c) CuSO_4 (d) CaCl_2
38. Under high pressure real gases do not obey gas law because their molecules (a) have become more energetic
(b) have become less energetic (c) have become smaller in size (d) decompose into atoms
39. Which of the following statement is an exception in the assumption of the Kinetic theory of gases?
(a) Gases are composed of many elastic particles (b) The particles are of negligible size
(c) The particles are in constant random motion (d) The particles are of negligible mass
40. Fats and oils are (a) addition products of long-chain fatty acids and glycerol (b) Condensation products of long- chain fatty acids and glycerol (c) Addition products of long-chain fatty acids and alkali (d) None of the above
41. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$ The rate of the above reaction will be greatly increased if (a) The zinc is in the powder form (b) a greater volume of the acid is used (c) a smaller volume of the acid is used (d) The reaction vessel is immersed in an ice-bath
42. The sun's surface temperature is approximately (a) 9000°C (b) 6000°C (c) 600°C (d) 7500°C
43. The circumference of the earth is approximately (a) 10,761 km (b) 12,803 km (c) 40,084 km (d) 150, 000 km
44. The approximate distance of the earth from the sun is (a) 57,600,000 km (b) 107,200,000 km (c) 148,800,000 km (d) 772,800,000 km
45. What is the longitudinal location of place "X" with local time 4.30 pm, when it is 11.30 GMT? (a) 93°W (b) 120°E (c) 75°E (d) 75°N
46. General Murital Muhammed was assassinated in a Col Dimka led coup on
(a) 29/5/1975 (b) 13/2/1996 (c) 14/3/1976 (d) 23/4/1976

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Arts & Law

Total Time Allowed: 1 hour

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- i. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- ii. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- iii. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- iv. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

1. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b) incapable (c) powerless (d) decrepit
2. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
3. She was a very proficient hair dresser but had little aptitude for sew in which she was _____ (a) unskilled (b) unlearned (c) ignorant (d) awkward
4. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
5. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -6-, I quickly -7- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -8- of his title. The -9- harped on Hagler's previous fight and -10- an easy victory over his -11-. I then read through the -12- which usually states the paper's opinion on current issues. The -13- were very many, with some of them taking up full pages. There was only one -14- by an artist whose intention was clearly to -15- readers.

	(a)	(b)	(c)	(d)
6.	trader	dealer	vendor	painter
7.	perused	studied	stared	flipped
8.	victory	attack	protection	defence
9.	correspondent	writer	editor	publisher
10.	predicted	prophesied	imagined	expressed
11.	antagonist	opponent	protagonist	attacker
12.	communiqué	propaganda	editorial	resolution
13.	commercials	announcements	advertisement	exhibits
14.	drawings	cartoon	sketch	caricature
15.	amuse	abuse	annoy	stimulate

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

16. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
17. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom (d) of.fi.cial.DOM
18. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
19. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness (d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

20. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
21. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
22. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids

23. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
24. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
25. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

26. The groom was described as a man of alluring personality. (a) intricate (b) remarkable (c) charming (d) trustworthy
27. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness
28. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom
29. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
30. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

From the words lettered A to D, choose the word that best completes each of the following sentences.

31. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
32. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
33. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
34. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
35. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
36. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
37. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her
38. In order to separate the two boys, the policeman stood _____ them. (a) with (b) against (c) among (d) between

39. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
40. The elite ____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

SUBJECT: GENERAL PAPER

1. According to _____, the leading specialist in African language certification, there are only five independent language families in Africa. (a) Joseph Greenberg (b) Ayo Banjo (c) Francis Egbokhare (d) Harrison Greenland
2. The most famous of the wondering scholars, whose influence eventually spread throughout the western Sudan, was _____ (a) Tijanniya Ahmed (b) Uthman dan Fodio (c) Abdullahi Agades (d) Ahmadu Bello
3. _____ was the first warrior king of Benin Kingdom, who launched the state on the path of conquest, expansion and empire-building in the 15th century. (a) Oba Ozolua (b) Oba Ewuare (c) Oba Esigie (d) Oba Orhogbua
4. Indirect rule in colonial Nigeria was introduced by _____ (a) Sir John Macpherson (b) Sir Oliver Lyttleton (c) Sir Hugh Clifford (d) Sir Frederick Lugard
5. In _____ in Lagos, the Nigerian Youth Movement (NYM) was formed and put forward a charter which sought to encourage national feeling in Nigeria and demanded self-determination and Africanisation. (a) 1932 (b) 1933 (c) 1934 (d) 1935
6. European powers met in _____ to discuss their interests in Africa in the second half of the 19th century. (a) Berlin (b) Paris (c) London (d) Barcelona
7. At independence in 1960, the federal government of Nigeria was led by _____ (a) Queen Elizabeth II (b) Dr. Nnamdi Azikiwe (c) Chief Obafemi Awolowo (d) Sir Abubakar Tafawa Balewa
8. The proclamation of the Republic of Biafra was made on _____ (a) 30th May, 1967 (b) 15th July, 1967 (c) 1st August, 1967 (d) 18th September, 1967
9. The driving force at the 1945 Pan-African Conference in London was supplied by the energy of two men, _____ (a) King George V and Prince Harry (b) William Boyd and Steven Ross (c) Kwame Nkrumah and George Padmore (d) Ben Moore and George Washington
10. The Charter of the Organization of African Unity (OAU) was signed on _____ (a) 25th August, 1955 (b) 17th August, 1975 (c) 26th May, 1963 (d) 18th May, 1993
11. _____ has been adopted by the African Union as one of the Pan-African languages and has been proposed as a future lingua franca for Africa. (a) Mandinka language (b) English language (c) Yoruba language (d) Swahili language
12. The evidence that one of King Solomon's wives was an African is recorded in _____ (a) Proverbs (b) Song of Solomon (c) Chronicles (d) Revelation

13. The coming of _____ in the seventh century was responsible for the eclipse of Christianity in the Maghreb and Nubia. (a) Judaism (b) Islam (c) Hindu (d) Hebrew
14. The _____ were the first European power to sail into the Indian Ocean from the South, through the Cape. (a) Spanish (b) British (c) French (d) Portuguese
15. The apartheid system in South Africa collapsed in _____ (a) 1984 (b) 1994 (c) 2004 (d) 2014
16. The United Nations Charter on Human Rights was released in _____ (a) 1945 (b) 1948 (c) 1957 (d) 1919
17. Bicameralism was introduced in the _____ Constitution of Nigeria. (a) 1954 (b) 1957 (c) 1960 (d) 1963
18. The legislative process is also known as _____ (a) appropriation (b) law-making (c) judicial action (d) executive relations
19. The terrorist attack in the United States that started the war against 'the new international terrorism' was on _____ (a) September 9, 2011 (b) June 12, 1993 (c) September 11, 2001 (d) June 19, 2012
20. The legislature is a _____ of government. (a) code (b) branch (c) citizen (d) tier
21. 'The Tempest' by William Shakespeare is a _____ play. (a) comic (b) historical (c) tragic (d) tragicomedy
22. The major theme in 'Women of Owu' by Femi Osofisan is _____ (a) the negative effect of war (b) the beauty of war (c) war brings peace (d) the effective effect of war
23. The people of Brenhoma in 'A Woman in her Prime' by Asare Konadu, are said to be _____ (a) prayerful (b) superstitious (c) kindful (d) envious
24. In 'The Old Man and the Sea' by Ernest Hemingway, Santiago exhibits the spirit of all these except (a) determination (b) perseverance (c) laziness (d) headwork
25. In P.O.C. Umeh's poem, 'Ambassadors of Poverty', the poet made great use of _____ (a) metonymy (b) exaggeration (c) irony (d) oxymoron
26. Sola Owonibi's 'Homeless Not Hopeless', dwells on _____ (a) class stratification (b) age differences (c) wealth (d) happiness
27. In Jared Angira's 'Expelled', the poet dwells on _____ (a) indoctrination (b) colonization (c) acquisition (d) solemnization
28. In the poem 'Expelled', the coming of the colonists bring all these to the people except _____ (a) rejection (b) disunity (c) neglect (d) brotherliness
29. In John Donne's 'The Sun Rising', the poet made dominant use of _____ (a) personification (b) images (c) simile (d) oxymoron
30. In the poem, 'Tell Faith it's Fled the City', is an example of _____ (a) metaphor (b) simile (c) personification (d) paradox
31. Fiat characters are _____ (a) characters who are 'type' and do not change (b) selective characters (c) characters that grow and change in the story (d) characters without respect
32. The point at which incidents in a story reach their height or peak is known as _____ (a) motivation (b) climax (c) anti-climax (d) comic relief

33. Every good novel should strive to _____ (a) be satirical (b) redeem mankind (c) be a reflection of life (d) have a comic event
34. The court in the poem, 'The Soul's Errand' by Sir Walter Raleigh, is an example of _____ (a) metonymy (b) euphemism (c) synecdoche (d) metaphor
35. Beauty in the poem 'Hard Lines' by Gbemisola Adeoti, is said to be _____ (a) a virtue (b) in excess (c) deceitful (d) in dire need in human society

Questions 36 – 50 are divided into two parts (Part I & II). Candidates are expected to answer questions in either Part I or Part II, but not both.

Part I

36. God fed the Israelites with manna in the wilderness of (a) Sinai (b) Sin (c) Horeb (d) Meribah.
37. The greatest achievement of King Josiah of Judah was (a) his religious reforms (b) the expansion of his territory (c) the Deuteronomy reform of 621BC (d) his improvement of relations with Assyria.
38. The agony of Jesus occurred in (a) Galilee (b) Jerusalem (c) Bethany (d) Gethsemane.
39. According to St. John's Gospel, Lazarus was from (a) Bethany (b) Galilee (c) Jerusalem (d) Bethsaida.
40. The Jewish highest council is referred to as the (a) Pharisees (b) Zealots (c) Sanhedrin (d) Nazarenes.
41. The first missionary journey of St. Paul took off from (a) Perga in Pamphylia (b) Paphos (c) Cyprus (d) Antioch in Syria.
42. Paul was very confident that Philemon would grant his request because (a) Philemon had proved himself a true Christian partner (b) Paul promised to pay back all debts owned by Onesimus (c) Philemon was his former slave (d) his imprisonment would arouse Philemon's sympathy and compliance.
43. Elijah called for a contest between him and worshippers of Baal to (a) show that God always answered him by fire (b) prove that the drought could end through sacrifice (c) demonstrate God's power over the Baals (d) show that he could bring rain.
44. One of the moral defects of David which Nathan condemned was (a) adultery (b) idolatry (c) polytheism (d) ethnicity.
45. Whosoever drinks the water Jesus gives will never thirst. What is this water? (a) The Spirit of God (b) Holy and anointed water (c) The word of God (d) Law of God.
46. Who among the following came to Jesus at night to enquire about the Kingdom of God? (a) Peter (b) Martha (c) Nicodemus (d) Mary.
47. Christians living among non-Christians should win them over by (a) visiting and praying for them daily (b) forcing them to change their ways of life (c) reconciling themselves to their ways of life (d) maintaining good conduct always.

48. Sin that reigns in our mortal bodies makes us obey (a) one another (b) rules and regulations (c) our passions (d) our rulers.
49. According to the Mosaic law, the only authority to declare a leper healed was (a) Jesus Christ (b) the Emperor (c) the priest (d) the elders.
50. Which, according to Luke, were the last words of Jesus? (a) "Eli, Eli, lamasabach-thani" (b) "Father forgive them for they do not know what they do" (c) "Truly, I say to you, today you will be with me in paradise" (d) "Father unto thy hands I commit my Spirit".

Part II

36. He who takes another person's life mistakenly should do one of the following _____
 (a) run away (b) pay the blood money (c) go to court (d) all of the above
37. _____ became the Khalifah of Muslims after the death of Prophet Muhammad. (a) Ali (b) Shehu (c) Abubakar (d) Ibrahim
38. Afa is a word popularly used by the Muslims in the _____ (a) Hausa land (b) Igbo land (c) Arab world (d) Yoruba land
39. Ustaz in Islam means _____ (a) scholar (b) trader (c) preacher (d) driver
40. A Muslim woman is considered impure to pray or fast when she is on _____ (a) Hajj (b) picnic (c) menstruation (d) journey
41. In the Quran, Allah said, 'He who kills an innocent soul is as if he has killed _____'.
 (a) the whole Christians (b) the whole family (c) the whole Muslims (d) the whole of mankind
42. In one of the Hadith of the Prophet, he said, none of you is a true believer except you love for yourself what you love for your _____ (a) neighbour (b) father (c) mother (d) wife
43. The punishment for sodomy in Islam is _____ (a) two year imprisonment (b) three years imprisonment (c) stone to death (d) life imprisonment
44. Interest is prohibited in Islam because it _____ (a) makes the rich richer and the poor poorer (b) makes people happy (c) benefits only the poor (d) creates slavery
45. Before the advent of Muhammad, the Arabs were worshippers of _____ (a) idols (b) fire (c) moon (d) graves
46. Divorce in Islam is allowed but it is _____ (a) the last option (b) disliked (c) not encouraged (d) all of the above
47. Prophet Muhammad died in which city _____ (a) Iran (b) Iraq (c) Medina (d) Makkah
48. The two recognized celebrations in Islam are _____ (a) Idil Fitri and Idil Maulud (b) Maulud and Idil Adha (c) Idil Fitri and Idil Adha (d) Idil Maulud and Ramadan
49. The washing done by Muslims before prayers is called _____ (a) spiritual bath (b) Azan (c) ablution (d) Zakat
50. The Spiritual leader of Muslims in Nigeria is _____ (a) Sanusi Lamido Sanusi (b) Emir of Zaria (c) Lamido Adamawa (d) Sultan of Sokoto

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014
COURSE: Education – Arts

Total Time Allowed: 1 hour

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- v. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- vi. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- vii. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- viii. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -1-, I quickly -2- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -3- of his title. The -4- harped on Hagler's previous fight and -5- an easy victory over his -6-. I then read through the -7- which usually states the paper's opinion on current issues. The -8- were very many, with some of them taking up full pages. There was only one -9- by an artist whose intention was clearly to -10- readers.

	(a)	(b)	(c)	(d)
41.	trader	dealer	vendor	painter
42.	perused	studied	stared	flipped
43.	victory	attack	protection	defence
44.	correspondent	writer	editor	publisher
45.	predicted	prophesied	imagined	expressed
46.	antagonist	opponent	protagonist	attacker
47.	communiqué	propaganda	editorial	resolution

- | | | | | |
|-----|-------------|---------------|---------------|------------|
| 48. | commercials | announcements | advertisement | exhibits |
| 49. | drawings | cartoon | sketch | caricature |
| 50. | amuse | abuse | annoy | stimulate |

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

51. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
52. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom (d) of.fi.cial.DOM
53. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
54. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness (d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

55. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
56. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
57. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids
58. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
59. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
60. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

61. The groom was described as a man of alluring personality.
 (a) intricate (b) remarkable (c) charming (d) trustworthy

62. The complainant was not happy with the decision of the court. (a) solicitor (b) accused
(c) plaintiff (d) witness
63. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d)
wisdom
64. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b)
kindness (c) rascality (d) disobedience
65. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

From the words lettered A to D, choose the word that best completes each of the following sentences.

66. When the two women started fighting, the man who tried to _____ was knocked down.
(a) intrude (b) interpose (c) intervene (d) obstruct
67. The journalists saw that she was _____ and although they admired her, they also hated her.
(a) a young career ruthless woman (b) a career young ruthless woman (c) a young career
ruthless woman (d) a ruthless young career woman
68. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new
appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising
carbonated new soft
69. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c)
with (d) from
70. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made
out (b) made away (c) made up (d) made through
71. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when
(d) than
72. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's
(d) who her
73. In order to separate the two boys, the policeman stood _____ them. (a) with (b) against (c)
among (d) between
74. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will
repeat (d) would repeat
75. The elite _____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d)
is having

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

76. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b)
incapable (c) powerless (d) decrepit
77. The doctor was acquitted after being _____ by a female patient of seducing her. (a)
sentenced (b) defended (c) accused (d) discharged
78. She was a very proficient hair dresser but had little aptitude for sew in which she was
_____ (a) unskilled (b) unlearned (c) ignorant (d) awkward

79. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
80. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

SUBJECT: GENERAL PAPER

1. Sociology of Education essentially focuses on _____ (a) socioeconomic status of members of the society (b) resolutions of gender issues in the society (c) influences of the society on school and vice versa (d) arranging roles or responsibilities to school leavers
2. The author of the National Policy on Education (2004) edition is _____ (a) Federal Republic of Nigeria (b) Federal Government of Nigeria (c) Federal Ministry of Education (d) Federal Office of Statistics
3. The minimum teaching qualification approved by the government of Nigeria is _____ (a) TC II (b) NCE (c) B.Ed. (d) Diploma in Education
4. The government parastatal that supply and control primary education in Nigeria is known as _____ (a) Universal Basic Education Commission (b) National Primary Education Commission (c) Local Education Authority (d) None of the above
5. Philosophy of education is intended to _____ (a) cover what education is all about (b) create the logical purity and sequence in the body of knowledge (c) options (a) and (b) (d) none of the above
6. The agency that regulates the establishment, management and funding of colleges of education in Nigeria is the _____ (a) Federal Ministry of Establishment and Manpower (b) National Commission for Colleges of Education (c) Fede National Council on Education (d) none of the above
7. The memory process encompasses _____ (a) encoding and storage processes only (b) encoding, storage and retrieval processes only (c) encoding, storage, retrieval and feedback processes only (d) none of the above
8. Operant conditioning theory was propounded by _____ (a) B.F. Skinner (b) Pavlov (c) Thorndike (d) John Dewey
9. Behavioural objectives in lesson note are written in actionable words such as: (a) know, understand, show, help, draw, list (b) draw, list, identify, sing, dance (c) come, go, carry, draw, list (d) all of the above
10. In writing lesson note, (a) the demographics of the students are compulsory (b) explanation of the lesson presentation is compulsory (c) evaluation of the lesson and use of teaching aids are not necessarily compulsory (d) both options (a) and (b) are correct
11. The following are the qualities of a good teacher except (a) dress flamboyantly (b) talk very loud (c) comport him/herself very well (d) punctual at classes
12. The following are sources of financing public primary education in Nigeria except (a) payment of school fees (b) support from PTA (c) donations (d) school business ventures
13. The following are examples of records kept in the school _____ (a) logbook, staff meeting minutes book (b) lesson note, lesson plan, teacher salary structure (c) logbook, lesson note, time book (d) all of the above

14. The approved class size for Nigerian secondary schools is _____ (a) 1:30 (b) 1:35 (c) 1:40 (d) options (a) and (c)
15. The purpose of education is to _____ (a) speak English fluently (b) solve mathematics problems quickly (c) acquire skills to function and survive in the society (d) earn good salary and allowances
16. Learning occurs when _____ (a) a learner passes his/her examinations (b) desirable changes occur in behaviour (c) a learner is able to read and write (d) all of the above
17. All are agents of socialization except _____ (a) home (b) church (c) government (d) peer groups
18. _____ is not a descriptive statistic (a) t-test (b) standard deviation (c) mean (d) range
19. The following are measures of central tendencies except _____ (a) variance (b) mean (c) mode (d) median
20. The first university to be established in Nigeria is the _____ (a) University of Nigeria, Nsukka (b) University of Lagos, Akoka (c) University of Ibadan, Ibadan (d) University of Benin, Benin City
21. European powers met in _____ to discuss their interests in Africa in the second half of the 19th century. (a) Berlin (b) Paris (c) London (d) Barcelona
22. At independence in 1960, the federal government of Nigeria was led by _____ (a) Queen Elizabeth II (b) Dr. Nnamdi Azikiwe (c) Chief Obafemi Awolowo (d) Sir Abubakar Tafawa Balewa
23. The proclamation of the Republic of Biafra was made on _____ (a) 30th May, 1967 (b) 15th July, 1967 (c) 1st August, 1967 (d) 18th September, 1967
24. The driving force at the 1945 Pan-African Conference in London was supplied by the energy of two men, _____ (a) King George V and Prince Harry (b) William Boyd and Steven Ross (c) Kwame Nkrumah and George Padmore (d) Ben Moore and George Washington
25. The Charter of the Organization of African Unity (OAU) was signed on _____ (a) 25th August, 1955 (b) 17th August, 1975 (c) 26th May, 1963 (d) 18th May, 1993
26. _____ has been adopted by the African Union as one of the Pan-African languages and has been proposed as a future lingua franca for Africa. (a) Mandinka language (b) English language (c) Yoruba language (d) Swahili language
27. The evidence that one of King Solomon's wives was an African is recorded in _____ (a) Proverbs (b) Song of Solomon (c) Chronicles (d) Revelation
28. The coming of _____ in the seventh century was responsible for the eclipse of Christianity in the Maghreb and Nubia. (a) Judaism (b) Islam (c) Hindu (d) Hebrew
29. The _____ were the first European power to sail into the Indian Ocean from the South, through the Cape. (a) Spanish (b) British (c) French (d) Portuguese
30. The apartheid system in South Africa collapsed in _____ (a) 1984 (b) 1994 (c) 2004 (d) 2014

31. The United Nations Charter on Human Rights was released in _____ (a) 1945 (b) 1948 (c) 1957 (d) 1919
32. Bicameralism was introduced in the _____ Constitution of Nigeria. (a) 1954 (b) 1957 (c) 1960 (d) 1963
33. The legislative process is also known as _____ (a) appropriation (b) law-making (c) judicial action (d) executive relations
34. The terrorist attack in the United States that started the war against 'the new international terrorism' was on _____ (a) September 9, 2011 (b) June 12, 1993 (c) September 11, 2001 (d) June 19, 2012
35. The legislature is a _____ of government. (a) code (b) branch (c) citizen (d) tier
36. 'The Tempest' by William Shakespeare is a _____ play. (a) comic (b) historical (c) tragic (d) tragicomedy
37. The major theme in 'Women of Owu' by Femi Osofisan is _____ (a) the negative effect of war (b) the beauty of war (c) war brings peace (d) the effective effect of war
38. The people of Brenhoma in 'A Woman in her Prime' by Asare Konadu, are said to be _____ (a) prayerful (b) superstitious (c) kindful (d) envious
39. In 'The Old Man and the Sea' by Ernest Hemingway, Santiago exhibits the spirit of all these except (a) determination (b) perseverance (c) laziness (d) headwork
40. In P.O.C. Umeh's poem, 'Ambassadors of Poverty', the poet made great use of _____ (a) metonymy (b) exaggeration (c) irony (d) oxymoron

Questions 41 – 50 are divided into two parts (Part I & II). Candidates are expected to answer questions in either Part I or Part II, but not both.

Part I

41. God fed the Israelites with manna in the wilderness of (a) Sinai (b) Sin (c) Horeb (d) Meribah.
42. The greatest achievement of King Josiah of Judah was (a) his religious reforms (b) the expansion of his territory (c) the Deuteronomy reform of 621BC (d) his improvement of relations with Assyria.
43. The agony of Jesus occurred in (a) Galilee (b) Jerusalem (c) Bethany (d) Gethsemane.
44. According to St. John's Gospel, Lazarus was from (a) Bethany (b) Galilee (c) Jerusalem (d) Bethsaida.
45. The Jewish highest council is referred to as the (a) Pharisees (b) Zealots (c) Sanhedrin (d) Nazarenes.
46. The first missionary journey of St. Paul took off from (a) Pergia in Pamphylia (b) Paphos (c) Cyprus (d) Antioch in Syria.
47. Paul was very confident that Philemon would grant his request because (a) Philemon had proved himself a true Christian partner (b) Paul promised to pay back all debts

- owned by Onesimus (c) Philemon was his former slave (d) his imprisonment would arouse Philemon's sympathy and compliance.
48. Elijah called for a contest between him and worshippers of Baal to (a) show that God always answered him by fire (b) prove that the drought could end through sacrifice (c) demonstrate God's power over the Baals (d) show that he could bring rain.
49. One of the moral defects of David which Nathan condemned was (a) adultery (b) idolatry (c) polytheism (d) ethnicity.
50. Whosoever drinks the water Jesus gives will never thirst. What is this water? (a) The Spirit of God (b) Holy and anointed water (c) The word of God (d) Law of God.

Part II

81. He who takes another person's life mistakenly should do one of the following _____
 (b) run away (b) pay the blood money (c) go to court (d) all of the above
82. _____ became the Khalifah of Muslims after the death of Prophet Muhammad. (a)
 Ali (b) Shehu (c) Abubakar (d) Ibrahim
83. Afa is a word popularly used by the Muslims in the _____ (a) Hausa land (b)
 Igbo land (c) Arab world (d) Yoruba land
84. Ustaz in Islam means _____ (a) scholar (b) trader (c) preacher (d) driver
85. A Muslim woman is considered impure to pray or fast when she is on _____ (a) Hajj
 (b) picnic (c) menstruation (d) journey
86. In the Quran, Allah said, 'He who kills an innocent soul is as if he has killed _____'.
 (a) the whole Christians (b) the whole family (c) the whole Muslims (d) the whole of
 mankind
87. In one of the Hadith of the Prophet, he said, none of you is a true believer except you love for
 yourself what you love for your _____ (a) neighbour (b) father (c) mother (d)
 wife
88. The punishment for sodomy in Islam is _____ (a) two year imprisonment (b)
 three years imprisonment (c) stone to death (d) life imprisonment
89. Interest is prohibited in Islam because it _____ (a) makes the rich richer and the
 poor poorer (b) makes people happy (c) benefits only the poor (d) creates slavery
90. Before the advent of Muhammad, the Arabs were worshippers of _____ (a) idols
 (b) fire (c) moon (d) graves

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Education – Management & Social Sciences Total Time Allowed: 1 hour

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- ix. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- x. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xi. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xii. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

91. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b) incapable (c) powerless (d) decrepit
92. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
93. She was a very proficient hair dresser but had little aptitude for sew in which she was _____ (a) unskilled (b) unlearned (c) ignorant (d) awkward
94. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
95. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -6-, I quickly -7- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -8- of his title. The -9- harped on Hagler's previous fight and -10- an easy victory over his -11-. I then read through the -12- which usually states the paper's opinion on current issues. The -13- were very many, with some of them taking up full pages. There was only one -14- by an artist whose intention was clearly to -15- readers.

	(a)	(b)	(c)	(d)
96.	trader	dealer	vendor	painter
97.	perused	studied	stared	flipped
98.	victory	attack	protection	defence
99.	correspondent	writer	editor	publisher
100.	predicted	prophesied	imagined	expressed
101.	antagonist	opponent	protagonist	attacker
102.	communiqué	propaganda	editorial	resolution
103.	commercials	announcements	advertisement	exhibits
104.	drawings	cartoon	sketch	caricature
105.	amuse	abuse	annoy	stimulate

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

106. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
107. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom
(d) of.fi.cial.DOM
108. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
109. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness
(d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

110. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
111. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
112. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids

113. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
114. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
115. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

116. The groom was described as a man of alluring personality. (a) intricate (b) remarkable (c) charming (d) trustworthy
117. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness
118. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom
119. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
120. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

From the words lettered A to D, choose the word that best completes each of the following sentences.

121. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
122. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
123. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
124. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
125. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
126. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
127. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her

128. In order to separate the two boys, the policeman stood ____ them. (a) with (b) against (c) among (d) between
129. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
130. The elite ____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

SUBJECT: GENERAL PAPER

51. _____ are legally imposed minimum prices usually above the market equilibrium price. (a) Price floors (b) Price ceilings (c) Administered prices (d) market prices
52. _____ exists when a formed organization of producers within the industry is established to take over certain management decisions and functions of individual firms. (a) Oligopoly (b) Monopoly (c) Cartel (d) Duopoly
53. In instituting minimum wage laws, the government aims to _____ (a) improve the standard of living of the masses at the lower tail of the income strata (b) curtail the exploitation of the relatively immobile labour class (c) increase the buying power of the low income families (d) all of the above
54. When we take the first derivative of the total cost function, we obtain _____. (a) average cost (b) marginal cost (c) simple cost (d) diminishing cost
55. Marginal efficiency of capital is _____. (a) the lowest rate of return expected from an additional unit of a capital asset over its cost. (b) the highest rate of return expected from an additional unit of a capital asset over its cost (c) the lowest rate of return expected from the total unit of a capital asset (d) the highest rate of return expected from the total unit of a capital asset
56. Under the classical theory, unemployment results from _____. (a) the rigidity in the wage structure (b) the interference in the working of free market system in the form of trade union legislation, minimum wage legislation (c) options (a) and (b) (d) none of the above
57. Disequilibrium in balance of payments of a country may be caused by _____. (a) changes in exchange rates (b) changes in national income (c) price changes (d) all of the above
58. The price of one currency in terms of another currency is _____. (a) exchange rate (b) inflation rate (c) swap rate (d) drift rate
59. _____ is a systematic record of all its economic transactions with the outside world in a given year. (a) Balance of payments account (b) Balance of trade (c) Gross National Product (d) Exchangeable record
60. The history of accounting is traceable to _____. (a) Abraham Lincoln (b) Robert Mugabe (c) Luca Pacioli (d) John Luck
61. _____ is a mathematical relationship between what a business owns and what a business owes. (a) Assets (b) Liabilities (c) Balance sheet (d) Profit and loss account

62. If sales = ₦30,000; cost of sales = ₦15,000 and other expenses = ₦8,200, then find the gross profit and net profit, respectively. (a) ₦6,800; ₦15,000 (b) ₦15,000; ₦7,800 (c) ₦45,000; ₦6,800 (d) ₦15,000; ₦6,8000
63. In an imprest system, the total amount expended in a period is ₦9,730, while the reimbursement is ₦1,370. What is the float? (a) ₦8,360 (b) ₦11,100 (c) ₦10,000 (d) I do not know
64. _____ is 'an unconditional order in writing addressed by one person to another, signed by the giving it requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time, a sum certain in amount to or the order of specified person or to bearer'. (a) Negotiable instrument (b) Warranty (c) Bill of lading (d) Bill of exchange
65. _____ is a reduction in the catalogue price of an article, given by a wholesaler or manufacturer to a retailer. (a) Trade discount (b) Cash discount (c) Settlement discount (d) Bulk discount
66. Sociology of Education essentially focuses on _____ (a) socioeconomic status of members of the society (b) resolutions of gender issues in the society (c) influences of the society on school and vice versa (d) arranging roles or responsibilities to school leavers
67. The author of the National Policy on Education (2004) edition is _____ (a) Federal Republic of Nigeria (b) Federal Government of Nigeria (c) Federal Ministry of Education (d) Federal Office of Statistics
68. The minimum teaching qualification approved by the government of Nigeria is _____ (a) TC II (b) NCE (c) B.Ed. (d) Diploma in Education
69. The government parastatal that supply and control primary education in Nigeria is known as _____ (a) Universal Basic Education Commission (b) National Primary Education Commission (c) Local Education Authority (d) None of the above
70. Philosophy of education is intended to _____ (a) cover what education is all about (b) create the logical purity and sequence in the body of knowledge (c) options (a) and (b) (d) none of the above
71. The agency that regulates the establishment, management and funding of colleges of education in Nigeria is the _____ (a) Federal Ministry of Establishment and Manpower (b) National Commission for Colleges of Education (c) Fede National Council on Education (d) none of the above
72. The memory process encompasses _____ (a) encoding and storage processes only (b) encoding, storage and retrieval processes only (c) encoding, storage, retrieval and feedback processes only (d) none of the above
73. Operant conditioning theory was propounded by _____ (a) B.F. Skinner (b) Pavlov (c) Thorndike (d) John Dewey
74. Behavioural objectives in lesson note are written in actionable words such as: (a) know, understand, show, help, draw, list (b) draw, list, identify, sing, dance (c) come, go, carry, draw, list (d) all of the above
75. In writing lesson note, (a) the demographics of the students are compulsory (b) explanation of the lesson presentation is compulsory (c) evaluation of the lesson and use of teaching aids are not necessarily compulsory (d) both options (a) and (b) are correct

76. The following are the qualities of a good teacher except (a) dress flamboyantly (b) talk very loud (c) comport him/herself very well (d) punctual at classes
77. The following are sources of financing public primary education in Nigeria except (a) payment of school fees (b) support from PTA (c) donations (d) school business ventures
78. The following are examples of records kept in the school _____ (a) logbook, staff meeting minutes book (b) lesson note, lesson plan, teacher salary structure (c) logbook, lesson note, time book (d) all of the above
79. The approved class size for Nigerian secondary schools is _____ (a) 1:30 (b) 1:35 (c) 1:40 (d) options (a) and (c)
80. The purpose of education is to _____ (a) speak English fluently (b) solve mathematics problems quickly (c) acquire skills to function and survive in the society (d) earn good salary and allowances
81. Learning occurs when _____ (a) a learner passes his/her examinations (b) desirable changes occur in behaviour (c) a learner is able to read and write (d) all of the above
82. All are agents of socialization except _____ (a) home (b) church (c) government (d) peer groups
83. _____ is not a descriptive statistic (a) t-test (b) standard deviation (c) mean (d) range
84. The following are measures of central tendencies except _____ (a) variance (b) mean (c) mode (d) median
85. The first university to be established in Nigeria is the _____ (a) University of Nigeria, Nsukka (b) University of Lagos, Akoka (c) University of Ibadan, Ibadan (d) University of Benin, Benin City
86. Given the sets $A = \{x: x^2 - 3x + 2 = 0\}$ and $B = \{x: x = 2n + 1, n \text{ is an integer}\}$, find $A \cap B$. (a) $\{1, 2\}$ (b) $\{1, 3, 4\}$ (c) $\{1\}$ (d) ϕ
87. If $x^2 - xy - 6y^2 = 0$, find the values of $\frac{x}{y}$. (a) 3, -4 (b) -2, 3 (c) -5, 4 (d) -2, -5
88. Solve the equations $x + y = 5$ and $x^2 + y^2 = 13$, $x < y$. (a) 2, 5 (b) 3, 4 (c) 2, 3 (d) 1, 6
89. Solve $2^{2x} + 4(2^x) - 32 = 0$. (a) -8 (b) 4 (c) 6 (d) 2
90. Solve the equation $\log_{10}(3x^2 + 8) = 1 + \log_{10}\left(\frac{x}{2} + 1\right)$. (a) -3, 2 (b) -2, $\frac{1}{3}$ (c) $-\frac{1}{3}$, 2 (d) -2, 3
91. According to _____, the leading specialist in African language certification, there are only five independent language families in Africa. (a) Joseph Greenberg (b) Ayo Banjo (c) Francis Egbokhare (d) Harrison Greenland
92. The most famous of the wondering scholars, whose influence eventually spread throughout the western Sudan, was _____ (a) Tijanniya Ahmed (b) Uthman dan Fodio (c) Abdullahi Agades (d) Ahmadu Bello

93. _____ was the first warrior king of Benin Kingdom, who launched the state on the path of conquest, expansion and empire-building in the 15th century. (a) Oba Ozolua (b) Oba Ewuare (c) Oba Esigie (d) Oba Orhogbua
94. The driving force at the 1945 Pan-African Conference in London was supplied by the energy of two men, _____ (a) King George V and Prince Harry (b) William Boyd and Steven Ross (c) Kwame Nkrumah and George Padmore (d) Ben Moore and George Washington
95. The Charter of the Organization of African Unity (OAU) was signed on _____ (a) 25th August, 1955 (b) 17th August, 1975 (c) 26th May, 1963 (d) 18th May, 1993
96. _____ has been adopted by the African Union as one of the Pan-African languages and has been proposed as a future lingua franca for Africa. (a) Mandinka language (b) English language (c) Yoruba language (d) Swahili language
97. The evidence that one of King Solomon's wives was an African is recorded in _____ (a) Proverbs (b) Song of Solomon (c) Chronicles (d) Revelation
98. The coming of _____ in the seventh century was responsible for the eclipse of Christianity in the Maghreb and Nubia. (a) Judaism (b) Islam (c) Hindu (d) Hebrew
99. The _____ were the first European power to sail into the Indian Ocean from the South, through the Cape. (a) Spanish (b) British (c) French (d) Portuguese
100. The apartheid system in South Africa collapsed in _____ (a) 1984 (b) 1994 (c) 2004 (d) 2014

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Education – Physical Sciences, Vocational & Technical Education **Total Time Allowed: 1 hour**

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- xiii. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- xiv. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xv. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xvi. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the words lettered A to D, choose the word that best completes each of the following sentences.

- 131. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
- 132. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
- 133. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
- 134. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
- 135. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
- 136. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
- 137. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her
- 138. In order to separate the two boys, the policeman stood _____ them. (a) with (b) against (c) among (d) between
- 139. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat

140. The elite ____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

141. Abimbola is a very sturdy child, but his sister Simisola is _____. (a) puny (b) incapable (c) powerless (d) decrepit
142. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
143. She was a very proficient hair dresser but had little aptitude for sew in which she was _____. (a) unskilled (b) unlearned (c) ignorant (d) awkward
144. At school, John was industrious, whereas his brother was _____. (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
145. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -16-, I quickly -17- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -18- of his title. The -19- harped on Hagler's previous fight and -20- an easy victory over his -21-. I then read through the -22- which usually states the paper's opinion on current issues. The -23- were very many, with some of them taking up full pages. There was only one -24- by an artist whose intention was clearly to -25- readers.

- | | (a) | (b) | (c) | (d) |
|------|---------------|---------------|---------------|------------|
| 146. | trader | dealer | vendor | painter |
| 147. | perused | studied | stared | flipped |
| 148. | victory | attack | protection | defence |
| 149. | correspondent | writer | editor | publisher |
| 150. | predicted | prophesied | imagined | expressed |
| 151. | antagonist | opponent | protagonist | attacker |
| 152. | communiqué | propaganda | editorial | resolution |
| 153. | commercials | announcements | advertisement | exhibits |

- | | | | | |
|------|----------|---------|--------|------------|
| 154. | drawings | cartoon | sketch | caricature |
| 155. | amuse | abuse | annoy | stimulate |

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

156. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
157. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom
(d) of.fi.cial.DOM
158. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
159. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness
(d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

160. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
161. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
162. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids
163. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
164. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
165. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

166. The groom was described as a man of alluring personality.
(a) intricate (b) remarkable (c) charming (d) trustworthy
167. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness
168. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom

169. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
170. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

SUBJECT: GENERAL PAPER

1. A nutritious diet is _____ (a) a diet good for all family member (b) a diet prepared with rice (c) a diet that contains all essential nutrients (d) a diet rich in protein
2. Vitamin _____ improves eyesight. (a) K (b) A (c) D (d) B
3. Safety in the kitchen starts from _____ (a) allowing children into the kitchen (b) interring the floor with peels from floors (c) moping up all liquid spills on the floor immediately (d) putting on high heel shoes
4. Household equipments are classified into _____ (a) brooms and brushes (b) vacuum cleaners and carpet sweeper (c) mechanical and electrical equipment (d) dish washes and mashing machine
5. The human ear is divided into _____ parts. (a) four (b) three (c) one (d) five
6. _____ is one of the benefits of consumer education. (a) It enables the consumer to obtain the best value for his money (b) Engage in lire purchase (c) Engage in impulsive buying (d) Enables the consumers to buy cheap commodities
7. In educational measurement, which of these is considered a measure of students' achievement? (a) Observation (b) Interview (c) Questionnaire (d) Essay
8. In designing a test blue print for pupils in primary one, the highest member of items should be at the _____ level. (a) knowledge (b) understanding (c) application (d) interpretation
9. In an examination hall, the following except one is needed. (a) Invigilator (b) Supervisor (c) Attendant (d) Security guard
10. The test used to measure students personality include _____ (a) quantitative aptitude (b) verbal aptitude (c) interest (d) special ability
11. Which of these scales has absolute zero? (a) Nominal (b) Ordinal (c) Interval (d) Ratio
12. Which of these is not a measure of central tendency? (a) Mean (b) Median (c) Variance (d) Mode
13. The age bracket of adolescence is _____ (a) 6 – 12 years (b) 12 – 18 years (c) 18 – 40 years (d) 14 – 19 years
14. In Maslow's hierarchy of needs, the first to be satisfied is _____ (a) psychological needs (b) social needs (c) safety needs (d) self-esteem needs
15. One pointer to poor home environment as inhibiting learning is _____ (a) lateness to school (b) restlessness in class (c) noise making (d) non-completion of assignment
16. When the teacher has a large content area to cover, the preferred method of teaching is _____ (a) demonstration (b) discussion (c) peer intoring (d) lecture
17. In Jean Piaget theory of intellectual development, the pre-operational stage is between _____ years. (a) 0 – 2 (b) 2 – 7 (c) 8 – 11 (d) 12 and above

18. The teaching method that encourages students active participation in the learning process is _____ (a) field trip (b) inquiry (c) demonstration (d) team teaching
19. The following is an example of non-conventional method of teaching. (a) Lecture (b) Demonstration (c) Brainstorming (d) projects
20. What type of test is most assured to objective scoring? (a) Essay (b) Matching (c) Completion (d) Multiple choice
21. Given the sets $A = \{x: x^2 - 3x + 2 = 0\}$ and $B = \{x: x = 2n + 1, n \text{ is an integer}\}$, find $A \cap B$. (a) $\{1, 2\}$ (b) $\{1, 3, 4\}$ (c) $\{1\}$ (d) ϕ
22. If $x^2 - xy - 6y^2 = 0$, find the values of $\frac{x}{y}$. (a) 3, -4 (b) -2, 3 (c) -5, 4 (d) -2, -5
23. Simplify $(1 + \tan^2 x)(1 - \sin^2 x)$. (a) $\sec^2 x$ (b) $\cos^2 x$ (c) 2 (d) 1
24. If $S_n = n^2 - n + 1$, find the 5th term. (a) 8 (b) 21 (c) 13 (d) 15
25. Find the radius of the circle described by the equation $3x^2 + 3y^2 - 24x + 12y + 11 = 0$. (a) $\frac{7\sqrt{3}}{3}$ (b) 4 (c) 2 (d) 11
26. If $f(x) = (3x - 2)(x^2 + 3)$, find $f'(0)$. (a) -4 (b) 0 (c) 9 (d) 3
27. A box contains 40 identical discs, some red and the rest white. If a disc is drawn at random, the probability that it is red is $\frac{1}{4}$. How many more red discs must be added to make the probability of red disc being picked equals $\frac{1}{3}$? (a) 4 (b) 5 (c) 6 (d) 7
28. Evaluate the determinant $\begin{vmatrix} 2 & 7 & 5 \\ 4 & 6 & 3 \\ 8 & 9 & 1 \end{vmatrix}$. (a) -21 (b) 30 (c) 27 (d) 38
29. Evaluate $\int x^2 e^x dx$. (a) $\frac{x^3}{3} e^x + c$ (b) $e^x(x^2 - 2x + 2) + c$ (c) $e^{-x^3} + c$ (d) $e^x(x^2 + 1) + c$
30. The mean of the numbers 1, 3, x , y , 10, 15 is 7 and their standard deviation is $\sqrt{21}$. Find $x^2 + y^2$. (a) 85 (b) 13 (c) 16 (d) 48
31. Give the dimension of the equation $E = MC^2$, where C is the speed of light. (a) MLT^{-1} (b) $M^{-1}L^{-2}T^{-1}$ (c) ML^2T^{-2} (d) $M^2L^2T^2$
32. Two small spheres separated 20m apart have equal charges. How many excess electrons must be present on each sphere if the experienced a repulsive force of 2.30×10^{-22} . (a) 20,000 (b) 19,955 (c) 20,955 (d) 18,600
33. A load of 400Ω is connected via a potential divider of resistance of 800Ω , to a 10V supply. What is the potential difference across the load when the slider is one quarter way up the divider? (a) 1.11V (b) 1.12V (c) 1.82V (d) 1.16V

34. A material in which light travels at the same speed in all direction is called _____ (a) polar material (b) isotropic material (c) homotropic material (d) caustic material
35. A luminous object and a screen are 2.5cm apart. What is the focal length of the lens which will throw upon the screen an image of the object magnified 24 times? (a) 0.11 cm (b) 0.10cm (c) 0.09cm (d) 0.08cm
36. A prism that has an apex angle of 50° is made up of material with $n = 2.20$, what is the angle of minimum deviation? (a) 32.02° (b) 86.80° (c) 22.5° (d) 68.40°
37. A wave is described by $y = 15\sin(10x - 50t)$, where x and y are in cm. Find the phase velocity. (a) 0.033ms^{-1} (b) 0.05ms^{-1} (c) 0.52ms^{-1} (d) 0.025ms^{-1}
38. The inducement offers to the floor of current in an electric circuit is referred to as _____ (a) resistivity (b) conductivity (c) conductance (d) all of the above
39. What form of curve is used to represent the half-life of a radioactive sample? (a) Hyperbolic decay curve (b) Exponential decay curve (c) Sine wave curve (d) Cosine curve
40. The equation of motion of a point mass is given as $8\ddot{x} + 7\dot{x} + 20x = \cos(5t - \phi)$. Find the resonance frequency. (a) 0.78rad/s (b) 0.92rad/s (c) 0.64rad/s (d) 0.56rad/s
41. The general formula for alkanols is _____ (a) C_nH_{2n} (b) $\text{C}_n\text{H}_{2n+1}\text{OH}$ (c) $\text{C}_n\text{H}_{2n+2}\text{OH}$ (d) $\text{C}_n\text{H}_{2n-2}\text{OH}$
42. A sodium metal was dropped into a container of water and a gaseous explosion was observed. The gas is likely _____ (a) oxygen gas (b) hydrogen gas (c) sodium gas (d) hydrogen bomb
43. Which of the following is not a reaction type in chemistry?
(a) Addition (b) Hydrogenation (c) Subtraction (d) Ozonolysis
44. Baking powder is given by the molecular formula _____ (a) Na_2CO_3 (b) NaHCO_3 (c) CaCO_3 (d) MgSO_4
45. Which of the following is not a natural source of hydrocarbon? (a) Natural gas (b) Coal (c) Ocean (d) Crude oil
46. Separation of red blood cells from plasma can best be done by _____
(a) chromatography (b) medical doctors (c) centrifuge (d) distillation
47. Elemental analysis of a gaseous organic compound gave C: 83.08%, H: 16.83%. 1 litre of vapour of the compound at S.T.P. weighed 3.19g. Calculate the molecular formula. (a) C_5H_{12} (b) C_2H_5 (c) CH_2 (d) C_6H_{12}
48. The pH of pure water at 25°C is close to _____ (a) 7 (b) 0 (c) 2 (d) 9
49. Which of the following is an aromatic compound?
(a) Ethanol (b) Phenol (c) Hydrogen cyanide (d) Potash
50. To remove salt from salt solution, the best method is _____
(a) sublimation (b) decantation (c) evaporation (d) freezing

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Education – Life Sciences & Agriculture

Total Time Allowed: 1 hour

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- xvii. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- xviii. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xix. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xx. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

- 171. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b) incapable (c) powerless (d) decrepit
- 172. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
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- 174. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
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In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -6-, I quickly -7- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -8- of his title. The -9- harped on Hagler's previous fight and -10- an easy victory over his -11-. I then read through the -12- which usually states the paper's opinion on current issues. The -13- were very many, with some of them taking up full pages. There was only one -14- by an artist whose intention was clearly to -15- readers.

	(a)	(b)	(c)	(d)
176.	trader	dealer	vendor	painter
177.	perused	studied	stared	flipped
178.	victory	attack	protection	defence
179.	correspondent	writer	editor	publisher
180.	predicted	prophesied	imagined	expressed
181.	antagonist	opponent	protagonist	attacker
182.	communiqué	propaganda	editorial	resolution
183.	commercials	announcements	advertisement	exhibits
184.	drawings	cartoon	sketch	caricature
185.	amuse	abuse	annoy	stimulate

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

186. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
187. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom
(d) of.fi.cial.DOM
188. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
189. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness
(d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

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191. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
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193. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
194. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
195. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

196. The groom was described as a man of alluring personality. (a) intricate (b) remarkable (c) charming (d) trustworthy
197. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness
198. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom
199. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
200. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

From the words lettered A to D, choose the word that best completes each of the following sentences.

201. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
202. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
203. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
204. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
205. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
206. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
207. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her

208. In order to separate the two boys, the policeman stood ____ them. (a) with (b) against (c) among (d) between
209. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
210. The elite ____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

SUBJECT: GENERAL PAPER

51. The general formula for alkanols is ____ (a) C_nH_{2n} (b) $C_nH_{2n+1}OH$ (c) $C_nH_{2n+2}OH$ (d) $C_nH_{2n-2}OH$
52. A sodium metal was dropped into a container of water and a gaseous explosion was observed. The gas is likely _____ (a) oxygen gas (b) hydrogen gas (c) sodium gas (d) hydrogen bomb
53. Which of the following is not a reaction type in chemistry?
(a) Addition (b) Hydrogenation (c) Subtraction (d) Ozonolysis
54. Baking powder is given by the molecular formula _____ (a) Na_2CO_3 (b) $NaHCO_3$ (c) $CaCO_3$ (d) $MgSO_4$
55. Which of the following is not a natural source of hydrocarbon? (a) Natural gas (b) Coal (c) Ocean (d) Crude oil
56. Separation of red blood cells from plasma can best be done by _____
(a) chromatography (b) medical doctors (c) centrifuge (d) distillation
57. Elemental analysis of a gaseous organic compound gave C: 83.08%, H: 16.83%. 1 litre of vapour of the compound at S.T.P. weighed 3.19g. Calculate the molecular formula. (a) C_5H_{12} (b) C_2H_5 (c) CH_2 (d) C_6H_{12}
58. The pH of pure water at $25^{\circ}C$ is close to _____ (a) 7 (b) 0 (c) 2 (d) 9
59. Which of the following is an aromatic compound?
(a) Ethanol (b) Phenol (c) Hydrogen cyanide (d) Potash
60. To remove salt from salt solution, the best method is _____
(a) sublimation (b) decantation (c) evaporation (d) freezing
61. A nutritious diet is _____ (a) a diet good for all family member (b) a diet prepared with rice (c) a diet that contains all essential nutrients (d) a diet rich in protein
62. Vitamin _____ improves eyesight. (a) K (b) A (c) D (d) B
63. Safety in the kitchen starts from _____ (a) allowing children into the kitchen (b) interring the floor with peels from floors (c) moping up all liquid spills on the floor immediately (d) putting on high heel shoes
64. Household equipments are classified into _____ (a) brooms and brushes (b) vacuum cleaners and carpet sweeper (c) mechanical and electrical equipment (d) dish washes and mashing machine
65. The human ear is divided into _____ parts. (a) four (b) three (c) one (d) five

66. _____ is one of the benefits of consumer education. (a) It enables the consumer to obtain the best value for his money (b) Engage in lire purchase (c) Engage in impulsive buying (d) Enables the consumers to buy cheap commodities
67. In educational measurement, which of these is considered a measure of students' achievement? (a) Observation (b) Interview (c) Questionnaire (d) Essay
68. In designing a test blue print for pupils in primary one, the highest member of items should be at the _____ level. (a) knowledge (b) understanding (c) application (d) interpretation
69. In an examination hall, the following except one is needed. (a) Invigilator (b) Supervisor (c) Attendant (d) Security guard
70. The test used to measure students personality include _____ (a) quantitative aptitude (b) verbal aptitude (c) interest (d) special ability
71. Which of these scales has absolute zero? (a) Nominal (b) Ordinal (c) Interval (d) Ratio
72. Which of these is not a measure of central tendency? (a) Mean (b) Median (c) Variance (d) Mode
73. The age bracket of adolescence is _____ (a) 6 – 12 years (b) 12 – 18 years (c) 18 – 40 years (d) 14 – 19 years
74. In Maslow's hierarchy of needs, the first to be satisfied is _____ (a) psychological needs (b) social needs (c) safety needs (d) self-esteem needs
75. One pointer to poor home environment as inhibiting learning is _____ (a) lateness to school (b) restlessness in class (c) noise making (d) non-completion of assignment
76. When the teacher has a large content area to cover, the preferred method of teaching is _____ (a) demonstration (b) discussion (c) peer intoring (d) lecture
77. In Jean Piaget theory of intellectual development, the pre-operational stage is between _____ years. (a) 0 – 2 (b) 2 – 7 (c) 8 – 11 (d) 12 and above
78. The teaching method that encourages students active participation in the learning process is _____ (a) field trip (b) inquiry (c) demonstration (d) team teaching
79. The following is an example of non-conventional method of teaching. (a) Lecture (b) Demonstration (c) Brainstorming (d) projects
80. What type of test is most assured to objective scoring? (a) Essay (b) Matching (c) Completion (d) Multiple choice
81. Give the dimension of the equation $E = MC^2$, where C is the speed of light. (a) MLT^{-1} (b) $M^{-1}L^{-2}T^{-1}$ (c) ML^2T^{-2} (d) $M^2L^2T^2$
82. Two small spheres separated 20m apart have equal charges. How many excess electrons must be present on each sphere if the experienced a repulsive force of 2.30×10^{-22} . (a) 20,000 (b) 19,955 (c) 20,955 (d) 18,600
83. A load of 400Ω is connected via a potential divider of resistance of 800Ω , to a 10V supply. What is the potential difference across the load when the slider is one quarter way up the divider? (a) 1.11V (b) 1.12V (c) 1.82V (d) 1.16V
84. A material in which light travels at the same speed in all direction is called _____ (a) polar material (b) isotropic material (c) homotropic material (d) caustic material

85. A luminous object and a screen are 2.5cm apart. What is the focal length of the lens which will throw upon the screen an image of the object magnified 24 times? (a) 0.11 cm (b) 0.10cm (c) 0.09cm (d) 0.08cm
86. A prism that has an apex angle of 50° is made up of material with $n = 2.20$, what is the angle of minimum deviation? (a) 32.02° (b) 86.80° (c) 22.5° (d) 68.40°
87. A wave is described by $y = 15\sin(10x - 50t)$, where x and y are in cm. Find the phase velocity. (a) 0.033ms^{-1} (b) 0.05ms^{-1} (c) 0.52ms^{-1} (d) 0.025ms^{-1}
88. The inducement offers to the floor of current in an electric circuit is referred to as _____ (a) resistivity (b) conductivity (c) conductance (d) all of the above
89. What form of curve is used to represent the half-life of a radioactive sample? (a) Hyperbolic decay curve (b) Exponential decay curve (c) Sine wave curve (d) Cosine curve
90. The equation of motion of a point mass is given as $8\ddot{x} + 7\dot{x} + 20x = \cos(5t - \phi)$. Find the resonance frequency. (a) 0.78rad/s (b) 0.92rad/s (c) 0.64rad/s (d) 0.56rad/s
91. The resolving power of a microscope is _____ (a) the ability of the microscope or optical instrument to show two objects as separate (b) the measure of an image's clarity (c) the ability of an optical instrument to magnify an image (d) both (a) and (b)
92. A bird egg is a single large cell, whereas a human blood cell is a much smaller single cell because _____ (a) all bird cells are larger than all human cells (b) human blood cells must fit into small blood vessels (c) cell size is related to cell function (d) both (b) and (c)
93. The nucleoid region of a prokaryotic cell _____ (a) separates the DNA from the cytoplasm (b) contains the cells DNA (c) contains the cells nucleoli (d) is surrounded by a nucleoid membrane
94. Sexually fungi can reproduce by the process of plasmogamy, karyogamy or _____ (a) meiosis (b) isogamy (c) mitosis (d) conjugation
95. Gymnosperms produce all of the following except _____ (a) leaves (b) stem (c) flowers (d) seeds
96. Most of a cell enzymes are _____ (a) lipids (b) amino acids (c) proteins (d) carbohydrates
97. The organ that plays a major role in osmoregulation in humans is the _____ (a) pancreas (b) spleen (c) kidney (d) gall bladder
98. The ultimate source of nearly all energy available to life on earth is _____ (a) photosynthesis (b) cellular respiration (c) sunlight (d) electricity
99. The end-products of glycolysis include _____ (a) FADH (b) NADH (c) acetyl COA (d) O_2
100. One of these is a retrovirus _____ (a) Tobacco mosaic virus (TMV) (b) Bacterio – phage (c) HIV (d) mycoplasm

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Medicine, Dentistry, Basic Medical Sciences, Pharmacy, Life Sciences, Agriculture **Total Time Allowed: 1 hour**

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- xxi. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- xxii. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xxiii. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xxiv. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the words lettered A to D, choose the word that best completes each of the following sentences.

- 211. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
- 212. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
- 213. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
- 214. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
- 215. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
- 216. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
- 217. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her
- 218. In order to separate the two boys, the policeman stood _____ them. (a) with (b) against (c) among (d) between
- 219. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
- 220. The elite _____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

221. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b) incapable (c) powerless (d) decrepit
222. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
223. She was a very proficient hair dresser but had little aptitude for sew in which she was _____ (a) unskilled (b) unlearned (c) ignorant (d) awkward
224. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
225. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -16-, I quickly -17- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -18- of his title. The -19- harped on Hagler's previous fight and -20- an easy victory over his -21-. I then read through the -22- which usually states the paper's opinion on current issues. The -23- were very many, with some of them taking up full pages. There was only one -24- by an artist whose intention was clearly to -25- readers.

- | | (a) | (b) | (c) | (d) |
|------|---------------|---------------|---------------|------------|
| 226. | trader | dealer | vendor | painter |
| 227. | perused | studied | stared | flipped |
| 228. | victory | attack | protection | defence |
| 229. | correspondent | writer | editor | publisher |
| 230. | predicted | prophesied | imagined | expressed |
| 231. | antagonist | opponent | protagonist | attacker |
| 232. | communiqué | propaganda | editorial | resolution |
| 233. | commercials | announcements | advertisement | exhibits |
| 234. | drawings | cartoon | sketch | caricature |

235. amuse abuse annoy stimulate

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

236. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
237. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom
(d) of.fi.cial.DOM
238. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
239. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness
(d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

240. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
241. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
242. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids
243. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
244. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
245. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

246. The groom was described as a man of alluring personality.
(a) intricate (b) remarkable (c) charming (d) trustworthy
247. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness

248. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom
249. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
250. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

SUBJECT: GENERAL PAPER

1. The resolving power of a microscope is _____ (a) the ability of the microscope or optical instrument to show two objects as separate (b) the measure of an image's clarity (c) the ability of an optical instrument to magnify an image (d) both (a) and (b)
2. A bird egg is a single large cell, whereas a human blood cell is a much smaller single cell because _____ (a) all bird cells are larger than all human cells (b) human blood cells must fit into small blood vessels (c) cell size is related to cell function (d) both (b) and (c)
3. The nucleoid region of a prokaryotic cell _____ (a) separates the DNA from the cytoplasm (b) contains the cells DNA (c) contains the cells nucleoli (d) is surrounded by a nucleoid membrane
4. Sexually fungi can reproduce by the process of plasmogamy, karyogamy or _____ (a) meiosis (b) isogamy (c) mitosis (d) conjugation
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10. One of these is a retrovirus _____ (a) Tobacco mosaic virus (TMV) (b) Bacterio – phage (c) HIV (d) mycoplasm
11. Fungi possess a tubular threadlike and colourless filament called _____ (a) rhizoids (b) leptoids (c) hypha (d) mycelium
12. Eukayotic cell have all but one of the following organelles _____ (a) golgi bodies (b) vacuole (c) peroxisomes (d) mitochondria
13. The absorptive branches of a parasitic fungi are called _____ (a) haustoria (b) rhizoids (c) hypa (d) mycelia
14. A tubular, threadlike, and colourless filament in fungi with cross walls is _____ (a) zoospore (b) coenocytes (c) ascospore (d) basidiospores
15. Which of the following is not an example of a photosynthetic autotroph? (a) Algae (b) Fungi (c) Bryophyte (d) Angiosperm
16. Gas exchange in plants occurs through structures called _____ (a) stomata (b) spiracles (c) gas spores (d) zoospores

17. Mosses are included in a group of plants called (a) angiosperm (b) gymnosperms (c) bryophytes (d) lichens
18. Which of the following are adaptations that help plants live on land? (a) Vascular tissue (b) Gametangia (c) Seeds (d) All of the above
19. Which part of the life cycle does a pollen grain represent? (a) A spore (b) a sperm cell (c) a male gametophyte (d) a male sporangium
20. Which of the following structures encloses the flower before the flower opens? (a) Sepals (b) Petals (c) Carpel (d) Stigma
21. Give the dimension of the equation $E = MC^2$, where C is the speed of light. (a) MLT^{-1} (b) $M^{-1}L^{-2}T^{-1}$ (c) ML^2T^{-2} (d) $M^2L^2T^2$
22. Two small spheres separated 20m apart have equal charges. How many excess electrons must be present on each sphere if they experienced a repulsive force of 2.30×10^{-22} . (a) 20,000 (b) 19,955 (c) 20,955 (d) 18,600
23. A load of 400Ω is connected via a potential divider of resistance of 800Ω , to a 10V supply. What is the potential difference across the load when the slider is one quarter way up the divider? (a) 1.11V (b) 1.12V (c) 1.82V (d) 1.16V
24. A material in which light travels at the same speed in all directions is called _____. (a) polar material (b) isotropic material (c) homotropic material (d) caustic material
25. Material A is water and material B is glass with index of refraction 1.33 and 1.52, respectively. The incident ray makes an angle of 60° with the normal. Find the directions of the reflected and refracted rays respectively. (a) $60^\circ, 60^\circ$ (b) $60^\circ, 49^\circ$ (c) $49^\circ, 60^\circ$ (d) $23^\circ, 60^\circ$
26. Two plane mirrors are inclined at right angles with each other. An object is placed between them. How many images of the object will be formed? (a) 7 (b) 4 (c) 3 (d) 5
27. Compute the focal length of the lens which will give an erect image 20cm from the lens when the object distance from the lens is very great. (a) -20 cm (b) 10cm (c) 20cm (d) -10 cm
28. If the thickness and refractive indices of oil, water and glass together in a set up are respectively 5cm, 6cm, 4cm and 1.26, 1.33 and n_g . Find the value of n_g if the apparent position of an object placed at the bottom is 12cm. (a) 1.14 (b) 1.16 (c) 1.15 (d) 1.12
29. A luminous object and a screen are 2.5cm apart. What is the focal length of the lens which will throw upon the screen an image of the object magnified 24 times? (a) 0.11 cm (b) 0.10cm (c) 0.09cm (d) 0.08cm
30. A ray of white light incident upon a glass prism is dispersed into various colour components. Which colour experiences the highest refraction? (a) Red (b) Yellow (c) Violet (d) Blue
31. A prism that has an apex angle of 50° is made up of material with $n = 2.20$, what is the angle of minimum deviation? (a) 32.02° (b) 86.80° (c) 22.5° (d) 68.40°
32. A wave is described by $y = 15\sin(10x - 50t)$, where x and y are in cm. Find the phase velocity. (a) 0.033ms^{-1} (b) 0.05ms^{-1} (c) 0.52ms^{-1} (d) 0.025ms^{-1}
33. The inducement offered to the flow of current in an electric circuit is referred to as _____. (a) resistivity (b) conductivity (c) conductance (d) all of the above

34. What form of curve is used to represent the half-life of a radioactive sample? (a) Hyperbolic decay curve (b) Exponential decay curve (c) Sine wave curve (d) Cosine curve
35. The equation of motion of a point mass is given as $8\ddot{x} + 7\dot{x} + 20x = \cos(5t - \phi)$. Find the resonance frequency. (a) 0.78rad/s (b) 0.92rad/s (c) 0.64rad/s (d) 0.56rad/s
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38. Which of the following is not a reaction type in chemistry? (a) Addition (b) Hydrogenation (c) Subtraction (d) Ozonolysis
39. Baking powder is given by the molecular formula _____ (a) Na_2CO_3 (b) $NaHCO_3$ (c) $CaCO_3$ (d) $MgSO_4$
40. Which of the following is not a natural source of hydrocarbon? (a) Natural gas (b) Coal (c) Ocean (d) Crude oil
41. Separation of red blood cells from plasma can best be done by _____ (a) chromatography (b) medical doctors (c) centrifuge (d) distillation
42. Elemental analysis of a gaseous organic compound gave C: 83.08%, H: 16.83%. 1 litre of vapour of the compound at S.T.P. weighed 3.19g. Calculate the molecular formula. (a) C_5H_{12} (b) C_2H_5 (c) CH_2 (d) C_6H_{12}
43. The pH of pure water at $25^\circ C$ is close to _____ (a) 7 (b) 0 (c) 2 (d) 9
44. Which of the following is an aromatic compound? (a) Ethanol (b) Phenol (c) Hydrogen cyanide (d) Potash
45. To remove salt from salt solution, the best method is _____ (a) sublimation (b) decantation (c) evaporation (d) freezing
46. The presence of unpaired electron spins in a substance describes _____ (a) paramagnetism (b) diamagnetism (c) magnetic moments (d) none of the above
47. Calculate the percent composition of Mg in magnesium nitrate. [Mg = 24.31; N = 14.01; O = 16] (a) 18.89% (b) 16.39% (c) 64.72% (d) 8.25%
48. Which of the following compounds will be removed from a mixture by sublimation? (a) NaCl (b) NH_4Cl (c) $C_6H_{12}O_6$ (d) NH_4OH
49. The efficiency of diesel fuel is expressed in terms of _____ (a) cetane number (b) octane number (c) 2,4,6 – trimethyl octane (d) degree of viscosity and thickness
50. According to Arrhenius, which of the following is an acid? (a) CO_2 (b) Na_2O (c) BF_3 (d) $Ba(OH)_2$

UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Engineering & Physical Sciences

Total Time Allowed: 1 hour

Name _____ **JAMB Reg. No.** _____

Read the following instructions carefully:

- xxv. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- xxvi. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xxvii. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xxviii. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

From the words lettered A to D, choose the word that best completes each of the following sentences.

- 251. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
- 252. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
- 253. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
- 254. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
- 255. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
- 256. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
- 257. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her
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- 259. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
- 260. The elite _____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

261. Abimbola is a very sturdy child, but his sister Simisola is _____ (a) puny (b) incapable (c) powerless (d) decrepit
262. The doctor was acquitted after being _____ by a female patient of seducing her. (a) sentenced (b) defended (c) accused (d) discharged
263. She was a very proficient hair dresser but had little aptitude for sew in which she was _____ (a) unskilled (b) unlearned (c) ignorant (d) awkward
264. At school, John was industrious, whereas his brother was _____ (a) underdeveloped (b) jobless (c) indolent (d) unresponsive
265. The general said that raw troops were not good, he needed _____ veterans. (a) baked (b) processed (c) seasoned (d) roasted

In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -16-, I quickly -17- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -18- of his title. The -19- harped on Hagler's previous fight and -20- an easy victory over his -21-. I then read through the -22- which usually states the paper's opinion on current issues. The -23- were very many, with some of them taking up full pages. There was only one -24- by an artist whose intention was clearly to -25- readers.

- | | (a) | (b) | (c) | (d) |
|------|---------------|---------------|---------------|------------|
| 266. | trader | dealer | vendor | painter |
| 267. | perused | studied | stared | flipped |
| 268. | victory | attack | protection | defence |
| 269. | correspondent | writer | editor | publisher |
| 270. | predicted | prophesied | imagined | expressed |
| 271. | antagonist | opponent | protagonist | attacker |
| 272. | communiqué | propaganda | editorial | resolution |
| 273. | commercials | announcements | advertisement | exhibits |
| 274. | drawings | cartoon | sketch | caricature |
| 275. | amuse | abuse | annoy | stimulate |

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

276. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
277. officialdom (a) of.fi.CIAL.dom (b) of.FI.cial.dom (c) OF.fi.cial.dom
(d) of.fi.cial.DOM
278. exhibition (a) ex.HI.bi.tion (b) EX.hi.bi.tion (c) ex.hi.BI.tion (d) ex.hi.bi.TION
279. unwillingness (a) UN.will.ing.ness (b) un.WILL.ing.ness (c) un.will.ING.ness
(d) un.will.ing.NESS

After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

280. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
281. The student came boldly to the front of the class and began to explain from where the teacher had left off, but was soon out of his depth. (a) forced to leave the class (b) in great difficulty (c) being attacked on all sides (d) being praised for his courage
282. Unlike the Vice Principal, the Principal always fights shy of punishing anybody. (a) takes delight (b) never hesitates (c) fears (d) avoids
283. He didn't realise it but not many of even the more experienced employees could hold a candle to him. (a) give him light (b) were more skilful than he was (c) experience really helps (d) were experts
284. My friend will hate his uncle forever because he left him in the lurch in his hour of need. (a) disinherited him (b) left him in a sick state (c) punished him (d) abandoned him
285. I will suggest that we both go over the plans for tomorrow's activities. (a) ignore (b) examine (c) amend (d) implement

From the options lettered A to D, choose the one that is nearly the same in meaning to the underlined word.

286. The groom was described as a man of alluring personality. (a) intricate (b) remarkable (c) charming (d) trustworthy
287. The complainant was not happy with the decision of the court. (a) solicitor (b) accused (c) plaintiff (d) witness
288. Mrs Jacob plays the piano with great dexterity. (a) pride (b) force (c) skill (d) wisdom
289. Ojo's gallantry was noticed during the recent communal crisis. (a) bravery (b) kindness (c) rascality (d) disobedience
290. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

SUBJECT: GENERAL PAPER

101. Given the sets $A = \{x: x^2 - 3x + 2 = 0\}$ and $B = \{x: x = 2n + 1, n \text{ is an integer}\}$, find $A \cap B$. (a) $\{1, 2\}$ (b) $\{1, 3, 4\}$ (c) $\{1\}$ (d) ϕ
102. If $x^2 - xy - 6y^2 = 0$, find the values of $\frac{x}{y}$. (a) $3, -4$ (b) $-2, 3$ (c) $-5, 4$
(d) $-2, -5$
103. Solve the equations $x + y = 5$ and $x^2 + y^2 = 13, x < y$. (a) $2, 5$ (b) $3, 4$ (c) $2, 3$
(d) $1, 6$
104. Solve $2^{2x} + 4(2^x) - 32 = 0$. (a) -8 (b) 4 (c) 6 (d) 2
105. Solve the equation $\log_{10}(3x^2 + 8) = 1 + \log_{10}\left(\frac{x}{2} + 1\right)$. (a) $-3, 2$ (b) $-2, \frac{1}{3}$ (c) $-\frac{1}{3}, 2$
(d) $-2, 3$
106. Find a if $\sqrt[3]{\frac{3}{a}} = 3\sqrt{\frac{3}{a}}$, where a is a whole number. (a) 24 (b) 15 (c) 8 (d) 3
107. Simplify $(1 + \tan^2 x)(1 - \sin^2 x)$. (a) $\sec^2 x$ (b) $\cos^2 x$ (c) 2 (d) 1
108. If $S_n = n^2 - n + 1$, find the 5th term. (a) 8 (b) 21 (c) 13 (d) 15
109. Find the limiting value of the sequence defined as $T_n = 2\frac{1}{2} - \frac{1}{2}\left(\frac{1}{5}\right)^{n-1}$, as $n \rightarrow \infty$. (a)
 $\frac{1}{5}$ (b) $-\frac{1}{2}$ (c) $-\frac{1}{10}$ (d) $2\frac{1}{2}$
110. Find the radius of the circle described by the equation $3x^2 + 3y^2 - 24x + 12y + 11 = 0$.
(a) $\frac{7\sqrt{3}}{3}$ (b) 4 (c) 2 (d) 11
111. If $f(x) = (3x - 2)(x^2 + 3)$, find $f'(0)$. (a) -4 (b) 0 (c) 9 (d) 3
112. Evaluate $\lim_{x \rightarrow 0} \frac{\sin x}{x}$. (a) 0 (b) $\frac{0}{0}$ (c) ∞ (d) 1
113. A committee of two men and three women is to be chosen from five men and four women. How many different committees can be formed? (a) 10 (b) 4 (c) 40 (d) 5
114. If the expansion of $(1 + 8x)^4$ is used to obtain the value $\left(\frac{3\sqrt{3}}{5}\right)^8$, find the value of x .
(a) $\frac{1}{100}$ (b) $\frac{27}{25}$ (c) $\frac{\sqrt{3}}{25}$ (d) $\frac{9}{24}$

115. A box contains 40 identical discs, some red and the rest white. If a disc is drawn at random, the probability that it is red is $\frac{1}{4}$. How many more red discs must be added to make the probability of red disc being picked equals $\frac{1}{3}$? (a) 4 (b) 5 (c) 6 (d) 7
116. Evaluate the determinant $\begin{vmatrix} 2 & 7 & 5 \\ 4 & 6 & 3 \\ 8 & 9 & 1 \end{vmatrix}$. (a) -21 (b) 30 (c) 27 (d) 38
117. If $A = \begin{pmatrix} 4 & 7 \\ 5 & 2 \end{pmatrix}$, find the transpose of A^2 . (a) $\begin{pmatrix} 16 & 49 \\ 25 & 4 \end{pmatrix}$ (b) $\begin{pmatrix} 51 & 42 \\ 30 & 39 \end{pmatrix}$ (c) $\begin{pmatrix} 51 & 30 \\ 42 & 39 \end{pmatrix}$
(d) $\begin{pmatrix} 16 & 25 \\ 49 & 4 \end{pmatrix}$
118. Find the cosine of the angle between the vectors $\vec{p} = 2i + 3j + 4k$ and $\vec{q} = 4i - 3j + 2k$
(a) $\frac{8}{29}$ (b) $\frac{9}{29}$ (c) $\frac{7}{29}$ (d) $\frac{3}{\sqrt{29}}$
119. Evaluate $\int x^2 e^x dx$.
(a) $\frac{x^3}{3} e^x + c$ (b) $e^x(x^2 - 2x + 2) + c$ (c) $e^{-x^3} + c$ (d) $e^x(x^2 + 1) + c$
120. The mean of the numbers 1, 3, x , y , 10, 15 is 7 and their standard deviation is $\sqrt{21}$. Find $x^2 + y^2$. (a) 85 (b) 13 (c) 16 (d) 48
121. Give the dimension of the equation $E = MC^2$, where C is the speed of light. (a) MLT^{-1} (b) $M^{-1}L^{-2}T^{-1}$ (c) ML^2T^{-2} (d) $M^2L^2T^2$
122. Two small spheres separated 20m apart have equal charges. How many excess electrons must be present on each sphere if the experienced a repulsive force of 2.30×10^{-22} . (a) 20,000 (b) 19,955 (c) 20,955 (d) 18,600
123. A load of 400Ω is connected via a potential divider of resistance of 800Ω , to a 10V supply. What is the potential difference across the load when the slider is one quarter way up the divider? (a) 1.11V (b) 1.12V (c) 1.82V (d) 1.16V
124. A material in which light travels at the same speed in all direction is called _____. (a) polar material (b) isotropic material (c) homotropic material (d) caustic material
125. Material A is water and material B is glass with index of refraction 1.33 and 1.52, respectively. The incident ray makes an angle of 60° with the normal. Find the directions of the reflected and refracted rays respectively. (a) $60^\circ, 60^\circ$ (b) $60^\circ, 49^\circ$ (c) $49^\circ, 60^\circ$ (d) $23^\circ, 60^\circ$
126. Two plane mirrors are inclined at right angles with each other. An object is placed between them. How many images of the object will be formed? (a) 7 (b) 4 (c) 3 (d) 5
127. Compute the focal length of the lens which will give an erect image 20cm from the lens when the object distance from the lens is very great. (a) -20cm (b) 10cm (c) 20cm (d) -10cm

128. If the thickness and refractive indices of oil, water and glass together in a set up are respectively 5cm, 6cm, 4cm and 1.26, 1.33 and η_g . Find the value of η_g if the apparent position of an object placed at the bottom is 12cm. (a) 1.14 (b) 1.16 (c) 1.15 (d) 1.12
129. A luminous object and a screen are 2.5cm apart. What is the focal length of the lens which will throw upon the screen an image of the object magnified 24 times? (a) 0.11 cm (b) 0.10cm (c) 0.09cm (d) 0.08cm
130. A ray of white light incident upon a glass prism is dispersed into various colour components. Which colour experiences the highest refraction? (a) Red (b) Yellow (c) Violet (d) Blue
131. A prism that has an apex angle of 50° is made up of material with $n = 2.20$, what is the angle of minimum deviation? (a) 32.02° (b) 86.80° (c) 22.5° (d) 68.40°
132. A wave is described by $y = 15\sin(10x - 50t)$, where x and y are in cm. Find the phase velocity. (a) 0.033ms^{-1} (b) 0.05ms^{-1} (c) 0.52ms^{-1} (d) 0.025ms^{-1}
133. The inducement offers to the floor of current in an electric circuit is referred to as _____ (a) resistivity (b) conductivity (c) conductance (d) all of the above
134. What form of curve is used to represent the half-life of a radioactive sample? (a) Hyperbolic decay curve (b) Exponential decay curve (c) Sine wave curve (d) Cosine curve
135. The equation of motion of a point mass is given as $8\ddot{x} + 7\dot{x} + 20x = \cos(5t - \phi)$. Find the resonance frequency. (a) 0.78rad/s (b) 0.92rad/s (c) 0.64rad/s (d) 0.56rad/s
136. The general formula for alkanols is _____ (a) C_nH_{2n} (b) $\text{C}_n\text{H}_{2n+1}\text{OH}$ (c) $\text{C}_n\text{H}_{2n+2}\text{OH}$ (d) $\text{C}_n\text{H}_{2n-2}\text{OH}$
137. A sodium metal was dropped into a container of water and a gaseous explosion was observed. The gas is likely _____ (a) oxygen gas (b) hydrogen gas (c) sodium gas (d) hydrogen bomb
138. Which of the following is not a reaction type in chemistry?
(a) Addition (b) Hydrogenation (c) Subtraction (d) Ozonolysis
139. Baking powder is given by the molecular formula _____ (a) Na_2CO_3 (b) NaHCO_3 (c) CaCO_3 (d) MgSO_4
140. Which of the following is not a natural source of hydrocarbon? (a) Natural gas (b) Coal (c) Ocean (d) Crude oil
141. Separation of red blood cells from plasma can best be done by _____
(a) chromatography (b) medical doctors (c) centrifuge (d) distillation
142. Elemental analysis of a gaseous organic compound gave C: 83.08%, H: 16.83%. 1 litre of vapour of the compound at S.T.P. weighed 3.19g. Calculate the molecular formula. (a) C_5H_{12} (b) C_2H_5 (c) CH_2 (d) C_6H_{12}
143. The pH of pure water at 25°C is close to _____ (a) 7 (b) 0 (c) 2 (d) 9
144. Which of the following is an aromatic compound?
(a) Ethanol (b) Phenol (c) Hydrogen cyanide (d) Potash
145. To remove salt from salt solution, the best method is _____
(a) sublimation (b) decantation (c) evaporation (d) freezing
146. The presence of unpaired electron spins in a substance describes _____

- (a) paramagnetism (b) diamagnetism (c) magnetic moments (d) none of the above
147. Calculate the percent composition of Mg in magnesium nitrate. [Mg = 24.31; N = 14.01; O = 16] (a) 18.89% (b) 16.39% (c) 64.72% (d) 8.25%
148. Which of the following compounds will be removed from a mixture by sublimation?
(a) NaCl (b) NH₄Cl (c) C₆H₁₂O₆ (d) NH₄OH
149. The efficiency of diesel fuel is expressed in terms of _____
(a) cetane number (b) octane number (c) 2,4,6 – trimethyl octane (d) degree of viscosity and thickness
150. According to Arrhenius, which of the following is an acid? (a) CO₂ (b) Na₂O (c) BF₃
(d) Ba(OH)₂

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UNIVERSITY OF BENIN, BENIN CITY, NIGERIA
DIRECT ENTRY SCREENING EXERCISE 2014/2015

Friday, September 26th, 2014

COURSE: Mathematics & Economics, Management & Social Sciences Total Time Allowed: 1 hour

Name _____ JAMB Reg. No. _____

Read the following instructions carefully:

- xxix. use HB pencil only and shade in your names. Ensure that any shading in error is thoroughly erased.
- xxx. candidates should write their full names (surname first), JAMB registration number, sex, JAMB score, course of first choice and the paper type given to them, in the appropriate spaces on the answer sheet.
- xxxi. attempt all questions. Each candidate must submit the answer sheet with the question paper.
- xxxii. the use of calculators and/or similar electronic devices is NOT allowed.

SUBJECT: ENGLISH LANGUAGE

In each of the following questions, the primary stress is indicated by writing the syllable on which it occurs in capital letters. From the words lettered A to D, choose the one that has the correct stress.

- 291. dedication (a) DED.i.ca.tion (b) ded.I.ca.tion (c) ded.i.CA.tion (d) ded.i.ca.TION
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After each of the sentences below, a list of possible interpretations of the underlined part of the sentence is given. Identify the option that best explains the underlined part.

- 295. The chief used to dress quite expensively, but he is very down at heel now. (a) is wearing sandals (b) doesn't bother about his appearance (c) is very poorly dressed (d) is much smarter than he used to be.
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305. The culprit must be punished. (a) mason (b) delinquent (c) prig (d) angel

From the words lettered A to D, choose the word that best completes each of the following sentences.

306. When the two women started fighting, the man who tried to _____ was knocked down. (a) intrude (b) interpose (c) intervene (d) obstruct
307. The journalists saw that she was _____ and although they admired her, they also hated her. (a) a young career ruthless woman (b) a career young ruthless woman (c) a young career ruthless woman (d) a ruthless young career woman
308. They are advertising _____ drink. (a) a soft new carbonated appetising (b) a new appetising soft carbonated (c) an appetising new carbonated soft (d) an appetising carbonated new soft
309. You are entitled to a bigger share of the profits, but not _____ my expense. (a) on (b) at (c) with (d) from
310. While the worshippers closed their eyes in prayer, a thief _____ with the collection. (a) made out (b) made away (c) made up (d) made through
311. No sooner had we started the journey _____, we had a flat tyre. (a) then (b) that (c) when (d) than
312. Maryam is a clever girl _____ parents are both well educated. (a) her (b) whose (c) who's (d) who her

313. In order to separate the two boys, the policeman stood ____ them. (a) with (b) against (c) among (d) between
314. If Veronica failed the examination, she _____. (a) shall repeat (b) would repeat (c) will repeat (d) would repeat
315. The elite ____ many fine ideas to suggest to government. (a) have (b) has (c) think up (d) is having

From the options A to D, identify the one most nearly opposite in meaning to the underlined words.

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In the following passage, the numbered gaps indicate missing words. Against each number in the list below the passage, four options are offered in columns lettered A to D. For each question, choose the option that is the most suitable to fill the numbered gap in the passage.

As soon as I took the newspaper from the -31-, I quickly -32- through the pages, and stopped at the sports page. There, the picture of Marvin Hagler, the boxer attracted me. He was preparing for the -33- of his title. The -34- harped on Hagler's previous fight and -35- an easy victory over his -36-. I then read through the -37- which usually states the paper's opinion on current issues. The -38- were very many, with some of them taking up full pages. There was only one -39- by an artist whose intention was clearly to -30- readers.

- | | (a) | (b) | (c) | (d) |
|------|---------------|------------|-------------|-----------|
| 321. | trader | dealer | vendor | painter |
| 322. | perused | studied | stared | flipped |
| 323. | victory | attack | protection | defence |
| 324. | correspondent | writer | editor | publisher |
| 325. | predicted | prophesied | imagined | expressed |
| 326. | antagonist | opponent | protagonist | attacker |

327.	communiqué	propaganda	editorial	resolution
328.	commercials	announcements	advertisement	exhibits
329.	drawings	cartoon	sketch	caricature
330.	amuse	abuse	annoy	stimulate

SUBJECT: GENERAL PAPER

1. According to _____, the leading specialist in African language certification, there are only five independent language families in Africa. (a) Joseph Greenberg (b) Ayo Banjo (c) Francis Egbokhare (d) Harrison Greenland
2. The most famous of the wondering scholars, whose influence eventually spread throughout the western Sudan, was _____ (a) Tijanniya Ahmed (b) Uthman dan Fodio (c) Abdullahi Agades (d) Ahmadu Bello
3. _____ was the first warrior king of Benin Kingdom, who launched the state on the path of conquest, expansion and empire-building in the 15th century. (a) Oba Ozolua (b) Oba Ewuare (c) Oba Esigie (d) Oba Orhogbua
4. Indirect rule in colonial Nigeria was introduced by _____ (a) Sir John Macpherson (b) Sir Oliver Lyttleton (c) Sir Hugh Clifford (d) Sir Frederick Lugard
5. In _____ in Lagos, the Nigerian Youth Movement (NYM) was formed and put forward a charter which sought to encourage national feeling in Nigeria and demanded self-determination and Africanisation. (a) 1932 (b) 1933 (c) 1934 (d) 1935
6. European powers met in _____ to discuss their interests in Africa in the second half of the 19th century. (a) Berlin (b) Paris (c) London (d) Barcelona
7. At independence in 1960, the federal government of Nigeria was led by _____ (a) Queen Elizabeth II (b) Dr. Nnamdi Azikiwe (c) Chief Obafemi Awolowo (d) Sir Abubakar Tafawa Balewa
8. The proclamation of the Republic of Biafra was made on _____ (a) 30th May, 1967 (b) 15th July, 1967 (c) 1st August, 1967 (d) 18th September, 1967
9. The driving force at the 1945 Pan-African Conference in London was supplied by the energy of two men, _____ (a) King George V and Prince Harry (b) William Boyd and Steven Ross (c) Kwame Nkrumah and George Padmore (d) Ben Moore and George Washington
10. The Charter of the Organization of African Unity (OAU) was signed on _____ (a) 25th August, 1955 (b) 17th August, 1975 (c) 26th May, 1963 (d) 18th May, 1993
11. _____ has been adopted by the African Union as one of the Pan-African languages and has been proposed as a future lingua franca for Africa. (a) Mandinka language (b) English language (c) Yoruba language (d) Swahili language
12. The evidence that one of King Solomon's wives was an African is recorded in _____ (a) Proverbs (b) Song of Solomon (c) Chronicles (d) Revelation

13. The coming of _____ in the seventh century was responsible for the eclipse of Christianity in the Maghreb and Nubia. (a) Judaism (b) Islam (c) Hindu (d) Hebrew
14. The _____ were the first European power to sail into the Indian Ocean from the South, through the Cape. (a) Spanish (b) British (c) French (d) Portuguese
15. The apartheid system in South Africa collapsed in _____ (a) 1984 (b) 1994 (c) 2004 (d) 2014
16. _____ are legally imposed minimum prices usually above the market equilibrium price. (a) Price floors (b) Price ceilings (c) Administered prices (d) market prices
17. _____ exists when a formed organization of producers within the industry is established to take over certain management decisions and functions of individual firms. (a) Oligopoly (b) Monopoly (c) Cartel (d) Duopoly
18. In instituting minimum wage laws, the government aims to _____ (a) improve the standard of living of the masses at the lower tail of the income strata (b) curtail the exploitation of the relatively immobile labour class (c) increase the buying power of the low income families (d) all of the above
19. When we take the first derivative of the total cost function, we obtain _____ (a) average cost (b) marginal cost (c) simple cost (d) diminishing cost
20. Marginal efficiency of capital is _____ (a) the lowest rate of return expected from an additional unit of a capital asset over its cost. (b) the highest rate of return expected from an additional unit of a capital asset over its cost (c) the lowest rate of return expected from the total unit of a capital asset (d) the highest rate of return expected from the total unit of a capital asset
21. Under the classical theory, unemployment results from _____ (a) the rigidity in the wage structure (b) the interference in the working of free market system in the form of trade union legislation, minimum wage legislation (c) options (a) and (b) (d) none of the above
22. Disequilibrium in balance of payments of a country may be caused by _____ (a) changes in exchange rates (b) changes in national income (c) price changes (d) all of the above
23. The price of one currency in terms of another currency is _____ (a) exchange rate (b) inflation rate (c) swap rate (d) drift rate
24. _____ is a systematic record of all its economic transactions with the outside world in a given year. (a) Balance of payments account (b) Balance of trade (c) Gross National Product (d) Exchangeable record
25. The history of accounting is traceable to _____ (a) Abraham Lincoln (b) Robert Mugabe (c) Luca Pacioli (d) John Luck
26. _____ is a mathematical relationship between what a business owns and what a business owes. (a) Assets (b) Liabilities (c) Balance sheet (d) Profit and loss account
27. If sales = ₦30,000; cost of sales = ₦15,000 and other expenses = ₦8,200, then find the gross profit and net profit, respectively. (a) ₦6,800; ₦15,000 (b) ₦15,000; ₦7,800 (c) ₦45,000; ₦6,800 (d) ₦15,000; ₦6,8000

28. In an imprest system, the total amount expended in a period is ₦9,730, while the reimbursement is ₦1,370. What is the float? (a) ₦8,360 (b) ₦11,100 (c) ₦10,000 (d) I do not know
29. _____ is 'an unconditional order in writing addressed by one person to another, signed by the giving it requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time, a sum certain in amount to or the order of specified person or to bearer'. (a) Negotiable instrument (b) Warranty (c) Bill of lading (d) Bill of exchange
30. _____ is a reduction in the catalogue price of an article, given by a wholesaler or manufacturer to a retailer. (a) Trade discount (b) Cash discount (c) Settlement discount (d) Bulk discount
31. _____ are expenses incurred or services enjoyed during an accounting period but which have not yet been paid for. (a) Prepayments (b) Accrued expenses (c) Capital expenditures (d) Revenue expenditures
32. A business purchased a fixed asset at a cost of ₦10,000. Its expected useful life is 3 years and its estimated residual is ₦2,160. If the cost of depreciation rate is 40% on reducing balance basis, what is the depreciation in year 3? (a) ₦1,440 (b) ₦4,000 (c) ₦2,400 (d) ₦2,160
33. Income and expenditure account is equivalent to _____ (a) profit and loss account (b) trading account (c) balance sheet (d) value added
34. Discounts allowed are given to _____, while discount received are obtained from the _____ (a) creditors and debtors (b) debtors and creditors (c) debtors and suppliers (d) clients and customers
35. _____ shows the relationship between various prices of a commodity and the quantity purchased per unit time. (a) Supply schedule (b) Demand schedule (c) Indifference curve (d) Indifference map
36. Given the sets $A = \{x: x^2 - 3x + 2 = 0\}$ and $B = \{x: x = 2n + 1, n \text{ is an integer}\}$, find $A \cap B$. (a) $\{1, 2\}$ (b) $\{1, 3, 4\}$ (c) $\{1\}$ (d) ϕ
37. If $x^2 - xy - 6y^2 = 0$, find the values of $\frac{x}{y}$. (a) 3, -4 (b) -2, 3 (c) -5, 4 (d) -2, -5
38. Solve the equations $x + y = 5$ and $x^2 + y^2 = 13$, $x < y$. (a) 2, 5 (b) 3, 4 (c) 2, 3 (d) 1, 6
39. Solve the equation $\log_{10}(3x^2 + 8) = 1 + \log_{10}\left(\frac{x}{2} + 1\right)$. (a) -3, 2 (b) -2, $\frac{1}{3}$ (c) $-\frac{1}{3}$, 2 (d) -2, 3
40. Find a if $\sqrt{3\frac{3}{a}} = 3\sqrt{\frac{3}{a}}$, where a is a whole number. (a) 24 (b) 15 (c) 8 (d) 3
41. If $S_n = n^2 - n + 1$, find the 5th term. (a) 8 (b) 21 (c) 13 (d) 15

42. Find the limiting value of the sequence defined as $T_n = 2\frac{1}{2} - \frac{1}{2}\left(\frac{1}{5}\right)^{n-1}$, as $n \rightarrow \infty$. (a) $\frac{1}{5}$ (b)

$-\frac{1}{2}$ (c) $-\frac{1}{10}$ (d) $2\frac{1}{2}$

43. If $f(x) = (3x - 2)(x^2 + 3)$, find $f'(0)$. (a) -4 (b) 0 (c) 9 (d) 3

44. A committee of two men and three women is to be chosen from five men and four women. How many different committees can be formed? (a) 10 (b) 4 (c) 40 (d) 5

45. If the expansion of $(1 + 8x)^4$ is used to obtain the value $\left(\frac{3\sqrt{3}}{5}\right)^8$, find the value of x . (a)

$\frac{1}{100}$ (b) $\frac{27}{25}$ (c) $\frac{\sqrt{3}}{25}$ (d) $\frac{9}{24}$

46. A box contains 40 identical discs, some red and the rest white. If a disc is drawn at random, the probability that it is red is $\frac{1}{4}$. How many more red discs must be added to make the probability of red disc being picked equals $\frac{1}{3}$? (a) 4 (b) 5 (c) 6 (d) 7

47. Evaluate the determinant $\begin{vmatrix} 2 & 7 & 5 \\ 4 & 6 & 3 \\ 8 & 9 & 1 \end{vmatrix}$. (a) -21 (b) 30 (c) 27 (d) 38

48. If $A = \begin{pmatrix} 4 & 7 \\ 5 & 2 \end{pmatrix}$, find the transpose of A^2 . (a) $\begin{pmatrix} 16 & 49 \\ 25 & 4 \end{pmatrix}$ (b) $\begin{pmatrix} 51 & 42 \\ 30 & 39 \end{pmatrix}$ (c) $\begin{pmatrix} 51 & 30 \\ 42 & 39 \end{pmatrix}$ (d)

$\begin{pmatrix} 16 & 25 \\ 49 & 4 \end{pmatrix}$

49. Evaluate $\int x^2 e^x dx$.

(a) $\frac{x^3}{3} e^x + c$ (b) $e^x(x^2 - 2x + 2) + c$ (c) $e^{-x^3} + c$ (d) $e^x(x^2 + 1) + c$

50. The mean of the numbers $1, 3, x, y, 10, 15$ is 7 and their standard deviation is $\sqrt{21}$. Find $x^2 + y^2$. (a) 85 (b) 13 (c) 16 (d) 48

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