UNILAG Post UTME Past Questions and Answers [FREE]

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Note that the correct options are highlighted in red colour.

UNILAG Post-UTME Past Questions & Answers

English Language

1. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: The management has neither ….. nor **denied** the rumour that is was going to lay of some workers.

(a) pronounced

(b) confirmed

(c) rejected

(d) advertised

2. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: Instead of ……. the issue, the speaker **digressed** to unimportant matters.

(a) summarizing

(b) describing

(c) revealing

(d) addressing

3. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: The telephone booths were all…. and I had to wait for more than ten minutes for one to become **vacant.**

(a) locked

(b) busy

(c) occupied

(d) ringing

4. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: While the first battalion **halted** its march at nightfall, the second …. to the barracks

(a) returned

(b) set out

(c) proceeded

(d) turned up

5. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: His father is an ……. driver but he is only a **novice**

(a) enlightened

(b) excellent

(c) poor

(d) experienced

6. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: The arrival of the police at the scene……… rather than **mitigated** tension

(a) provoked

(b) heightened

(c) created

(d) prolonged

7. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: Roses are **common** in May but…. in November.

(a) dead

(b) strange

(c) rare

(d) extinct

8. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: A bank clerk should be able to tell easily the difference between …. notes and **counterfeit** ones.

(a) crisp

(b) good

(c) correct

(d) genuine

9. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: Last night, Uncle Joe was blind **drunk** but this morning he is as ….. as a judge

(a) alert

(b) saintly

(c) strong

(d) sober

10. From the list of words lettered A to D choose the one that is **most nearly opposite** in meaning to the underlined word and that will, at the same time, correctly fill the gap in the sentence: What I have is only a…… of the famous painting; the **original** is in the National Museum

(a) duplicate

(b) model

(c) fake

(d) drawing

11. From the words lettered A to D, choose the word that **best completes** the following sentence: If the jury's verdict is "not guilty," the defendant will be….

(a) acquitted

(b) indicted

(c) pardoned

(d) forgiven

12. From the words lettered A to D, choose the word that **best completes** the following sentence: When all the items on the agenda had been discussed, the meeting was …….

(a) adjourned

(b) dismissed

(c) postponed

(d) dissolved

13. From the words lettered A to D, choose the word that **best completes** the following sentence: Because the new venture was ………. Many businessmen and women went into it.

(a) rich

(b) manageable

(c) lucrative

(d) satisfying

14. From the words lettered A to D, choose the word that **best completes** the following sentence: We save a………. of lions at the game reserve

(a) pride

(b) family

(c) band

(d) group

15. From the words lettered A to D, choose the word that **best completes** the following sentence: Many educationists feel that……. Punishment should still be retained in schools

(a) capital

(b) corporal

(c) corporate

(d) physical

16. From the words lettered A to D, choose the word that **best completes** the following sentence: Freedom of movement is a ….. right of every citizen

(a) fundamental

(b) negotiated

(c) privileged

(d) respected

17. From the words lettered A to D, choose the word that **best completes** the following sentence: The river……… towards the sea

(a) meandered

(b) rolled

(c) ran

(d) trickled

18. From the words lettered A to D, choose the word that **best completes** the following sentence: I…… that our team will win the match tomorrow

(a) certify

(b) conclude

(c) announce

(d) predict

19. From the words lettered A to D, choose the word that **best completes** the following sentence: If found guilty, he will……. all the wealth he has amassed illegally.

(a) forgo

(b) abandon

(c) repay

(d) forfeit

20. From the words lettered A to D, choose the word that **best completes** the following sentence: At a……. of 200 kilometers an hour, the hurricane swept away everything in its path

(a) movement

(b) flow

(c) velocity

(d) drive

21. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: Ladies and gentlemen, the worst may be over, but we are not out of the woods yet. This means that we are

(a) still in the forest

(b) not yet ready to celebrate our success

(c) likely to encounter more difficulties

(d) not sure of ourselves

22. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: When I leave this country it will be for good. This means that I will

(a) never come back

(b) leave for better conditions elsewhere

(c) become an adventurer.

(d) improvement ways.

23. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: When she confronted her husband, he hung his head and didn't answer her questions. This means that he was

(a) defiant

(b) ashamed and embarrassed

(c) caught unawares

(d) angry with her

24. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: All our plans fell through at the last moment. This means that we

(a) were exposed

(b) delayed

(c) were abandoned

(d) failed

25. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: The police knew that the suspect was not being straight with them. This means that the suspect was

(a) not telling the truth

(b) not friendly

(c) afraid

(d) timid

26. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: After his prison experience. Etim decided to go straight. This means that he decided to.

(a) hold his head up and walk with defiance

(b) change his religion

(c) live an honest life

(d) stop using drugs

27. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: The teacher spoke with his tongue in his cheek when he said that lazy Ade was the best pupil. This means that the teacher

(a) did not mean what he said

(b) was disappointed

(c) was angry

(d) tried to encourage

28. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: They did not know what to expect and so decided to play it by it by ear. This means that they decided to

(a) listen attentively to everyone

(b) act according to circumstances

(c) pretend to be deaf

(d) prepare for the worst

29. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: Ojo decided that the best course of action was to play along with them for time being. This means that he decided to

(a) join their them temporarily

(b) entertain them for a while

(c) pretend to agree with them

(d) be playful with them.

30. From options A to D, choose the interpretation that you consider **most appropriate** for this sentence: The conference was attended by people from all walks of life. This means that conference was attended by people

(a) of all races

(b) who travelled widely

(c) from all professions

(d) from different parts of the world.

31. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: Amina is the one who **initiated** the quarrel, not Nikel!

(a) started

(b) stopped

(c) settled

(d) fuelled

32. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: She was **reprimanded** by her boss for negligence

(a) sacked

(b) rebuked

(c) punished

(d) surcharged

33. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: Why should I **retract** my statement when it is nothing but the truth?

(a) alter

(b) deny

(c) withdraw

(d) condemn

34. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: The doctor diagnosed the tumour as **malignant**

(a) deadly

(b) painful

(c) trouble

(d) minor

35. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: In tropical; Africa, mosquitoes are **ubiquitous**

(a) dangerous

(b) harmful

(c) trouble

(d) everywhere

36. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: It soon became obvious that a confrontation was **inevitable**

(a) disastrous

(b) unavoidable

(c) desirable

(d) imminent

37. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: They insisted that the omission of my named had been **inadvertent**

(a) unintentional

(b) unconditional

(c) improper

(d) unfortunate

38. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: The police announced that they were yet to **apprehend** the criminals

(a) interrogated

(b) charge

(c) prosecute

(d) arrest

39. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: He is easily recognizable because of a **conspicuous** birthmark on his face

(a) dark

(b) beautiful

(c) prominent

(d) natural

40. From the words letter A to D, choose the word that is **nearest in meaning** to the underlined word as it is used in the sentence: The fishing boat was **imperiled** by high winds, but it management to reach port safely

(a) pushed

(b) endangered

(c) disturbed

(d) blown

41. From options A to D, choose the word or group of words that **best completes** the following sentence: Surprisingly, Musa turned ….. the job offer

(a) away

(b) in

(c) out

(d) down

42. From options A to D, choose the word or group of words that **best completes** the following sentence: We have no choice………to do what they demand.

(a) except

(b) than

(c) unless

(d) but

43. From options A to D, choose the word or group of words that **best completes** the following sentence: The committee has submitted its report…… the students

(a) in

(b) for

(c) about

(d) on

44. From options A to D, choose the word or group of words that **best completes** the following sentence: The chairman told members that he was open ….. suggestions

(a) to

(b) for

(c) about

(d) on

45. From options A to D, choose the word or group of words that **best completes** the following sentence: The policeman shot the escaping robber ………. the leg

(a) on

(b) in

(c) at

(d) into

46. From options A to D, choose the word or group of words that **best completes** the following sentence: For the management, your remarks amount to a slap…….. the face

(a) on

(b) upon

(c) at

(d) in

47. From options A to D, choose the word or group of words that **best completes** the following sentence: She does not remember……. to anyone at the park

(a) to talk

(b) to be talking

(c) talking

(d) to have talked

48. From options A to D, choose the word or group of words that **best completes** the following sentence: This portion is to be shared between………

(a) us and them

(b) we and them

(c) us and they

(d) we and they

49. Select the option that has a different consonant sound from the others.

(a) of

(b) enough

(c) fight

(d) life

50. Fill the gap with the appropriate option from the list of options. Sir, I'm not lying about the matter, I know nothing of it. If I knew, _____

(a) I would tell you

(b) I must tell you

(c) I can tell you

(d) I shall tell you

General Paper

1. Which of the following groups fall into the Civil Service?

(a) The police, the army, and the air force

(b) Employees of NEPA, NNPC and NRC

(c) Employees of ministries of finance, education and transportation

(d) All of the above

2. The recruitment or appointment of the permanent secretary is one of the duties of:

(a) The federal public service commission

(b) The state civil service commission

(c) The executive

(d) The National Assembly

3. In the organizational structure of the ministry or government department, offices and positions are:

(a) Hierarchically arranged

(b) Diagonally arranged

(c) Secretly arranged

(d) Haphazardly arranged

4. The government maintains monopoly over certain services for:

(a) Selfish reasons

(b) Security and strategic reasons

(c) Undisclosed reasons

(d) All of the above

5. Ministers of local government and chieftancy affairs were abolished in Nigeria by:

(a) General Yakubu Gowon

(b) General Murtala Mohammed

(c) President Ibrahim Babangida

(d) General Olusegun Obasanjo

6. Policy analysis, policy implementation and plan setting are some of the functions of:

(a) The legislature

(b) The executive

(c) The local government

(d) The civil service

7. Public corporations can be controlled through:

(a) Riots

(b) Public opinion

(c) Civil disobedience

(d) None of the above

8. The general supervision of a public corporation is carried out by the:

(a) Board of directors

(b) Board of trustees

(c) Managing director

(d) Secretary of the board

9. The local government in Nigeria is created to:

(a) Create more civil service jobs

(b) Encourage competition and rivalry among communities

(c) Bring the government nearer to the people

(d) Prevent the creation of more states

10. The Civil Service embraces all workers in:

(a) All private corporations

(b) Public and private companies

(c) Government ministries

(d) Public corporations

11. The effective operation of the Civil Service in Nigeria is mostly hampered by:

(a) Inadequate training of personnel

(b) Corruption and inefficiency

(c) Debt burden and redundancy

(d) Poor infrastructure

12. The Bureau of Public Enterprises is charged with the responsibility for:

(a) Privatization and commercialization

(b) Generating revenue

(c) Eradicating poverty

(d) Providing employment opportunities

13. Financial allocation to a local government by the Federal or a State government to supplement the cost of a project is called:

(a) Revenue allocation

(b) Reimbursement

(c) Statutory allocation

(d) Matching grant

14. A permanent Civil Service:

(a) Makes continuity in government possible

(b) Makes civil servants arrogant

(c) Promotes ethnic domination

(d) Is undemocratic

15. One form of control exercised over public corporations is the requirement that their annual reports be laid before:

(a) Parliament for scrutiny

(b) All the political parties

(c) All the local authorities in the country

(d) A joint committee of the executive and parliament

16. Anonymity of the Civil Service means that the Civil Servant must:

(a) Serve any government impartially

(b) Be politically neutral

(c) Have job security

(d) Not receive the credit or blame for any good or bad policy

17. The local government reforms of 1976 in Nigeria were designed to:

(a) Decentralize authority

(b) Enlist grass-root support

(c) Achieve even development

(d) All of the above

18. Bye-laws made by local authorities can be declared unconstitutional only by the:

(a) Local government service commission

(b) Ministry of local government and chieftaincy affairs

(c) Courts

(d) Attorney-General

19. Mass retrenchment of workers in the public and private sectors is most likely to result in:

(a) Political stability

(b) Economic survival

(c) High rate of armed robbery, pilfering and political instability

(d) Electoral malpractices

20. Public Corporations are established to:

(a) Look after the affairs of local authorities

(b) Co-ordinate the activities of ministries

(c) Give advice to the government on commerce

(d) Provide essential services and amenities on commercial bases

21. Which of the following is **not** a source of local government revenue:

(a) State and federal government grants

(b) Licensing of cars and lorries

(c) Market stall fees

(d) Returns on investment

22. One of the major reasons for setting up public corporations is to:

(a) Maximize profit

(b) Compete with private companies

(c) Provide essential services

(d) Encourage patronage

23. All of the following are functions of the civil service **except**:

(a) Making laws

(b) Implementing policies

(c) Preparing financial estimates

(d) Implementing edicts

24. One factor which militates against the effective functioning of the Civil Service is:

(a) Delegated legislation

(b) Political interference

(c) Judicial inference

(d) Political stability

25. Being the third tier of government, the local government is therefore:

(a) Subordinate to state and federal government

(b) Antagonistic to state and federal government

(c) Co-ordinate to state and federal government

(d) All of the above

26. One major problem facing public corporations in Nigeria is:

(a) Political parties

(b) Excessive patriotism

(c) Government interference

(d) Judicial manipulation

27. Most of the reasons given for the establishment of public corporations in Nigeria are being contradicted by the current wave of:

(a) Privatization and commercialization

(b) Legalization and nationalization

(c) Judicial and legislative competence

(d) Rigging and electoral brouhaha

28. The recruitment, promotion and discipline of civil servants in Nigeria is the responsibility of:

(a) Board of Directors

(b) Civil Service Commission

(c) The president

(d) Ministry of Labour and Productivity

29. Engineers and architects in the Civil Service fall into the:

(a) Professional class

(b) Technical class

(c) Higher technical class

(d) The manipulative class

30. The main functions of the administrative class of the Civil Service include:

(a) Policy making

(b) Implementation of government policies

(c) Enactment of laws for the ministries

(d) All of the above

31. The relationship between staffs of the civil service in the discharge of their duties is expected to be:

(a) Personal and unofficial

(b) Official and non-personal

(c) Casual and inconsistent

(d) Illogical and sporadic

32. The first local government system adopted in Nigeria by the regional government was:

(a) The French prefectorial system

(b) The Indian local government system

(c) The Russian Socialist system

(d) The British Council system

33. The idea of making the local government the third tier of government was initiated by:

(a) Abdusalam Abubakar regime

(b) Alhaji Shehu Shagari regime

(c) Murtala/ Obasanjo regime

(d) Ibrahim Babangida regime

34. Before the 1976 local government reforms, one of the defective features of the local governments in Nigeria was that:

(a) They had no functions to perform

(b) They had no legal personality

(c) They had no chairmen to pilot their affairs

(d) They had no political aspiration

35. One of the major problems which spelt doom for Nigeria Airways was:

(a) Embezzlement of fund

(b) Corruption

(c) Lack of patriotism

(d) All of the above

36. The main cause of infrastructure decay in Nigeria is:

(a) Illiteracy

(b) Disobedience

(c) Lack of maintenance culture

(d) Political instability

37. One of the measures that will enhance the status of the local government as a third tier of government is:

(a) The creation of more local government areas

(b) Up-grading the local government to statehood

(c) Drafting of separate constitution for local government

(d) Deduction of local government share of federal allocation directly from source

38. To enhance the independence of the federal public service commission, members should:

(a) Be elected from a national party

(b) Take oath of celibacy

(c) Neither belong to the legislative nor executive branch of government

(d) Be appointed by the non-aligned movement

39. To be promoted from one grade level to another, a staff must first:

(a) Apply to the Nigeria export promotion council

(b) Petition the civil service commission

(c) Be in the president or governor's list

(d) Be recommended to the public service commission by his or her departmental head

40. To be entitled to pension in Nigeria, a staff must:

(a) Work for 55 years

(b) Work for at least 10 years consecutive years

(c) Work for 65 years

(d) Attain the age of seventy

41. The dismissal of a staff in the ministry for official misconduct is the prerogative is:

(a) The permanent secretary

(b) The personnel manager

(c) The minister

(d) The Public Service Commission

42. The greatest head-ache affecting revenue generation by NEPA is:

(a) Debts owed it by government departments and officials

(b) Refusal of NEPA men to collect revenue

(c) Its instability to employ accountants

(d) None of the above

43. Public Corporations in Nigeria are subject to the control of:

(a) The judiciary

(b) The minister in charge

(c) The parliament

(d) Public Service Commission

44. The public corporation is similar to the joint stock company because:

(a) The chairmen is also the managing director

(b) Their administrative centres are far from their main factories

(c) The two are legal entities

(d) They share the same market

45. Which of the following statements both describes a public corporation:

(a) It is an organ of government responsible for executing the policies of government

(b) It is a local body that renders services on a local basis

(c) It is a legal body established by an act of state to provide essential services

(d) It is a body owned by members of the public

46. 'Red tapism' can be explained as:

(a) The decentralized way of taking decision

(b) A flexible way by which government decisions are taken

(c) The rigid adherence to routines by civil servants

(d) Management by objectives

47. An institution which seeks to redress people's grievances against abuse of administrative power is the:

(a) Ombudsman

(b) Judiciary

(c) Directorate of Public Prosecution

(d) Judicial Service Commission

48. A statutory corporation is under the supervision of:

(a) The Chief Justice

(b) The commissioner of police

(c) A minister

(d) A local government chairman

49. To which class of the civil service does the causal or manual labour force belong:

(a) The technical class

(b) The casual class

(c) The manipulative class

(d) The higher technical class

50. The first person to develop the atomic bomb was:

(a) Albert Einstein

(b) Charles De Gaulle

(c) Thomas Jefferson

(d) T.S. Elliot

Mathematics

1. Which of the following points does not lie on the lie $2y + 5x - 4 = 0$?

(a) (0.8, 0)

(b) (1, -0.5)

(c) (0, 2)

(d) (2, 3)

2. A straight line has the equation $10y = 3x + 15$. Which of the following is true?

(a) The gradient is 0.3 and the y-intercept is 1.5

(b) The gradient is 3 and the y-intercept is 1.5

(c) The gradient is 15 and the y-intercept is 3

(d) The gradient is 1.5 and the y-intercept is 0.3

3. P is the point (2, 7) and Q is the point (6, 3). What is the gradient of PQ?

(a) 1

(b) – 1

(c) 0.5

(d) -0.5

4. P is the point (3, 5). Q is the point (-1, 9). R is the midpoint of PQ. Which one of the following lines does R lie on?

(a) y = x + 6

(b) y = x + 8

(c) y = x - 6

(d) y = x - 8

5. A straight line has a gradient of -2 and passes through the point (4, 1). What is its equation?

(a) y + 2x = 6

(b) y = 2x - 6

(c) y + 2x – 9 = 0

(d) 2y = x -2

6. The line y = 5x – 3 and y = 2x + 9 intersects at P. what are the coordinates of P?

(a) (2, 7)

(b) (2, 13)

(c) (4, 17)

(d) (-4,-23)

7. A is the point (1, 5), B is the point (4, 7) and C is the point (5, 2). Triangle ABC is

(a) Right-angle

(b) Scalene with no right angle

(c) Equilateral

(d) Isosceles

8. If un = 2, 6, 10, …, the 12th term of the sequence is

(a) 46

(b) 50

(c) 48

(d) 44

9. If un = 2, 6, 10, …, the last tem of the sequence is 90. The number of terms in the sequence is

(a) 20

(b) 22

(c) 24

(d) 23

10. If un = 2, 6, 10, …, the sum of the terms of the sequence above is

(a) 1104

(b) 1058

(c) 968

(d) 1012

11. In an arithmetic sequence with 25 terms, if the first term is 60 and last term is -12 the common difference is

(a) 3

(b) 2

(c) -3

(d) -2

12. In an arithmetic sequence with 25 terms, if the first term is 60 and last term is -12, the sum of the terms of the sequence is

(a) 600

(b) 2400

(c) 900

(d) 1800

13. In an arithmetic sequence whose 4th term is 14 and whose 11th term is 70, the first term and common difference are

(a) a = -10, d = 8

(b) a = -7, d = 7

(c) a = 10, d = 8

(d) a =-14, d =7

14. In an arithmetic sequence whose 4th term is 14 and whose 11th term is 70, the sum of the first 12 terms of the sequence is

(a) 468

(b) 330

(c) 456

(d) 408

15. Ann goes swimming regularly. She wants to improve her fitness, so she decides to swim 10 lengths in the first session and increase the number of lengths

she swims by 2 every session. When she reaches 50 lengths in a session she will not increase the number any further. After how many sessions does Ann swim 50 lengths for the first time?

(a) 21

(b) 22

(c) 20

(d) 19

16. Ann goes swimming regularly. She wants to improve her fitness, so she decides to swim 10 lengths in the first session and increase the number of lengths she swims by 2 every session. When she reaches 50 lengths in a session she will not increase the number any further. Ann decides she will give herself a reward when she has swum a total of 400 lengths. After how many sessions does she get her reward?

(a) 15

(b) 25

(c) 16

(d) 24

17. Ann goes swimming regularly. She wants to improve her fitness, so she decides to swim 10 lengths in the first session and increase the number of lengths she swims by 2 every session. When she reaches 50 lengths in a session she will not increase the number any further. If Ann asks her friend Joy to come swimming with her, Joy starts coming at Sue's 8th session. Joy starts to swim 15 lengths and increases the number of the lengths by 5 each time. After how many of Joy's sessions does she swim the same number of lengths as Ann?

(a) 10

(b) 5

(c) 11

(d) **4**

18. A dealer increased the price of an item by 20%, and then increased the price of the same item by 30%. If x is the original price, what is the price after the two increases?

(a) 1.5 x

(b) 1.56 x

(c) x + 0.5

(d) x + 0.56

(e) x + 6

19. Two dice are thrown. What is the probability that the sum of the two numbers obtained is greater than 10?

(a) 1/12

(b) 1/36

(c) 1/6

(d) 1/4

(e) 1/2

20. If x and y are two real numbers such that 3x + 2y = 5 and 5x + 4y = 9, then 4x + 3y =

(a) 0

(b) 2

(c) 5

(d) 6

(e) **7**

21. If 35 is the median of the data set including 21, 7, 45, 33, 62 and x, then x =

(a) 3

(b) 14

(c) 37

(d) 33

(e) 48

22. The_____is the value you calculate when you want the arithmetic average

(a) Mean

(b) Median

(c) Mode

(d) All of the above

23. The_____is often the preferred measure of central tendency if the data are severely skewed

(a) Mean

(b) Median

(c) Mode

(d) Range

24. Which of the following is the formula for range?

(a) H + L

(b) L x H

(c) L – H

(d) H – L

25_____are used when you want to visually examine the relationship between two quantitative variables.

(a) Bar graphs

(b) a Pie graphs

(c) a Line graphs

(d) a Scatterplots

26. As a general rule, the_____is the best measure of central tendency because it is more precise

(a) Mean

(b) Median

(c) Mode

(d) Range

27. The most frequently occurring number in a set of values is called the_____.

(a) Mean

(b) Median

(c) Mode

(d) Range

28. A rectangular box with a square base and no top has a volume of 500 cm, the dimensions of the box that require the least amount of material are

(a) 10x10x5cm

(b) 4x5x25cm

(c) 50x5x2cm

(d) 25x10x2

(e) 10x50x1

29. The roof of a shelter is made from a piece of corrugated iron 2.3m long inclined at 18° to the horizontal. How far from the wall does the roof stick out?

(a) 0.7m

(b) 2.2m

(c) 1.1m

(d) 1.2m

(e) 2.1m

30. A ladder 20m long rests against a vertical wall so that the foot of the ladder 9m from the wall. The height (correct to 1 decimal place above the ground at which the upper end of the ladder touches the wall is

(a) 19.7m

(b) 18.1m

(c) 18.7m

(d) 17.1m

(e) 17.9m

31. A chord 6.6m long is 5.6m from the centre of a circle. The radius of the circle is

(a) 3.2m

(b) 6.3m

(c) 6.5m

(d) 1.6m

(e) 2.56m

32. The heights in cm, of 10 children are 145, 163, 159, 162, 167, 149, 150, 160, 170, and 155. The mean height of the children is

(a) 156cm

(b) 158cm

(c) 160cm

(d) 162cm

(e) 159cm

33. The heights in cm, of 10 children are 145, 163, 159, 162, 167, 149, 150, 160, 170, and 155. The standard deviation of the heights of the children is

(a) 5.5cm

(b) 5.7cm

(c) 6.5cm

(d) 6.7cm

(e) 7.7cm

34. A class of all possible subsets of space S is called

(a) Universal set

(b) alpha - field

(c) sample space

(d) probability space

(e) random space

35. One of these is a demerit of a sample

(a) It is cheaper to enumerate a sample

(b) It is faster to survey a sample

(c) Results obtained from sample are oftentimes as informative as those from a censor

(d) All of the above

(e) None of the above

36. One of these is not a desirable feature of a good statistical table

(a) A table must reveal salient features of data

(b) A table must clearly communicate information in a neat and concise form

(c) A table must be self sufficient

(d) A table must be self explanatory

(e) None of the above

37. Which of these is a measure of location

(a) Mean

(b) Standard deviation

(c) Variance

(d) All of the above

(e) None of the above

38. Statistics is a set of tools whose proper use will …….. the decision maker

(a) Completely fill the needs of

(b) Encumber

(c) Aid

(d) Confuse

(e) None of the above

39. The graph of cumulative frequency distribution is called

(a) Frequency polygon

(b) Frequency distribution curve

(c) Frequency curve

(d) Step function

(e) Ogive

40. A ……… variation is one whose values convey the concept of attribute rather than number

(a) Quantitative

(b) Qualitative

(c) Discrete

(d) Continuous

(e) None of the above

41. A company employs 100 people, 65 of whom are men. 60 people including all the women are paid weekly. The number of the men that are paid weekly is

(a) 35

(b) 40

(c) 25

(d) 30

(e) None of the above

42. In a survey of villagers, it is found that 20% of the people have visited Kano and 25% have visited Port Harcourt. If 5% have been to both cities, then the percentage that have visited neither Kano nor Port Harcourt is

(a) 75%

(b) 65%

(c) 50%

(d) 60%

(e) 70%

43. The length of a rectangle is three times its width. If the perimeter is 72 cm, the width of the rectangle is

(a) 6cm

(b) 8cm

(c) 9cm

(d) 10cm

(e) 11cm

44. A frustum of a pyramid is 3cm square at the top and 6cm square at the bottom and is 5cm high. The volume in cm3 of the frustum is

(a) 15

(b) 150

(c) 105

(d) 115

(e) 36

45. If x = 2, then (x - 1)(2x - 3) =

(a) 1

(b) 3

(c) -1

(d) 0

(e) -3

46. What is sin30 ?

(a) ½

(b) 3/2

(c) 0.866

(d) 1

(e) 2

47. Given the list of numbers {1, 6, 3, 9, 16, 11, 2, 9, 5, 7, 12, 13, 8}, what is the median?

(a) 7

(b) **8**

(c) 9

(d) 11

(e) 6

48. What is the slope of the line that is perpendicular to y - 2x = 1?

(a) 2

(b) -2

(c) ½

(d) -½

(e) 1

49. What is the sum of the first 40 even positive integers?

(a) 1,600

(b) 1,560

(c) 820

(d) 1,640

(e) 400

50. What is the length of an arc of a circle with a radius of 5 if it subtends an angle of 60° at the center?

(a) 3.14

(b) 5.24

(c) 10.48

(d) 2.62

(e) 4.85

POST UTME SCREENING PRACTICE QUESTION

I. MATHEMATICS

1. A solid is made up of a hemisphere of radius $x\ cm$, and a cone of height $x\ cm$ of the same radius as the hemisphere. What is the volume of the composite solid?

   (a) $\frac{1}{3}\pi x^3$ (b) $\frac{15}{3}\pi x^3$ (c) $\frac{45}{3}\pi x^3$ (d) πx^3

2. What is the difference in the local time between two places in latitude $55°N$ if they are located at longitudes $8°W$ and $18°E$ respectively.

   (a) 60 mins   (b) 80 mins   (c) 98 mins   (d) 104 mins

3. A solid sphere of radius $x\ cm$ is placed in a cylinder of radius $2x\ cm$ and height $2x\ cm$. The cylinder is then filled with water to the brim and the solid gently withdrawn. Find the volume of the water in the cylinder in cm^3.

   (a) $\frac{28}{3}\pi x^3$ (b) $24\pi x^3$ (c) $\frac{20}{3}\pi x^3$ (d) $8\pi x^3$

4. The earth rotates on its own axis once in 24hrs. What is the speed in km/hr of a place whose latitude is $30°S$. (Take $2\pi R$ to be equal to 4×10^4 km)

   (a) $2,140\ km/hr$ (b) $1,443\ km/hr$ (c) $1,200\ km/hr$ (d) $1,000\ km/hr$

5. The minor sector of a circle of diameter 3.6cm subtends angle $35°$ at the center. What is the perimeter of the sector?

   (a) 5.8cm   (b) 4.7cm   (c) 2.9cm   (d) 1.1cm

6. A regular polygon of $(2k + 1)$ sides has $140°$ as the size of each interior angle. Find k.

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

7. Solve the following simultaneous equation

   $x + y = 10, \quad x^2 + y^2 = 58$

   (a) $x = 7, y = 3$ or $x = 3, y = 7$ (b) $x = -7, y = -3$ or $x = -3, y = -7$

   (b) $x = -7, y = 3$ or $x = 3, y = -7$ (d) $x = 7, y = -3$ or $x = -3, y = 7$

8. A man is x years old which his son is y years old. The sum of their ages is twice the difference of their ages. If the product of their ages is 675, find the age of the man.

   (a) 40 years   (b) 42 years   (c) 55 years   (d) 45 years

9. Let the universal set $U = \{1,2,3,4,5,6\}$.

   $A = \{1,2,3\}$ and $B\ \{2,4,6\}$. Then $A \cap B^c$ is

   (a) {2}   (b) {1, 3}   (c) {4, 6}   (d) {1, 2, 3, 5}

10. Simplify $\frac{\sqrt{5}+\sqrt{50}}{\sqrt{7}}$ as far as possible.

(a) $\sqrt{14}$　　　　(b) $7\sqrt{2}$　　　　(c) $\frac{7\sqrt{2}}{\sqrt{7}}$　　　　(d) $\frac{2\sqrt{2}+2\sqrt{5}}{\sqrt{7}}$

1

11.　Factorize fully: $px^2 - py^2 + qy^2 - qy^2$.

(a) $(p-q)(x+y)(x-y)$　(b) $(p-q)(x^2+y^2)$　(c) $(p+q)(x-y)(x+y)$　　(d) $(p-q)(x^2+y^2)$

12.　Evaluate $\log_3 9 - \log_{27} 3 + \log_{\sqrt{3}} 9$

(a)　　$6\frac{1}{3}$　　(b) $5\frac{1}{2}$　　　　(c) 9　　　　(d) $5\frac{2}{3}$

13.　In a class of 30 students, there are 10 who wear spectacles and 16 girls. There are 8 boys who do not wear spectacles. How many girls wear spectacles?

(a) 3　　　　(b) 4　　　　(c) 5　　　　(d)　　6

14.　Solve the equation $\log_2 x - \log_2 (x-1) = 2$

(a) 2　　　　(b) $1\frac{1}{3}$　　　　(c) $1\frac{1}{99}$　　　　(d) no solution

15.　$(x-2)$ is a factor of $x^2 - 3x^2 + kx + 14$. The value of k is

(a)-5　　　　(b) -2　　　　(c) 2　　　　(d) -3

16.　Factorize the polynomial $x^3 - 7x + 6$

(a) $(x-3)(x-1)(x+2)$　　(b) $(x-3)(x-1)(x-2)$　(c) $(x+3)(x+1)(x+2)$　(d) $(x-1)(x-6)$

17.　y is inversely proportional to the square of x. When $x = 3$, then $y = 4$. Find the constant of proportionality.

(a) 48　　　　(b) $\frac{4}{9}$　　　　(c) 2.25　　　　(d) 36

18.　The solution to the inequality $5 - 2x > 11 - 4x$ is

(a) $x > 3$　　　　(b) $x > 3$　　　　(c) $x > 1$　　　　(d) $x < 1$

19.　If $\begin{vmatrix} x & 2 \\ 1 & 5 \end{vmatrix} = \begin{vmatrix} x & 3 \\ 2 & 3 \end{vmatrix}$, find the value of x

(a) 2　　　　(b) -2　　　　(c) 0　　　　(d) -1

20.　The determinant of $\begin{pmatrix} 1 & 2 & 0 \\ 3 & 2 & 1 \\ 4 & 2 & 1 \end{pmatrix}$ is

(a) 0   (b) 2   (c) -2   (d) 1

2

31. A girl has 98 beads, and all but 14 were lost. How many beads did she loose?
    (A) 84   (B) 112   (C) 114   (D) 14

32. If 15% of a number is 175. What is the number multiplied by 2?

    (A) 500   (B) 150 (C) 1000   (D) 800

33. A man was born on the 29th of February, 1980. How many birthdays has he celebrated after his birth till today?

    (A) 9   (B) 9   (C) 3   (D) 13

34. 17, 31, 51, 68, _

    (A) 75   (B) 82   (C) 90   (D) 85

35. A car travels at 120km/h. How long would it take it to get to Jebba which is 2,400km away?

    (A) 20hrs   (B) 25hrs   (C) 15hrs   (D) 30hrs

36. A man buys 6 books and 3 bags. If a book cost N17 and a bag cost N25. How much has he spent?

    (A) N112   (B) N177   (C) N125   (D) N150

37. It takes 15 minutes to fill 125 gallons with petrol from a tanker. How long will it take to fill 725 gallons?

    (A) 92mins   (B) 45mins   (C)   87mins   (D) 102mins

38. If it takes 15 men 6 ½ days to build a house, How many houses can they build in 45 days?

    (A) 3days   (B) 7days   (C) 8days   (D) 5days

39. If it takes a boy 5minutes to run 1km, how long would it take him to run 2 ½ km?
    (A) 10 ½ mins   (B) 15mins   (C) 12 ½ mins   (D) 11 ½ mins

40. How many bottles are in a dozen crates containing 24 bottles each?

    (A) 288   (B) 300   (C) 180   (D) 120

19. In which continent is Mount Everest?
A. Asia
B. North America
C. South America
D. Africa
E. Europe

20. Which of these people is not an explorer?
A. Vasco Da Gama
B. Christopher Columbus
C. Ferdinand Magellan
D. David Livingstone
E. None of the above

21. What is the difference between 2:45 am and 12:32 pm?

(A) 9Hrs 47min   (B) 14Hrs 10min   (C) 5Hrs 25min   (D) 10Hrs 17min

22. 4 ¾ - 2 ½ x ½ =

(A) $^4/_3$ (B) $^{14}/_3$ (C) $^9/_8$ (D) $^3/_2$

23. 2 scores plus 4 dozens multiplied by 14 equals?

(A) 118   (B) 1232   (C) 1882   (D) 1432

24. 33 $^1/_3$ of 100 equal?

(A) 33 $^1/_3$ (B) 30   (C) 3   (D) 33

25. 1800 multiplied by what number will give you 100800

(A) 56   (B) 28   (C) 41   (D) 38

26. 5.8 x 6.1 x 9.8 =

(A) 480.4   (B) 350.3   (C) 560.8   (D) 260.7

27. A farmer has 41 bags of oranges. Each bag contains 59 oranges each. How many oranges does the farmer have?

(A) 3324   (B) 1591   (C) 2831   (D) 2419

28. If 16 of the same book weight 4kg. How much does one book weigh?

(A) 20g   (B) 25g   (C) 55g   (D) 40g

29. What is 5 % of N575?

(A) 30.8   (B) 28.75   (C) 25.5 (D) 55.5

30. What is the difference between 500 multiplied by 700 and 700 multiplied by 500?
    (A) 1000   (B) 100   (C) 0   (D) 10000

22.

21. In Fig.1, O is the centre of the circle.

$\angle AOB = 130^0$ Find $\angle ACB$.
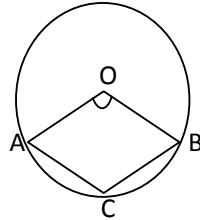

Fig.1

(a) 115   (b) 135   (c) 70   (d) 65

22. Fig.2 shows a circle of radius 4cm. The area of the shaded segment is

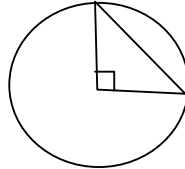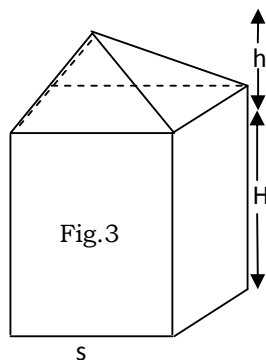(a) $4\pi cm^2$ (b) $4\pi - 8cm^2$ (c) $84 cm^2$ (d) $2\pi - 4cm^2$

Fig.2

23. Fig.3 shows a pyramid on top of a cuboid. The height of the cuboid is Hcm, the height of the pyramid is b, cm, and the square base of both shapes has side s cm. find the volume of the shape.

Fig.3

(a) $s^2(H + h)cm^3$ (b) $s^2(H + h)cm^3$ (c) $\frac{1}{3}s^2(H + h)cm^3$ (d) $\frac{1}{3}s^2(2H + h)cm^3$

24. If $y = \sin(x^2 + 7)$, then $\frac{dy}{dx}$ is

    (a) $2x \cos = (x^2 + 7)$ (b) $(2x + 7) \cos (x^2 + 7)$ (c) $-2 \cos(x^2 + 7)$ (d) $2x \cos x$

25. The line $y = kx - 3$ is perpendicular to the line $2y + 3x = 7$. The value of k is

    (a) $-\frac{1}{3}$ (b) $-\frac{2}{3}$ (c) $\frac{3}{2}$ (d) $\frac{2}{3}$

26. The midpoint of the line segment joini   3) and (5, 7) is
                                          3.

    (a) (3, 5)   (b) (3, 2)   (c) (2, 5)   (d) (1, 6)

27. The solution of the inequality $x^2 + 3x - 10 < 0$ is

    (a) $-2 < x < 5$ (b) $x < -5 \text{ or } x > 2$ (c) $2 < x < 5$ (d) $-5 < x < 5$

28. A binary operation is defined by $a*b = a + b - 3$. The identity is

    (a) 3   (b) -3   (c) 1   (d) 0

29. A binary operation is defined by $a*y = xy - x + y$. The value of $(3*4)*5$ is

    (a) 81   (b) 61   (c) 57   (d) 73

30. Find the difference between the mean and the median of the numbers 1, 2, 3, 4, 5, 7, 8, 9 and 10

    (a) 0   (b) $\frac{1}{9}$ (c) 5   (d) $\frac{4}{9}$

31. There are eight men and nine women on a committee. In low many ways can a subcommittee of two men and three women be chosen?

    (a) 2,352   (b) 112   (c) 6,188   (d) 28,224

32. Change 671_{nine} to base 8

    (a) 550_{eight} (b) 540_{eight} (c) 671_{eight} (d) 1046_{eight}

33. Write $\frac{14}{\sqrt{5}-\sqrt{3}}$ in the form $a\sqrt{5} + b\sqrt{3}$, where a and b are rational.

    (a) 7   (b) $7\sqrt{5} + 5\sqrt{3}$ (c) $7\sqrt{5} - 7\sqrt{3}$ (d) $7\sqrt{3} + 7\sqrt{5}$

34. In the relation $\log_x y = z$, write x in terms of y and z.

    (a) $x = z^y$ (b) $x = z^y$ (c) $x = z^{1/y}$ (d) $x = z^{1/y}$

35. Solve the equation $\sqrt{x + 7} = x - 5$.

(a) 9   (b) 5, -7   (c) 2   (d) 2, 9

36.   Let $y = \frac{4x+3}{2x-5}$. Write x as a function of y.

   (a) $x = \frac{5y-3}{5y+3}$ (b) $x = \frac{5y-3}{5y+4}$ (c) $x = \frac{5y+3}{5y-4}$ (d) $x = (5y+3)(2y-4)$

13. The Parliament of the United Stc 4   America is called:
A. House of Parliament
B. National Assembly
C. Congress
D. Assembly of Lawmakers
E. None of the above

14. Cote d'Ivoire is formerly known as?
A. Yamassokou
B. Ivory Coast
C. Gold Coast
D. Rhode Coast
E. Diamond Haven

15. The process of preservation, protection and wise use of natural resources is called:
A. Fermentation
B. Preservation
C. Conservation
D. Ecology
E. Zoning

16. Ballet and Tango are types of:
A. Song
B. Dancing
C. Cycling
D. Swimming
E. Horse Ridding

17. The first person to develop atomic bomb was:
A. Albert Einstein
B. Charles De Gaulle
C. Thomas Jefferson
D. T. S. Elliot
E. Plato

18. The process by which the people in a country is given an opportunity to elect, choose or reject new government is known as:

A. Referendum
B. Plebiscite
C. Election
D. Ratification
E. None of the above

21

7. A system of government based on the ideological belief of equality of people and concentration of national resources in the hands of the State is called:
A. Fanaticsm
B. Egalitarianism
C. Communism
D. Democracy
E. Utopianism

8. An instrument used in finding ways and navigation is called:
A. Map
B. GPRS
C. Compass
D. Compound
E. None of the above

9. A computer is made of:
A. hardware
B. software
C. None of the above
D. A& B.
E. A only

10. Which of these continents is the coldest in the world?
A. Asia
B. Africa
C. Antarctic
D. Europe
E. America

11. What is the name of the world's highest mountain?
A. Mount Kilomajaro
B. Mount Everest
C. Mount Cameroon
D. Mountain Nkoyo
E. None of the above.

12. What name is the Parliament of Nigeria called:
A. House of Representative
B. Senate
C. State House of Assembly
D. National Assembly
E. All of the above

37. The second and fifth terms o 20 netric progression are 6 and -48, respectively. The first term is

    (a) -3   (b) 3   (c) 12   (d) -12

38. Find the positive solution of the equation $\log(x + 1) + \log(x + 4) = 1$.

    (a) 6   (b) 0   (c) 2   (d) 1

39. ₦72000 is invested at 80% simple interest. After how many years has it reached ₦87 840?

    (a) $2\frac{3}{4}$ years   (b) 2 years   (c) 3 years   (d) $2\frac{1}{2}$ years

40. Suppose that p is the probability that an event occurs, and that q is the probability that the event does not occur. Which of the following is true?

    (a) $p = q$ (b) $p + q = 1$ (c) $pq = 0$ (d) $pq = 1$

41. Suppose x and y are positive numbers for which $x > y$. Which of the following is not true?

    (a) $x^2 > y^2$ (b) $-x < -y$ (c) $\frac{1}{x} > \frac{1}{y}$ (d) $3x > 2y$

42. Fig.4 shows a trapezium. The height is 8m, one the parallel side is 10m and the area is 104m². Find the other parallel side.

    Fig.4   8m

    (a) 16m   (b) 10m   (c) 13m   (d) 10.4m

43. Find the remainder when $x^3 - 3x^2 + 4x - 7$ is divided by $(x + 2)$

    (a) -3   (b) -7   (c) -35   (d) $x^2 - 5x + 14$

44. If $\frac{dy}{dx} = 6x^2 + 15x^4$ and $y = 7$ when $x = 2$, find y.

    (a) $2x^3 + 3x^5 + 7$ (b) $12x + 60x^3 - 497$ (c) $12x + 60x^2 +$ (d) $2x^3 + 3x^5 - 105$

45. The long hand minute of a clock is 7cm long. What distance does to the tip of the minute hand move $1\frac{1}{4}$ hours? (Take $\pi = \frac{22}{7}$)

    (a) 33cm   (b) 44cm   (c) 55cm   (d) 65cm

5

Questions 46 and 47 refers to the points $A(-2,3)$ and $B(4,-5)$.

46.   The distance $|AB|$ is:

(a) 10 units   (b) $\sqrt{8}$ units   (c) $\sqrt{40}$ units   (d) $\sqrt{14}$ units

47.   The midpoint of AB is

(a) (3,-4)   (b) $(-1,1)$ (c) $(1,-1)$ (d) $(-3,4)$

48.   Find the sum to infinity of the series

$$\frac{1}{2} - \frac{1}{4} + \frac{1}{8} - \frac{1}{16} + \cdots$$

(a) 1   (b) $\frac{1}{3}$ (c) $\frac{1}{3}$ (d) 2

49.   Find the solution set for the set $(x-2)(x-1) > 0$.

(a) $x > 2$ (b) $x < 2$ (c) $x < 1$ (d) $x < 1$ or $x > 2$.

50.   The solution set of the inequality $|2x+6| < 10$ is;

(a) $(-3,2)$ (b) $(-5,2)$ (c)$(-8,2)$ (d) $(-3,8)$

51.   Write the 7th term of the sequence $\{1 + (-1)^n\}$

(a) 0   (b) 1   (c) 2   (d) 8

52.   If $x, 2x+1, 3x-a$ form an A.P. find a

(a) 2   (b) -2 (c) 1   (d) -1

53.   The fifth term of the sequence 1, 21, 51, 91................is

(a) 131   (b)141   (c) 151   (d) 161

54.   Let X= (a, b, c, d) which statement is correct?

(a) $\{a\} \in X$ (b) $\{a,b\} \supseteq X$ (c) $b \notin X$ (d) $n(x) - 4$

55.   The distance from the points (3, -2) to the line 3y+2x +5=0 is

(a) $\frac{5}{\sqrt{13}}$ (b) $\frac{23}{\sqrt{13}}$ (c) $\frac{7}{\sqrt{13}}$ (d) $\frac{7}{\sqrt{13}}$

56. Find the slope of the line which is perpendicular to the line 3x +5y +17=0.

(a) 5/3   (b) $-3/5$ (c) $-5/3$ (d) 17/5

III. 6 ERAL PAPER

Answer the following questions by choosing one of the options

1. A low land between two hills is called
A. Island
B. Valley
C. Plateau
D. Lake
E. Mountain

2. Which of these animals is not a member of dog family
A. Jackal
B. German shepherd
C. Tiger
D. Yorkshire terrier
E. Rottweiler

3. The process in which the food we eat is broken down into substance that can be used by the body is called:
A. Digestion
B. Circulation
C. Tissue
D. Respiration
E. Excretion

4. A frightening dream is called
A. Blush
B. Nightmare
C. Night Anguish
D. Night Fear
E. None of the above

5. Which of these is not a type of eagle?
A. Short-toed
B. Booted
C. Bonelli
D. All of the above
E. None of the above

6. What was the former name of present Zimbabwe?
A. Rhodesia
B. Yamashoma
C. Orange Republic
D. Brazzaville

E.¯ Oceania

19

B. reticence

C. sensibility

D. pervasiveness

39. The greatness of the creator of the universe is always *inexpressible* to many adherents of certain faiths.

A. inevitable

B. wonderful

C. ineffable

D. unbearable

40. We *made a pile* in the business deal.

A. lost a lot of money

B. earned a lot of money

C. broke even

D. cut corners

57. Find the intercept on the x and y axes respectively of the line 3x-2y+6=0.

    (a) $(3,2)$ (b) $(2,3)$ (c) $(3,-2)$ (d) $(-2,3)$

58. If $f(x + 2) = 3x^2 - 2x + 5$, find $f(1)$

    (a) 8   (b) 10   (c) 6   (d) 3

59. If α and β are the roots of the equation $2x^2 + 3x - 9=0$, find $\frac{1}{\alpha} + \frac{1}{\beta}$

    (a) $-1/3$ (b) $2/3$ (c) 3   (d) $1/3$

60. The nth term of a sequence is given by $U_n = 2+3U_{n-1}$ while the $U_4=36+U_3$, find the third term of the sequence.

    (a) 1   (b) 5   (c) 17   (d) 51

61. If α and β are the roots of the equation $2x^2 - 5x + 6 = 0$. Find $\alpha^2 + \beta^2$

    (a) $1/2$ (b) 3   (c) $-5/2$ (d) $1/4$

62. If $x - 2$ and $x + 1$ are factors of equation $x^2 + px^2 - 4xq = 0$, determine p, q

    (a) $-3,12$ (b) $3,-12$ (c) $-3,-12$ (d) $-1,0$

63. If $\frac{s+2s}{(s+1)(s-2)} = \frac{p}{s+2} + \frac{q}{s-2}$, find p

    (a) 3   (b) 2   (c) 1   (d) -8

64. A 16m ladder is placed against a house so that its base is 8m from the house. What angle does the ladder makes with the ground?

    (a) 65^0 (b) 60^0 (c) 34^0 (d) 10^0

65. Find the trigonometric function value of $\cos(315^0)$.

    (a) $\frac{\sqrt{3}}{2}$ (b) $\sqrt{2}$ (c) $\frac{1}{\sqrt{2}}$ (d) undefined

66. Convert -320^0 to radian measure. Give answer using 3.14 for π

    (a) 32π (b) 2.57 (c) -5.58 (d) 1.31

67. Solve for $\sec^2 x - \frac{3}{4}\sec x = \frac{1}{2}$

(a) $\dfrac{3 \pm \sqrt{41}}{8}$ (b) $\dfrac{3 - \sqrt{41}}{8}$ (c) $\dfrac{3 \sqrt{41}}{6}$ (d) $\dfrac{3 \pm \sqrt{41}}{8}$

7

68. Given that $\tan\theta = \frac{3}{4}$ and θ is in the second quadrant. Find $\sin 2\theta$

    (a) $-\frac{7}{25}$ (b) 30.70 (c) $-\frac{24}{25}$ (d) 10

69. Find Arc sin 0.2334 in degrees, using tables

    (a) 2.91 (b) $21^0.30^1$ (c) $13^0.31'$ (d) $13^0.40^1$

70. Find the components of this vector u+v, where u= (3, -7) and v =(4, 2).

    (a) $(7, \;\; 5)$ (b) $(7, \;\; 6)$ (c) $(2, \;\; 5)$ (d) $(3, \; | \; 5)$

71. Simplify. $(4-x^2)(2+x)^{-1/2}$

    (a) $(2+x)\sqrt{(2-x)}$ (b) $(2-x)\sqrt{(2+x)}$ (c) $\frac{2-x}{\sqrt{(2-x)}}$ (d) $\frac{2+x}{\sqrt{(2-x)}}$

72. Simplify. $(2-\sqrt{3})^3$

    (a) $10-9\sqrt{3}$ (b) $8-3\sqrt{3}$ (c) $26-15\sqrt{3}$ (d) $26-9\sqrt{3}$

73. The sum of an infinite geometric progression is $2\frac{2}{7}$ and the first term is 4. What is the common ratio?

    (a) $-2\frac{3}{4}$ (b) $-\frac{3}{4}$ (c) $\frac{3}{4}$ (d) $2\frac{3}{4}$

74. Evaluate $\frac{x^3+1}{2x^2-x-1}$ when x=-1.

    (a) 0 (b) -1 (c) 1 (d) $\frac{1}{2}$

75. If $\frac{2m+3n}{4m-3n}=2$, then $\frac{5m+n}{3m+n}$ is equal to:

    (a) $\frac{74}{32}$ (b) $\frac{32}{74}$ (c) 2 (d) 4

76. If $2x^2-px+6=(2x-6)(x-1)$, then p is equal to

    (a) -8 (b) 4 (c) 8 (d) -4

77. Which of the following is not a quadratic expression?

    (a) x^2-5 (b) $x(1 \;\; 2x)$ (c) $x(1+x^2)$ (d) $x^2-\frac{1}{2}x+1$

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8

B. Courage

C. Responsibility

D. Diligence

32. The *common* practice among some media practitioners is to be sensational in their reporting.
    A. prevalent
    B. rampant
    C. ordinary
    D. cogent

33. That *fateful* decision changed the company's outlook in many ways.
    A. wonderful
    B. disastrous
    C. uncontrollable
    D. unsuccessful

34. The accident victim received *a superficial* wound from the crash.
    A. a serious
    B. a painless
    C. an internal
    D. an external

35. The boxer *fizzled out* just in the sixth round.
    A. knocked out his opponent
    B. showed off his talents
    C. became tired but fought on spiritedly
    D. surrendered rather disappointingly

36. The manager described Mfon as *a man of vehement character*.
    A. weak and uninterested
    B. strong and insistent
    C. troublesome and noisy
    D. clever and helpful

37. Obi's dog is old but still *lively*.
    A. attractive
    B. howling
    C. barking
    D. frisky

38. His *tacitumity* amazed everyone in the court during the legal tussle.

    A. obliviousness

17

C. I did not go to England and could not go to Manchester City.
D. I could not visit Manchester City because I did not want to go to England.

25. The man puts his foot down whenever he is convinced of his action.
   A. He desires to assert his will in the situation.
   B. He makes his mark wherever he goes.
   C. His attitude demonstrates someone who likes to oppress others around him.
   D. He demonstrates firmness of character.

In each of questions 26 to 40, choose the option *nearest in meaning* **to the word or phrase in italics.**

26. No wonder Dekemi later became a detective; she has been very *observant.*
   A. curious   C. inductive
   B. perceptive   D. inquisitive

27. Nigeria has been playing a *vital* role in the political and economic development of Africa.
   A. creditable
   B. crucial
   C. respectable
   D. laudable

28. Emeka's painting was so *realistic* that it could almost have been a photograph.
   A. picturesque
   B. concrete
   C. lively
   D. authentic

29. *Courteously,* Ade stood back to let his teacher go first through the door.
   A. Patiently
   B. Politely
   C. Carefully
   D. Calmly

30. Many people used to live in *poverty.*
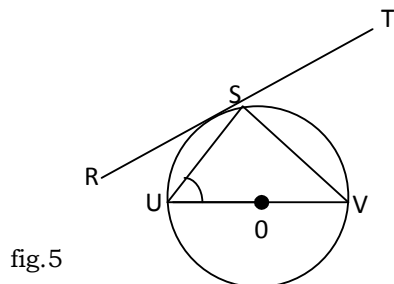   A. instability
   B. want
   C. difficulty
   D. the slums

31. *Accountability* is certainly a desirable quality in a politician.

A. $\overline{\text{Respectability}}$

16

78. In fig.5 below, RST is a tangent to the circle centre O. It touches the circle at S.U and V are at the ends of a diameter, and $\angle SUV = 48^0$. Find $\angle RSU$.

fig.5

(a) 40^0 (b)130^0 (c)42^0 (d) 90^0

79. The bearing of A from B is 280^0. Find the bearing of B from A.

(a) $80^0 N$ (b)100^0 (c)100^0 (d) 90^0

Use frequency Table below to answer questions 80 to 82.

X	0	1	2	3
Frequency	20	18	7	5

80. Calculate the mean of x.
(a) 1.5 (b)0.47 (c)0.94 (d) 1

81. What is the median of x?
(a) 0 (b)1 (c)25.5 (d) 0.94

82. What is the range of x?

(a) 15 (b)$0 \text{ to } 3$ (c)$5 \text{ to } 20$ (d) 3

83. OAB is a sector of a circle of radius 8cm and centre 0 in fig.6 below. The length of the arc AB is 8cm. Find the area of the sector.
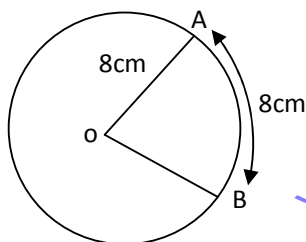
fig.6

(a) $32cm^2$ (b) $64cm^2$ (c) $30cm^2$ (d) $60cm^2$

9

84. In Fig.7 below, find the value of x.

    (a) 141^0 (b)90^0 (c)97^0 (d) 112^0

Fig.7
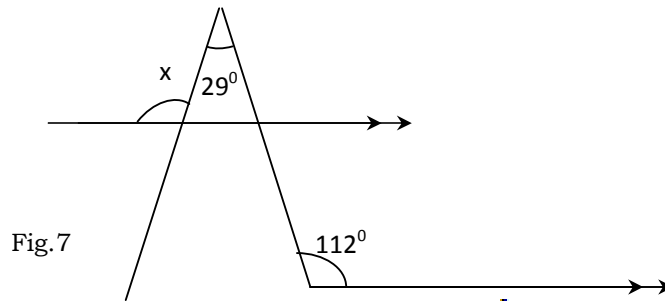
85. What value of k makes the expression $p^2 - 18p + k$ a perfect square?

    (a) -9 (b)9 (c)-81 (d) 811

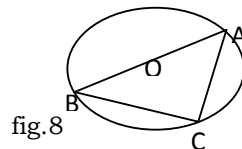86. For what value of x is the function $y = \frac{7}{x+3}$ not defined

    (a) 7 (b)0 (c)-3 (d) 3

87. Evaluate (4x10³) x (6 x10²), giving your answer in standard form.

    (a) $2400\ 000$ (b)24×10^5 (c)2.4×10^6 (d) 4.6×10^3

88. In fig.8 below, O is the centre of the circle, AC = 6 cm and

    BC= 8cm. Find the circumference of the circle.

fig.8

    (a) $10\pi cm$ (b)$5\pi cm$ (c)$4\sqrt{7}\pi cm$ (d) $10cm$

89. In fig.9 below, O is the centre of the circle and $< ACB = 130^0$. Find $< DOB$.

    (a) 100^0 (b) 130^0 (c)80^0 (d) 25^0

fig.9
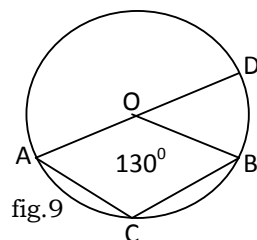
90. Two ships leave the same port: one ship sails for 300 km on a bearing of 340⁰; the other ships sails for 400 km on a bearing of 250⁰. The distance between the ships is

    (a) $700km$ (b)$100km$ (c)$500km$ (d) $200km$

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10

17. If the rain hadn't fallen, we wouldn't have missed the match.
    A. The rain is falling, so we will miss the match.
    B. The rain fell, so we didn't watch the match.
    C. The rain fell, so we watched the match.
    D. The rain didn't fall, so we didn't watch the match.

18. The new Headmaster hoped that his men would pull together.

    A. He expected that the men would cooperate with him.
    B. He thought that the men would compose themselves at work.
    C. He was certain that they would resign en masse.
    D. He was certain that their condition would improve under him.

19. If the trader paid in full, his order was not pruned down.

    A. The trader who made full payment did not have his order reduced.
    B. The trader who made some payment did not have his order delayed.
    C. Unless the trader paid in full his order would be rejected.
    D. As the trader did not increase his order, he did not need to pay in full.

20. The men were not pawns in someone else's political game.
    A. The action they executed was their idea.
    B. The men used someone else's plan.
    C. They were used by someone's political game.
    D. They loved playing political games.

21. The crisis ended as suddenly as it began.
    A. The crisis had suddenly begun.
    B. The crisis will not end suddenly.
    C. The crisis stopped almost immediately.
    D. The crisis will stop immediately.

22. One thing I will not be complaining about in my new job is a lack of excitement.
    A. The job is bad.
    B. The job is exciting.
    C. The job is not too exciting.
    D. The job has been previously done.

23. The Governor parried all the questions put to him by the journalist.
    A. The Governor answered all the questions
       brilliantly.
    B. The Governor evaded all the questions.
    C. The Governor failed all the questions.
    D. The Governor mastered all the questions.

24. If I visited England, I might go to Manchester City.
    A. When I go to England, I could go to Manchester City.
    B. Whenever I visit England, I must go to Manchester City.

15

B. Eye behaviour is one of the non-verbal ways of communicating.
C. Eye movement is the most potent means of expressing intimacy.
D. People are always offended by searching eye contact.

5. From the findings of the research described in the passage, one can reason that

A. innocent people maintain longer eye contact than the guilty ones
B. guilty people make Jess frequent gazes during interrogation
C. 'shifty eyes' are equally induced by innocence and guilt
D. a feeling of guilt is occasioned by 'shifty eyes'.

PASSAGE II

*Use the passage-below to answer questions **6** to* 16. *The passage has gaps numbered* 16 *to* 26. *Immediately following each gap, four options are provided. Choose the most appropriate option for each gap.*

Two thirds of children in .... 6 [A: industrialized B. socialized C. technological D. modernized] societies no longer have family life. They are virtually abandoned to child - minders from a very tender age. 'The ... 7 [A. disregard B. indifference C. alienation D. inattention] from their mothers brings suffering and makes it impossible for them to achieve a healthy social life. The 8 [A. development B. increase C. appreciation D. inflation] in the number of suicides, the rates of drug addiction and ..... 9 [A. delinquency B. irresponsibility C. Satanism D. truancy] among young people may be to a large 'extent, due to these premature separations which take place before sufficient time has 10 [A. materialized B. occurred C. surfaced D. elapsed] for attachment to develop. 'This is one of the causes of psychosis in children today' says a psychiatrist who believes that breast-feeding is one of the basic cares which many children of this age are 11 [A. tantalized with B. denied of C. left with D. spared of). This psychiatrist argues that

breast-feeding extends into the world outside the womb, a liquid bond with the inside of the mother's body; a bond 12 [A. close to B. the same as C. unrelated to D. irrelevant to] that which the baby had with the placenta inside the uterus. Rhythmic rocking to and fro is   13 [A. an elongation B. a demonstration

C. a continuation D. a stretching] of the movement that the child experienced before it was born. As for the baby's   14   [A. squeezing against B. separation from C. likeness for D. pressure against] its mother's body, it reminds the child of the ..... 15 .. [A. reassuring B. uncomfortable C. amusing D. unpleasant]   pressure of the uterus, and enables it to   16

[A. unearth B. rediscover C. learn D. explore] the rhythms of its mother's breathing and

heartbeat.

In each of questions 17 to 26, select the option that *best explains* the information conveyed in the sentence.

14

91.   A shopkeeper sold an item for N3 600, making a profit of 20%. Find the original cost of the item.

(a)₦2,880   (b)₦3,000   (c)₦4,500   (d) ₦4,320

92.   A flagpole of height 2.5 m casts a shadow of length 4m. Calculate the angle of elevation of the sum, correct to the nearest degree.

(a) 32^0 (b) 58^0 (c) 39^0 (d) 51^0

93.   If $4^{x+1} \times 8^{2x-1} = 16$, find x.

(a) 1   (b)$9\frac{1}{2}$ (c)$\frac{5}{6}$ (d) -1

94.   Evaluate 22_{three} x 102_{three}, leaving your answer in base 3.
(a) 88_{three} (b)1021_{three} (c)10021_{three} (d) 2244_{three}

95.   8% of a certain sum of money is ₦320. What is 10% of the sum?

(a)₦400   (b)₦256   (c)₦4 000   (d) ₦800

96.   A number is selected at random from the set {3, 0, 5,$\sqrt{4}$, $\sqrt{5}$, $\frac{5}{6}$}. What is the probability the number is rational?

(a) $\frac{1}{6}$ (b) $\frac{5}{6}$ (c) $\frac{1}{6}$ (d) $\frac{4}{6}$

97.   The area of a circle is $154 cm^2$. Find its circumference. (take $\pi = \frac{22}{7}$)

(a) $7cm$ (b)$14cm$ (c) $308cm$ (d) $44cm$

98.   Two dice are thrown together. What is the probability of getting a sum of 5.

(a) $\frac{1}{6}$ (b) $\frac{5}{36}$ (c) $\frac{1}{9}$ (d) $\frac{1}{12}$

99.   In fig.10 below, the acute angle of the parallelogram is 45°. One side is 8cm and the area is $24\sqrt{2}cm^2$, find the   other side.

45°
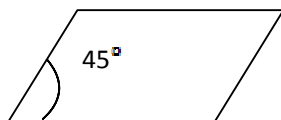
fig.10

(a) ⁻12cm   (b) 10cm   (c) 6cm   (d) 4cm

100.   Three times the tens digit of 11 digit number is 2greater than the unit digit. When the digits are interchanged the new number is 36 more than the original number. What is the original number?

(a) 35   (b) 37   (c) 15   (d) 28

II. EN ^{12} LANGUAGE

Read passages **I and II,** carefully and answer the questions that follow.

PASSAGE I

One of the most potent elements in body language is eye behaviour. You shift your eyes, meet another person's gaze or fail to meet it - and produce an effect out of all proportion to the muscular effort you have made. When two people look searchingly into each other's eyes, emotions are heightened and the relationship tipped toward greater intimacy.

In normal conversation, each eye contact lasts only about a second before one or both individuals look away.

Because the longer meeting of the eyes is rare, it is weighted with significance when it happens and can generate a special kind of human-to-human awareness. Most of the time, a lingering look is interpreted as a sign of attraction and this should be scrupulously avoided except in appropriate circumstances. A young woman once complained, 'That man makes me so uncomfortable, half the time when I glance at him he's already looking at me - and he keeps right on looking.'

Proper street behaviour requires a balance of attention and intention. You are supposed to look at a passer-by just enough to show that you are aware of his presence. If you look too little, you appear haughty or furtive; too much and you are inquisitive. Usually what happens is that people eye each other until they are about eight feet apart, at which point both cast down their eyes.

Much of eye behaviour is so subtle that we react to it only on the intuitive level. This has been demonstrated in elaborate experiments. Subjects sit and talk in the psychologist's laboratory, innocent of the fact that their eye behaviour is being observed from behind a one-way vision screen. In one fairly typical experiment, subjects were induced to cheat while performing a task, then were interviewed and observed. It was found that those who had cheated met the interviewer's eyes less often than was normal, an indication that 'shifty eyes' can actually be a tip-off to an attempt to deceive.

However, none of the 'facts' of eye behaviour are cut and dried, for there are variations between individuals.

People use their eyes differently and spend different amounts of time looking at others. Besides, no pattern of eye behaviour is precisely predictable in any normal conversation.

Adapted from McQuade (1969), Thinking in Writing, p. 167

1. The young woman in the passage was uncomfortable because
    A. the man appeared to be showing interest in her by his prolonged eye contact
    B. the man's short and sharp gazes would tip the relationship toward greater intimacy
    C. strangers who made the man's type of eye contact were likely to be dangerous
    D. she was allergic to eye contact.

2. The reason given for the non-finality of research results on eye contact is
    A. lack of concord and foresight among psychologists who carry out research on eye movement
    B. lack of uniformity in eye behaviour and the variability of contact situation
    C. that some subjects cheat during experiments, thus invalidating research findings
    D. that research findings on eye contact have not been subjected to further empirical tests.

3. From the expression *proper street behaviour requires a balance of attention and intention,* it can be concluded that
A. even among strangers, attitudes and purposes can be deduced from eye behaviour
B. before walking the streets one must balance one's shifty eyes
C. when intimate groups meet in the streets, eye contact is usually longer
D. there is a balance between those with longer eye contact and those with shorter eye contact.

4. Which of the following can be concluded from the opening paragraph?
A. The effects of eye contact are always overwhelming.

13

ENGLISH		GENERAL PAPER	
1. A	21. C	1.C	21. A
2. B	22. B	2.C	22. C
3. A	23. B	3.A	23. B
4. B	24. C	4.B	24. C
5. D	25. D	5.E	25. A
6. D	26. B	6. A	26. B
7. D	27. B	7. C	27. D
8. B	28. A	8. C	28. B
9. A	29. B	9. D	29. B
10. D	30. B	10.C	30. D
11. B	31. C	11.B	31. D
12. A	32. B	12.D	32. C
13. C	33. B	13. C	33.D
14. A	34. D	14. B	34. D
15. A	35. D	15. C	35. A
16. B	36. C	16. B	36. B
17. B	37. D	17. A	37. C
18. A	38. B	18. C	38. D
19. A	39. B	19. A	39. C
20. A	40. B	20. E	40. A

MATHEMATICS				
1. D	21. A	41. C	61. D	81. B
2. D	22. B	42. A	62. D	82. D
3. C	23. C	43. C	63. D	83. A
4. B	24. A	44. D	64. B	84. C
5. B	25. D	45. C	65. C	85. D
6. B	26. C	46. A	66. C	86. C
7. A	27. D	47. C	67. A	87. B
8. D	28. A	48. B	68. C	88. A

9. B	29. C	49. D	69. C	89. C
10. A	30. D	50. C	70. A	90. C
11. C	31. A	51. A	71. B	91. B
12. D	32. D	52. B	72. C	92. A
13. D	33. C	53. B	73. B	93. C
14. B	34. B	54. D	74. A	94. C
15. D	35. A	55. A	75. A	95. A
16. B	36. C	56. A	76. C	96. C
17. D	37. A	57. D	77. C	97. D
18. B	38. D	58. C	78. C	98. C
19. C	39. A	59. D	79. B	99. C
20. A	40. B	60. C	80. C	100. B