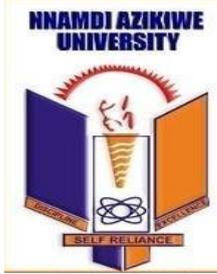


NNAMDI AZIKIWE UNIVERSITY, AWKA



**POST-TIME SCREENING EXERCISE 2006/2007
FOR
ENGINEERING AND ENVIRONMENTAL SCIENCES
SEPTEMBER 15, 2006**

**CHOOSE THE OPTION THAT BEST CONVEYS THE
MEANING OF THE UNDERLINED PORTION IN EACH
OF THE FOLLOWING SENTENCES**

1. In the match against the Rangers team, the Enyimba boys turned out to be the dark horse. (A) Played most brilliantly (B) Played below their usual form (C) Won unexpectedly (D) Lost as expected (E) Won as expected
2. He spoke with his hearth in his mouth. (A) Courageously (B) With such unusual cowardice (C) With a lot of confusion in his speech (D) Without being able to make his mind (E) With fright and agitation
3. The leader in today's issue of Punch Newspaper focuses in inflation (A) President (B) Headline (C) Editorial (D) Columnist (E) Proprietor
4. All his plans fell through. (A) Failed (B) Were accomplished (C) Had to be reviewed (D) were rejected (E) Fell
5. He stared at her (A) glanced (B) Peeped (C) Looked (D) Gazed (E) Fixed
6. As he was a gullible, his followers took advantage of him. (A) He was weak and unable to enforce his authority (B) He was partial and un rail in dispensing justice (C) He was simple minded to a fault (D) He was slow to act (E) He was backing in education and experience in everyday affairs
7. His summary of the lecturer was brief and to the point. (A) Careful (B) Precise (C) Accurate (D) Exact (E) Crucial
8. Do you have the same aversion as I do for home videos? (A) Bitterness (B) Dislike (C) Criticism (D) Exact (E) Crucial
9. I did not think she could be so easily taken in by his pretences (A) flattered (B) Deceived (C) Pregnant (D) Overcome (E) Blackmailed
10. The witness was guilty of swearing to a statement he knew to be false. (A) Forgery (B) Perjury (C) Libel (D) Slander (E) Affidavit.
11. Most of his observations were wide of the mark. (A) Comprehensive (B) Irrelevant (C) Pertinent (D) Came rather late (E) Unaccepted
12. The clerk refused to answer for the mistakes made by manager and his assistants. (A) To reply to (B) To give an answer (C) To explain (D) To accept responsibility (E) To account.
13. Good citizens should take the part of government when it is being attacked by the foreign press. (A) Speak in support of (B) Explain the part played by (C) Act like a representative of (D) Emphasize the progress made by (E) Outline the virtues of.
14. The Principal of my school has a variety of peculiarities. The most conspicuous is the way he gesticulates when making a serious point. (A) Shows anxiety when making a serious point (B) Breaks down when talking seriously (C) Uses his hands and arms as a sign (D) Bows his head in humility (E) Shakes his head from one side to the other.
15. He heard the loud noise of the huge air-raid siren.(A) Buzz (B) Crack (C) Rumble (D)Whistle (E) Wail.
16. One of the stages of the creative process is the incubation period. This refers to the period when. (A) The idea is firmly fixed through repetition (B) The person suddenly comes upon the idea (C) The persons thinks over the idea (D) The idea yields concrete results (E) The idea given up.
17. When a man is immune to an illness, he is (A) Opposed to it (B) Attached to it (C) Hated by it (D) Protected against it (E) Addicted to it.
18. The two boxers were neck and neck up till the sixth round but in the seventh and final round, the bigger one lost ground. (A) Could no longer stand on his feet (B) Failed to maintain his position (C) Was beaten (D) Became dizzy (E) Became a punching bag.
19. He uses his savings to bring up his nephew (A) Lead (B) Accompany (C) Feed (D) Support (E) Conduct
20. Whenever I travel abroad, I always bring on my return, photographs, postcards and other small items as souvenirs. (A) Mementoes (B) Remembrance (C) Memorials (D) Memorable (E) Property.

INSTRUCTIONS

**COMPLETE EACH OF THE FOLLOWING SENTENCES
BY CHOOSING THE OPTION THAT MOST SUITABLY
FILLS THE SPACE.**

21. When the beggar was tired he _____down by the roadside (A) Lied (B) Laid (C) Layed (D) Lay (E) Lain
22. He did not like _____leaving the class early. (A) We (B) Us (C) Our (D) Ourselves (E) Our selves
23. Before the operation the dentist found that his patient's teeth_____(A) Have long decayed (B) Have long been decayed (C) Have long being decayed (D) Had long decayed (E) Had been decayed.
24. The employer, not use salesman and his representative._____ responsible for the loss of revenue. (A) Are (B) Being (C) Are never (D) Have been (E) Is
25. The boy was born before his parents actually got married and so the court has declared him_____(A) Illegal (B) illegitimate (C) Illicit (D) Unlawful (E) Untenable
26. As he was still owing me two naira, I was careful not to _____him any money. (A) Credit (B) Loan (C) Borrow (D) Extend (E) Lend
27. Last week the_____at the theatre was the largest I had Ever seen. (A) Assembly (B) Congregation (C) Convention (D) Audience (E) Crowd
28. The green snake which lives in the green grass, is using a perfect _____ (A) Ambush (B) Under cover (C) Camouflage (D) Shelter (E) Subterfuge
29. In order to carry out the necessary post mortem examination, the dead body was. (A) Extracted (B) Extradited (C) Exiled (D) Exhumed (E) Expelled

30. Remember this matter is strictly _____ (A) Between you and I (B) Among you and I (C) Among you and me (D) Between you and me (E) Between you and myself
31. A rectangular picture 6cm x 8cm is enclosed by frame ½cm wide. Calculate area of the frame. (A) 15sq.cm (B) 20sq.cm (C) 13sq.cm (D) 16sq.cm (E) 17sq.cm
32. If the four interior angles of a quadrilateral are $(P+10)^\circ$, $(P-30)^\circ$, $2P-45^\circ$ and $(P+15)^\circ$, then P is: (A) 125° (B) 82° (C) 135° (D) 105° (E) 6000
33. The annual profits of a transport business were divided between the two partner A and B in the ratio 3:5. If B received N3,000 more than A, the total profit was. (A) N5,000 (B) N1,800 (C) 12,000 (D) N24,000 (E) N8,000
34. In a school there are 35 students in class 2A and 40 in class 2B, the mean score for class 2A in an English literature examination is 60.0 and that for 2B in the same paper is 52.5. Find, to one place of decimal, the mean for the combined classes. (A) 1.5 (B) 56.0 (C) 56.2 (D) 56.3 (E) 56.5
35. Which of the following fraction is less than one-third? (A) $22/63$ (B) $4/11$ (C) $15/46$ (D) $33/98$ (E) $122/363$
36. A baking recipe call for 2.5kg of sugar and 4.5kg of flour. With this recipe, Some cakes were baked using 24.5kg of a mixture of sugar and flour. How much sugar was used? (A) 12.25kg (B) 6.75kg (C) 8.75kg (D) 15.75kg (E) 8.25kg
37. If N560.70 is shared in the ratio 7:2:1, what is the smallest shares? (A) N392.49 (B) N56.70 (C) N113.40 (D) N112.14 (E) N56.07
38. If $2x + 3y = 1$ and $x - 2y = 11$, find $(x + y)$. (A) 5 (B) -3 (C) 8 (D) 2 (E) -2
39. A sum of money was invested at 8% per annum simple interest. If after 4 years the money amounts to N330. Find the amount originally invested. (A) N180 (B) N165 (C) 150 (D) N200 (E) 250
40. If $m = 3$, $p = -3$, $q = 7$ and $r = 5/2$ evaluate $m(p+q+r)$. (A) 19.50 (B) 19.15 (C) 18.95 (D) 18.05
41. A man walks 1 km due east and then 1 km due north. His displacement is: (A) 1km N150E (B) 1km N300E (C) -/2km N450E (D) -/2km N450E (E) 2km N600E
42. A palm fruit dropped to the, ground from the top of a tree 45m tall. How long does it take it to reach the ground? ($g = 10\text{ms}$). (A) 9s (B) 4.5s (C) 6s (D) 7.5s (E) 3s
43. Of the following, which is different from the other? (A) X-rays (B) Gamma rays (C) Cathode rays (D) Ultraviolet rays (E) Infrared rays
44. Which of the following elements are real magnetic materials? (A) iron, steel and Nickel (B) Copper, steel and iron (C) Lead, iron and brass (D) Glass, lead and steel (E) Stone, Air and iron
45. A 109 mass placed on the pan of a spring balance causes an extension of 5cm. If a 15g mass is placed on the pan of the same spring balance, the extension is: (A) 3.3cm (B) 6.5cm (C) 0.5cm (D) 16.6cm (E) 15.0cm
46. If the pressure on 100cm of an ideal gas is double while its Kelvin temperature is halved then the temperature of the gas will become. (A) 25cm^3 (B) 50cm^3 (C) 100cm^3 (D) 200cm^3 (E) 400cm^3
47. A substance has a half life of 3mm. After 5mm, the count rate was observed to be 400 what was its count rate at rate at zero time?
48. A room is heated by means of a charcoal fire. An occupant of the room standing away from the fire is warned mainly by. (A) Convection (B) Radiation (C) Conduction (D) Reflection (E) Induction
49. Hen an atom losses or giants a charge, it becomes: (A) An electron (B) An iron (C) A neutron (D) A proton (E) A cathode
50. The process of energy production in the sun is: (A) Nuclear fission (B) Nuclear fusion (C) Electron collision (D) Radioactive decay (E) Electron transfer

ANSWER TO NAU POST-UME SCREENING EXERCISE (2006/2007) SESSION

ENGINEERING	AND	ENVIRONMENTS	SCIENCES
1.C	2.E	3.C	4.A 5.D 6.4
7.D	8.B	9.B	10.C 11.E 12.D 13.A
14.C	15.D	16.C	17.D 18.B 19.D
20.A	21.E	22.B	23.B 24.B 25.B 26.E
27.D	28.C	29.D	30.A 31.C 32.B
33.C	34.C	35.C	36.C 37.E 38.D 39.E
40.A	41.C	42.E	43.C 44.B 45.None
Solution	46.A	47.Solution	48.B 49.B 50.B

**NNAMDI AZIKIWE UNIVERSITY,
AWKA**

**POST-UME SCREENING EXERCISE 2007/2008 FOR
ENGINEERING AND ENVIRONMENTAL SCIENCES**

**SHADE (FIRMLY) ONLY ONE ANSWER USING HB
PENCIL ONLY**

TIME ALLOWED: 1 HOUR DATE: AUGUST 22, 2007

**READ THIS PASSAGE CAREFULLY ANSWER THE
QUESTIONS THAT
FOLLOW IT**

PASSAGE A

An over the world till lately and in most of the world till today, mankind has been following the course of nature: that is to say it has been breeding up to the maximum. To let nature take her extravagant course in the reproduction or the human race may have made sense in an age in which we were also letting her take her course in decimating mankind by the causalities of war, pestilence and famine. Being human, we have at least revolted against the senseless waste. We have started to impose on nature's heartless, play a humane new order of our own. But when once man has begun to interfere with nature, he cannot afford to stop half way. We cannot, with impunity, cut down the death rate and at the same time allowed the birth-rate to go on taking nature's course. We must consciously try to establish an equilibrium, or sooner or later, famine win stalk abroad again.

- The author observes that A. War, pestilence and famine were caused by the extravagance of nature B. Nature was heartless and senseless C. There was a time when uncontrolled birth made sense D. There was a time when mankind did not interfere with the work or nature E. Nature was heartless in its reproductive process.
- Which of these statements does not express the option of the author? A. Mankind has started to interfere with the work or nature B. Many people had died in the past through want and disease C. Mankind should not have the maximum number of children possible D. Mankind should take care of its children E. Man's present relationship with nature in matters of birth and death is a happy one
- Humane, as used in the passage means A. Sensible (B) Wise (C) Human (D) Benevolent (E) Thorough
- We must consciously try to establish an equilibrium; implies that mankind must A. Realistically find an equation B. Man should control the birth rate C. Mankind will soon erish of starvation D. Pestilence causes more death than war E. Man should change nature's course gradually
- The main idea of this passage is that A. Nature is heartless (B) Man shall control the birth-rate (C) Man will perish of starvation (D) Pestilence causes more death than war

EACH OF THE FOLLOWING WORDS IF OFFERED IN ITS CORRECT FORM AND IN SOME OF THE INCORRECT FORMS INDICATE THE CORRECTS SPELLING.

- (A) fullscap (B) foolscap (C) fulscap (D) Foiscap
- (A) perseverance (B) perservance (C) perseverence (D) Perseverance
- (A) sorvinir (B) souvenir (C) souvenir (D) Souvenire
- (A) momento (B) memento (C) mormento (D) Mementor
- (A) mischievious (B) mischivous (C) mischievous (D) Mischiveous
- (A) dormant (B) domant (C) durman (D) Doomant
- (A) bureaucracy (B) bureaucracy (C) burreacracy (D) Beurccracy
- (A) aesthetic (B) aesthetic (C) easthetic (D) Aesthetic
- (A) accessory (B) acesory (C) accesory (D) Assessory
- (A) abattor (B) abattoir (C) abattoir (D) Abatoir
- (A) ballustar (B) ballustar (C) Balluster (D) Baluster
- (A) attrition (B) atrittion (C) atrition (D) Attrition
- (A) corroboration (B) coroboretion (C) Corroborassion (D) Coroborassion

Select the wrongly spelt words in these question

- A. disappointed (B) embarrassed (C) equipped (D) Rhythm
- A. occurrence B. surprise C. personnel D. Possess
- A. quiet B. believe C. precede D. Opportunity

Choose the option opposite in meaning to the word(s) underlined

- Mr. Agu was most flexible in his instructions A. rigid B. correct C. Stiff D. Upright.
- The university has offered temporary accommodation to its staff A. popular B. permanent C. recognized D. Regular.
- Mary complained that he slept on the coarse floor A. smooth B. rough C. bad D. Harsh.
- Tony was one of the spectators at the concert A. ushers B. judges C. Guests D. Performers.
- The Governor decline to give audience to the journalists. A. Ignored B. Accepted C. Forgot D. Rejected.

- The debtors husband is liable for his wife's debts A. Unanswerable B. Responsible C. Unquestionable D. Accountable.
- The lotion recommended by the doctor soothed Chinwe's aching toot A. Calmed B. excited C. Worsened D. Extracted.
- The sun cast its shadow on the wall. A. Reflection B. Rays C. Substance D. Resemblance.
- He was locked up for a week. A. released B. Punished C. remanded D. Locked out.
- The lady acted courageously when thieves attacked her. A. Shyly B. Fearlessly C. severe D. Sour.
- To most people last Christmas was an austere period. A. Prosperous B. Hearse C. Severe D. Sour.
- The chief was generous in his award of university scholarship. A. Noble B. honest C. mean D. Garrulous.
- Chidi is naturally taciturn. A. Friendly B. dumb C. Lively D. Garrulous.
- He is loved for his altruism. A. Sincerity B. benevolence C. Kindness D. Selfishness.

CHOOSE THE OPTION NEAREST IN MEANING TO THE WORD(S) OR PHRASE UNDERLINED

- You are free to leave the hall. A. at an advantage B. opportune C. At liberty D. Right.
- The discussion will surrender their loot to the customs officials. A. Give away B. Give out C. Given in D. Give up.
- The discussion become animated when the professor came in. A. Specialized B. Lively C. Intellectual D. Unruly.
- Rich citizens are often niggardly in their ways. A. beggarly B. Sordid C. Miserly D. Pompous.
- The musicians popularity is beginning to decline. A. change B. Wane C. Side.
- A temperature of 20°C is the same as: A. 36°F B. 65°F C. 11.1°F D. 25°F.
- Three 5 Ohms resistance connected in parallel have a potential difference of 60v applied across the combination. The current in each resistor is: A. 4A B. 35A C. 12A D. 24A.
- An object 1cm is placed on the axis 15cm from a converging lens forms an image 30cm from the lens. The size of the image is: A. 0.5cm B. 2.0cm
- When the vapour of a substance is in equilibrium with its own liquid, it is said to be. A. Gaseous B. liquefied C. saturated D. Diffused.
- Which of the following statements is correct? The reading of pressure on a mercury barometer is independent of; A. the atmospheric pressure B. the cross sectional area of the tube C. The density of mercury D. the density of mercury.
- The motion of the moving skin of a talking drum can rightly be described as: A. relational B. oscillatory C. transitory D. Random.
- A pressure cooker saves both time and fuel in cooking because inside the cooker the A. pressure is constant B. heat is completely trapped C. temperature is evenly distributed D. Boiling point of water.
- The name given to the characteristic, behavior of substances which set with their length perpendicular to a strong magnetic field instead of in line with it is: A. magnet B. magnetization C. par magnetism D. Ferromagnetism.
- According to Ohms law, the ratio V is constant for: A. an electrolyte B. a diode C. an electrode.

50. Which of the following is not an effect that can be produced by an electric current? A. heat B. light C. motion D. none of the above.
51. All example of a scalar quantity is: A. velocity B. weight C. electric charge D. acceleration due to gravity.
- 52.
53. A liquid in glass thermometer should quietly register temperature changes. This is achieved by choosing a liquid that: A. is opaque B. has a high density C. has a high thermal conductivity D. has a regular expansion.
54. The tyre pressure of a car was found to be 150cm Hg in the morning of a temperature of 270°C. Hard driving in the afternoon raised the temperature of the tyre to 57°C. The tyre pressure in the afternoon had. A. increased by 22.5cm Hg B. increased by 15.0cm Hg C. decreased by 15.0cm Hg D. decrease by 22.5cm Hg.
55. The force responsible for the moon in its orbit around the earth against the gravitational pull of the earth is: A. centrifugal B. rotational C. centripetal D. fractional.
56. A hydrometer is an instrument for measuring the A. density of water in a vessel B. relieved density of a liquid by the method of allocation C. relived density of a liquid by finding the apparent loss in weight D. relived humidity of the air.
57. The point beyond which a stretched spring does not return to its original length is called limit. A. breaking point B. elastic limit C. release point D. spring constant.
58. The unit of quantity of electricity is called A. the ampere B. the volt C. the coulomb D. the ammeter.
59. What is the apparent colour of a Red shirt when viewed pure Green, light? A. Red B. green C. black D. Blue.
60. A device that converts sound energy into electrical energy is: A. the horn of a motor car B. a loud speaker C. a microphone D. the telephone catpiece.
61. Which of the following can be used to illustrate the Brownian motion? A. suspension of sculpture in water viewed under a microscope B. smoke in a glass container illuminated by a strong light from the side C. a dusty room being swept and viewed through a beam of sunlight D. boiled distilled water viewed under sunlight.
62. The following can be uses of sulphur except. A. prevention of the growth fungi B. vulcanization of rubber C. manufacture of dyes D. coating of steel to prevent rusting.
63. An acid present in protein is. A. lactic acid B. amino acid C. palmitic acid D. stearic acid.
64. The noble gas argon is used for: A. electric welding B. welding brass C. Under water welding D. steel welding
65. Phosphorus is stored under water to prevent it from. A. smelling B. dehydrating C. catching fire D. becoming inert.
66. Which of the following compound is aromatic. A. Benzene B. Hexane C. Cyclobutane D. Cyclopentane.
67. Which of the following does not affect the rate of chemical reaction? A. concentration of the reactants B. addition or presence of a catalyst C. size of the reacting particles D. the enthalpy change or the reaction.
68. A salt which losses mass when exposed to air is A. hygroscopic B. deliquescent C. efflorescent b. Effervescent.
69. Which of the following statements is not correct? A. carbon exhibits allotropy B. sulphur exhibits allotropy C. chlorine exhibits allotropy D. nitrogen is a gas.
70. How many carbon atoms are there in the benzene ring? A. 4 B. 5 C. 6 D.8.
71. Why is potassium fluoride added to the electrolyte in the extraction of sodium from fused, sodium chloride? A. pure sodium chloride does not conduct electricity B. potassium chloride prevents the sodium produced from attacking the electrodes C. potassium fluoride acts as a catalyst D. potassium fluoride reduces the temperature at which chloride fuses.
72. Which of the following is used extensively in manufacturing photographic chemical A. Aluminium chloride B. zinc chloride C. silver chloride D. chloride.
73. Catalytic hydrogenation of oils results in the production of A. soap B. detergent C. butter D. Margarine.
74. A sample of orange juice is suspected to be contaminated with a yellow dye. Which of the following methods can be used to detect the dye? A. decantation B. chromatography C. distillation D. evaporation.
75. When a solid melts and consequently boils, there is A. a gradual increase in the average kinetic energy of the particles B. a sudden decrease in the kinetic energy of the particles C. a rapid change in the nature of bonding of the components D. a change in the size of the fundamental particles.
76. Which of the following compound will undergo reaction? A. Ethyne B. Butane C. pentane D. Ethanol.
77. A catalyst which increase the rate of a chemical reactions does so by: A. increase the reaction pathway B. increasing the surface area of the reactant C. Decreasing their temperature at which the reactant occurs D. decreasing the activation energy of the reaction
78. Which of the following correct explain entropy? A. The nature tendency for a system to achieve a greater disorder B. A measure of the rate attaining equilibrium in a reversible reaction C. the cause of spontaneity of a reaction D. a measure of the enthalpy of a reaction.
79. The gas that is liberated when iron is heated with concentrated tetraoxosulphate (VI) acids is A. HS B. SO C. O₂ D. S₂.
80. Which of the following pollutants is biodegradable? A. Sewage B. plastic C. lead compound D. hydrogen sulphide.
81. $X^2 - 4 = 0$, then $x =$ A. 4 B. 2 C. -2 D. none of the above.
82. After getting rise of 15%, a man's monthly salary is N345, how much per month did he earn before the increase? A. N330 B. 360 C. N300 D. 396t.75.
83. A solid cylinder of radius 3cm has a total surface area of 3611cm, find its height A. 2cm B. 3cm C. 4cm D. 6cm.
84. The medium of the set of numbers 4,9,4,13,7,14,10,17 is A. 13 B. 7 C. 10 D. 19/2.
85. 7 pupil is of average age 12 years, leaves a class of 25 pupils of average age 14 years, if 16 new pupils of average age 11 years join the class. What is the average age of pupils no in the class? A. 13 years B. 10 months C. 11 years D. 12 years 71/2 months.
86. Divide the L.C.M of 48, 64, and 80 by their H.C.F. A. 20 B. 30 C. 48 D. 60.
87. Of the nine hundred students admitted in a university in 2000 the following are the distribution by state of origin: Anambra — 185 Imo — 135 Kaduna — 90 Kwara 110 Ondo — 155 Oyo — 225.

88. Find the least length of a rod which can be cut into exactly equal strips each 40cm by 48cm in length A. 120cm B. 240cm C. 360cm D. 480cm.
89. A rectangular lawn has an area of 1815 square yards. If its length is 50 meter, find its Q to P through the same that metre equal 1.1 yards. A. 39.93 B. 35.00cm C. 33.00cm D. 30.00.
90. A car moves from P to an average speed of 90k111/II and immediately returns from Q through the same route at a average speed for the entire journey. A. 55km/h B. 60km/li C. 67:50km/h D. 75km/h.
91. In a school 220 students offer biology or mathematics or both. 125 offer biology and 100 mathematics. How many students offer biology but not mathematics? A. 95 B. 80 C. 125 D. 110.
92. The time taken to do piece of works is inversely proportioned of the number of men employed. If it takes 45 men to do piece of work in 5 days, how long will it take 25 men? A. 1.5 days B. 12 days C. 5 days D. 9 days.
93. Simplify $52;2.4-5.7-3,45-1.75$. A. 41.1 B. 41.5 C.24.1 D.24.2.
94. A trade bought goats for N4,000.00 each. He sold them for N 180,000 at a loss of 25%. How many did he buy? A. 60 B. 50 C. 45 D.36.
95. A 5.Og of salt was weighted by Amaka as 5.1g. what is the percentage error A. 20% B. 2% C. 1% D. 0.2%
96. Find correct to one green, black and place 0.24633/0.306 A. 0.8 B. 1.8 C.8.0 D.8.i
97. A basket contains green, black and blue balls in the ratio or 5:2:1 if there are 10 blue balls, find the corresponding net ratio when 10 green and 10 black balls are removed from the basket A. 1:1:1 B. 4:2:1 C. 4:1:1 D. 5:1:1.
98. Factorize completely $(x+1)^2 - (2x+2)^2$. A. $(x+1)(x+2)(x-2)$ B. $(x-1)^2(x-2)^2$ C. $(x+1)^2(x+2)^2$ D. $(x+1)^2(x-2)$.
99. A student calculated the means of numbers as 45.3 while rechecking his working, he discovered that his total as short by 0.05. What is the correct means of the five numbers? A. 24 B. 41.2 C. 49.4 D. 65.8.
100. A man bought a second hand car for N250,000.00 and spent N70,000.00 refurbishing it. He then sold the car for N100,000,000.99. What is the percentage gain? A. 20% B. 25%h C. 32% D.60%.

ANSWERS TO NAU POST-LIME SCREENING EXERCISE (2007/2008) SESSION FOR ENGINEERING AND ENVIRONMENTAL SCIENCES

- | | | | | | | | | | | | |
|-------|--------|-------|-------|-----------|--------------|-------|-------|-------|-------|-------|-------|
| 1. C | 2. C | 3. A | 4. A | 5. B | 6. B | 7. A | 8. C | 9. A | 10. C | 11. A | 12. B |
| 13. B | 14. A | 15. C | 16. D | 17. A | 18. A | 19. A | 20. A | 21. B | 22. A | 23. B | 24. A |
| 25. D | 26. B | 27. A | 28. C | 29. A | 30. A | 31. A | 32. A | 33. C | 34. D | 35. D | 36. D |
| 37. C | 38. B | 39. C | 40. B | 41. B | 42. C | 43. B | 44. C | 45. | 46. B | 47. C | 48. C |
| 49. D | 50. D | 51. C | 52. | 53. D | 54. Solution | 55. C | 56. C | 57.B | 58. C | 59.C | |
| 60. C | 61.C | 62.D | 63. B | 64 C | 65.C | 66.A | 67.C | 68.C | 69.C | 70.C | 71.D |
| 72.C | 73.D | 74.B | 75. A | 76.A | 77.D | 78.A | 79.D | 80. A | 81. B | 82. C | 95. B |
| 96. A | 97. C. | 98. C | 99. C | 100. None | Solution | | | | | | |

**NNAMDI WZIKIWE UNIVERSITY,
AWKA**

**POST-UME SCREENING EXERCISE, 2008/2009
FOR
ENGINEERING, ARCHITECTURE, BUILDING,
QUANTITY
SURVEYING, SURVEYING AND GEOINFORMATICS**

INSTRUCTIONS

1. Shade firmly only one answer using HB pencil only
2. Shade your second choice of course in the column provided (column)

Time allowed: 1 hour

Date: July

23,2008

From the words lettered A to D, choose the words or group of words that best complete each of the following sentences.

1. Cosmas is a very good friend on _____ I can rely A. who B. whose C. which D. Whom.
2. A hotel is supposed to be a home away from home, but the one we — was bell away form home. A. moved into B. checked C. dropped by D. checked into.
3. Initially, we were deceived by the beautiful surroundings and by The Manager’s_ which was warm and inviting. A. Reception B. intention C. conviction D. Conception.
4. After the usual _____ and signing of forms, we were allowed into our rooms. A. feeling B. filling C. fill in D. Filling.
5. I ought _____ the letter by now. A. to be sent B. to have being sent C. to have sent D. to have to send.
6. Chinwe’s fever was so acute that she _____ an injection A. had to have B. had to had C. must have D. ought to have.
7. I started writing at 9am. It is 10am and by 11am. I writing for two hours. A. will be B. am C. will have been D. have been.
8. The car couldn’t keep pace _____ the motorcycle especially in congested areas. A. along B. with C. down D. on
9. Obiora couldn’t have said a thing like that _____ A. could he? B. did he? C. can he D. would he?.
10. I don’t know what to do with these children. They are always fighting — A. themselves B. myself C. one D. each another.

11. The fishermen threw a stone into the river and this caused a A. sprinkle B. sparkle C. splash D. Storm.
12. The play was so interesting that the _____clapped for quite a long time at the end. A. spectators B. watchers C. congregation D. Audience.
13. The building _____ because of weak structural foundation A. tumble B. caved C. collapsed D. Succumbed.
14. The magazine was _____ by the government for an offensive publication. A. prescribed B. proscribed C. suspended D. Persecuted.
15. Many people reacted to the brutal murder of the popular musician with strong. A. indignation B. demonstration C. accusation D. Condemnation.
16. The governor frowned at the _____, which slowed down the implementation of policy decisions. A. Bureaucracy B. opposition C. accusation D. Condemnation.
17. The doctor _____ the illness as typhoid fever and not malaria. A. prescribed B. discovered C. announced D. Diagnosed.
18. Since the writer did not indicate his name, the editor decided not to publish such _____ Article A. a discourteous B. an anonymous C. a scandalous D. Libelous.
19. Please let me have _____ salt in my soup. A. few B. a little C. a small D. a few.
20. Don't believe all _____ he had told you. A. what B. which C. that D. There
29. A gully which is a natural phenomenon, could not be mistaken for a tunnel which is A. supernatural B. meticulous C. easy-going D, Lovable.
30. It is curious how Chike can be so carefree in his ways when his brother is so A. eccentric B. Meticulous C. easy-going D. Lovable
31. Personally, I give in rather easily when it comes to arguments, but Emeka will always _____ to his opinion A. hold in B. hold on C. hold back D. Give out.
32. He intentionally threw the documents away and somebody _____ burnt them. A. carelessly B. willingly C. accidentally D. Foolishly.
33. The crops the farmer planted were _____ by some naughty boys A. sowed B. weeded C. destroyed D. uprooted.
34. The man refuse to accept the offer of a job in the rural areas, he preferred one in the area. A. local B. urban C. township D. Municipal.
35. The young engineer is good at terminating other people's projects but has not been capable of _____ any of his own. A. integrating B. finishing C. completing D. Initiating.
36. The manger who expected to be given respect was treated with A. dignity B. scorn C. shame D. Disloyalty.
37. Those who had invitation cards were admitted to the party while those who had none were A. barred B. replied C. expelled D. restricted.
38. Too many theories will not help us, we need to be _____ A. bookish B. hythetical C. shrewd D. Practical.
39. Nobody expects him to show for his children but he certainly bestows too much affection on them. A. love B. concern C. devotion D. Hatred.
40. The challenger at the boxing tournament was crude and inexperienced in contrast to the champion who was _____ A. great B. exposed C. refined D. Strong.

IN EACH OF THE FOLLOWING SENTENCES, THERE IS ONE WORD UNDERLINED AND ONE GAP. FROM THE LIST OF WORDS LETTERED A TO D, CHOOSE THE WORD OR GROUP OF WORDS THAT IS MOST NEARLY OPPOSITE IN MEANING TO THE UNDERLINE WORD AND THAT WILL AT THE SAME TIME, CORRECTLY FILL THE GAP IN THE SENTENCE.

21. Joseph purchase various articles at the big sale near the supermarket and surprisingly enough, he _____ them in all before he reach home that day. A. destroyed B. Bought C. lent D. Sold.
22. In this argument, Martin was my supporter even though he is often my _____ in other matters A. Opponent B. any C. opposite D. Proper,
23. People who are normally _____ often turn to be dauntless heroes in the face of real danger. A. Unsteady B. colourless C. cowardly D. Bashful.
24. I encouraged my younger brother to take on law as a profession while I my sister from doing so A. financed B. warned C. dissuaded D. Persuaded.
25. It is quite customary to introduce the guest speaker but _____ to insult him A. illegal B. impolite C. unusual D. Useless.
26. John was able to kindle the fire, which my father had to _____ later. A. Kill B. switch C. extinguish D. Ignite.
27. One of the armed robbers was as darling in his words at the stake as the other was A. morose B. secretive C. rational D. Timid.
28. His outspokenness contrast with the _____ of the father. A. humour B. sobriety C. deafness D. Taciturnity.

FROM THE WORDS LEITERED A TO D BELOW EACH OF THE FOLLOWING SENTENCES, CHOOSE THE WORD OR GROUP OF WORDS THAT IS NEAREST IN MEANING TO THE UNDERLINED EXPRESSION AS IT IS USED IN THE SENTENCE

41. My choice of a partner would be based on character, not looks A. Visibility B. feasibility C. appearance D. Posture.
42. Mike is very winsome yet this neighbour finds it difficult to put up with him. A. stay with B. live with C. tolerate D. rely on.
43. The Efik girl has just come out of the fettering room and her waist is adorned with beads. A. surrounded B. decorated C. besieged D. Defaced.
44. There are some drugs that could exacerbate a particular illness. A. heal B. ameliorate C. worsen D. .Defaced.
45. In accordance with the practice of his religion, Roman's body was interred the day he died. A. preserved B. sanctified C. cremated D. Buried.
46. What you cannot avoid you try to endure A, cast off B. out off C. dispense with D. Tolerate.
47. The decision taken by the panel is irrevocable A. irresponsible B. unexpected C. acceptable D. irresponsible and unacceptable.
48. Death is inevitable for man. A. Essential B. necessary C. unavoidable D. Imminent.

49. The superintendent was appalled by the attitude of some of the employees towards their work. A. Annoyed B. disappointed C. shocked D. Depressed.
50. The lawyer's argument of the case was exhausting. A. interesting B. exaggerating C. exhilarating D. Thorough.
51. In a school, 220 students offer Biology or Mathematics or both. 125 offer Biology and 110 mathematics. How many offer Biology but not Mathematics? A.95 B.80 C.125 D.11
52. Simplify: $52, 4 - 5.7 - 3.45 - 175$ A. 41.4 B. 41.5 C. 42.1 D. 42.2.
53. A trade bought goats for N4,000.00 each. He sold them for N180,000.00 at a loss of 25%. How many goats did he buy? A. 60 B. 50 C. 45 D. 36.
54. A circle with a radius 5cm has its rC I dius increasing at the rate of 0.2cm. what will be the corresponding increase in the area? A. 2n B. 5n C.11 D. 4n.
55. A cinema hail contains a certain number of people. If 22 Y2 (% are children, 47 Y2 are merl and 84 are women, find the number of men in the hall A. 63 B. 84 C. 113 D. 133.
56. X varies directly as the product of U and V and inversely as their sum. If x ole 3 when u = 3 and v 1 what is the value of x if u = 3 and v = 3? A. 3 B.4 C.6 D.9.
57. The length a person can jump is inversely proportional to his weight. If a 20kg person can jump 1.50m, find the constant of proportionality A. 60 B. 30 C. 20 D. 15.
58. Find the value of x and y respectively if $3x - 5y + 5 = 0$ and $4x - 7y + 8 = 0$. A. -5, -4 B. -4, -5 C. A,5 D. 5,4.
59. A trapezium has two parallel sides of length 5cm and 9cm. If the area is 21cm³, find the distance between the parallel side. A. 3cm B. 4cm C. 6cm D. 7cm.
60. An aeroplane flies due north form airports P to Q and then flies due east to R, if Q is equidistant from P and R, find the bearing of P from R. A. 090° B. 135° C. 225° D. 270°
61. An arc of a circle substance an angle of 30o on the circumference of a circle of radius 21cm, find the length of the arc. (II = 22/7) A. 11cm B.22cm C. 44cm D. 66cm.
62. By how much is the man of 30,56,31,55,43 and 44 less than the median? A. 0.75 B. 0.50 C. 0.33 D. 0.17
63. The range of 4,3,11,9,6,15,19,23,27,24,21 and 16 is A. 16 B. 21 C. 23 D. 24.
64. On a pie chart, there are four sectors of which three angles are 45°, 90° and 135°. If the smallest sector represents N28.00, how much is the largest sector? A. 96.00 B. N84.00 C. N48.00 D. 42.00.
65. Find the number of committees of three that can be formed consisting of two men and one women from four men and three women. A. 3 B. 6 C
66. A bag contains 5 black: balls and 3 balls. Two balls are picked at random without replacement. What is the probability that a black and a red balls are picked? A. 15/28 B. 13/28 C. 5/14 D. 3/14.
67. If x is the addition of the prime numbers between 1 an 6, and y the HCF of 6,9,15, find the product of x and y. A. 27 B. 30 C. 33 D. 90.
68. A 5.og of salt was weighted by Ikechukwu as 5.19. what is the percentage error? A. 20 B. 2 C. 1 D. 0.2.
69. Two brothers, John and Tim, own a store. The ratio of 10hn's share to Tim's is 11.9. later, Tim sells 2/3 of his share to John for N720.00. Find the value of the store.
A. N 1,080.00 B. N2,400.00 C. N3,000.00 D. N3,600.00.
70. Four interior angles of a pentagon are 90o — Xo, 90o + Xo,110 — 2Xo, 110 + 2xo. Find the fifth interior angle. A. 110° B. 120° C. 130° D. 140°.
71. The slope of a straight line displacement time graph indicates the . A. distance traveled B. uniform velocity C. uniform acceleration D. un dorm speed.
72. A ball of mass 0.5kg moving at 10ms — collides with another ball of equal mass at rest. If the two balls move off together after the impact, calculate their corn 111 on velocity. A. 0.2111S- B. 0.5n;s-1 C. 5.0ms- D.10ms
73. A ball is thrown vertical upwards from the ground with an initial velocity of 50cmf what is the total time spent by the ball in the air? (g = 10ms-) A.2.5s B.5.0s C. 10.0s D. 15.0s.
74. The motion of body is simple harmonic if the A. acceleration is directed towards a fixed point and proportional to its distances from the point B.path of motion is a straight line C. acceleration is proportional to the square of the distance from a fixed point D. acceleration is always directed towards a fixed point.
75. Which or the following statements about the gaseous state of matter is not correct? The molecules of a substance in gaseous state. A. are in constant state or motion B. have different speeds C. have a temperature which is a measure of the average kinetic energy D. have no intermolecular attractive force.
76. Which of the following cannot be measure the temperature of a substance? A. variation of pressure with temperature B. expansivity of liquid C. change in resistance of a conductor D. change in colour with temperature.
77. The clinical thermometer is characterized by having a. A. wide range of temperature B. vide bore C. narrow bore D. Construction.
78. Which of the following is a reason why a concrete floor colder to the bare feet than a mat on the same floor during the rainy season? A. mat is better conductor of heat than the feet B. mat losses heat to the bare floor at a faster rate than a concrete floor C. concrete floor is a better conducted of heat than the mat D. mat losses heat to the bare feet while the concrete floor extracts heat from them.
79. In which of the following is the expansion of solids a disadvantage? A. the fitting or wheels in rims B. the balance wheel of a watch C. fire alarms D. the thermostat.
80. Which of the following best explains why a person suffers a more severe burn when his skin is exposed to steam than when boiling water is poured onto his skin? A. stem possesses greater heat energy per unit mass than boiling water B. steam is at a higher temperature than boiling water C. steam is at higher spreads more easily over a wider area of the skin than boiling water D. steam penetrates more deeply into the skin than boiling water.
81. The temperature at which the water vapour present in the air is just sufficient too saturate is it called the A. ice point B. boiling point C. dew point D. saturation point.
82. Which of the following instruments may be used to measure relative humidity? A. Hydrometer B. Hygrometer C. manometer D. Barometer.
83. An object is placed 36cm from a converging lens of focal length 24cm. If a real image, which is 4cm high, is formed, calculate the height of the object A. 2.0cm B. 4.0cm C. 6.0m D 10.0cm.

84. The ability of the eye to focus objects at different distance is called A. power B. accommodation C. long sight D. normal vision.
85. The unit inductance is the A. farad B. Henry C. ampere D. Colomb.
86. The component of universal indicator solution can best be separated by A. chromatography B. filtration C. evaporation D. Crystallization.
87. The number of replaceable hydrogen atoms in one molecules of an acid indicates it's. A. basically B. Acidity C. alkalinity D. pH value.
88. A measure of the degree of disorder in a chemical system is known as the A. enthalpy B. free energy C. activation energy D. Entropy.
89. In any chemical reaction, the total mass of the products is always equal to that of the reactions. This is statement of the law of A. definite proportion B. conservation of matter C. multiple proportions D. constant composition.
90. Which of the following is not a property of magnesium oxide? A. high melting point B. Dissolution in polar solvents C. presence of ionic bonds D. low binding energy
91. Calcium is usually extracted by the electrolysis of it's? (A) trioxonitrate (V) B. tetraoxosulphate (VI) C. chloride D. Oxide.
92. When naphthalene on heating changes from the solid state directly to the gas sate it undergoes A. evaporation B. sublimation C. decomposition D. lionization.
93. When sodium atom forms the ion Na⁺. A. it gains one electron B. it gains one proton C. it achieves a noble gas configuration D. its atomic number increase.
94. Which of the following properties is characteristic of the halogens? A. ability to accept electrons readily B. ability to donate electrons readily C. ability to form basic oxides D. formation of coloured compounds.
95. A transition metal would be expected to A. form oxides with different formulae B. have strong oxidizing ability C. have low density D. have an atomic structure with an incomplete outermost shell.
96. Which of the following properties of atoms generally increase down a group in the periodic table? A. Electron affinity B. Electro negativity C. ionic radius D. Ionization.
97. Which of the following compounds has hydrogen bonds between its molecules? A. HF B. HBr C. HCL D. HI.
98. What product is formed at the cathode durihg the electrolysis of concentrated sodium chloride solution using carbon electrodes? A. chlorine B. Hydrogen C. Oxygen D. Sodium.
99. Glucose reduces Fehling's solution on warming to A. copper (I) oxide B. copper (II) oxide C. copper (I) chloride D. copper (II) hydroxide.
100. Which of the following activities is not a source of air pollution? A. Domestic fires B. carbon dating C. Coal powered stations D. Cigarette smoking

**POST TO NAU POST-UME SCREENING EXERCISE
(2008/2009) SESSION**

ENGINEERING, ARCH, BUILDING, SURVEYING, QT. & GEOINFORMAT

- | | | | | | | | | | | | |
|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. D | 2. D | 3. A | 4. C | 5. C | 6. B | 7. C | 8. B | 9. A | 10. C | 11. C | 12. D |
| 13. C | 14. C | 15. D | 16. A | 17. D | 18. A | 19. D | 20. C | 21. 0 | 22. A | 23. C | 24. C |
| 25. C | 26. C | 27. D | 28. D | 29. A | 30. B | 31. B | 32. C | 33. C | 34. B | 35. C | 36. B |
| 37. D | 38. D | 39. D | 40. C | 41. C | 42. C | 43. B | 45. D | 46. D | 47. A | 48. C | 49. C |
| 50. D | 51. D | 52. A | 53. A | 54. B | 55. D | 56. C | 57. C | 58. D | 59. A | 60. C | 61. A |
| 62. C | 63. A | 64. B | 65. A | 66. A | 67. B | 68. B | 69. B | 70. D | 71. B | 72. C | 73. B |
| 74. A | 75. D | 76. D | 77. D | 78. D | 79. D | 80. A | 81. A | 82. B | 83. D | 84. B | 85. B |
| 86. A | 87. A | 88. D | 89. B | 90. D | 91. A | 92. B | 93. C | 94. A | 95. A | 96. C | 97. C |
| 98. B | 99. C | 100. B | | | | | | | | | |

**ENGINEERING, ARCHITECTURE, BUILDING,
QUANTITY SURVEYING,
SURVEYING AND GEOINFORMATICS**

INSTRUCTIONS

1. Shade FIRMLY only one answer using 118 pencil only
2. Shade second choice of course in the column provided (Column 8)

Time Allowed: 1 hour

Date: July

20, 2010

Complete each of the following sentences by choosing the option that most suitably fills the space.

1. If I went to watch the football match, I _____ early. (A) shall return (B) am returning (C) would return (D) had returned.
2. He went up quickly and returned . (A) fastest (B) very fast (C) fastly (D) as fast.
3. His suggestion is completely _____ the point and cannot accepted. (A) to (B) about (C) besides (D) beside.
4. In order to carry out the post-mortem examination, the dead body was _____ (A) extracted (B) exhumed (C) Fumigated (D) dispelled.

NNAMDI AZIKIWE UNIVERSITY, AWKA

**POST-LIME SCREENING EXERCISE,
2010/2011 FOR**

5. The green snake which lives in the green grass is using a perfect _____ (A) shelter (B) under cover (C) camouflage (D) subterfuge.
6. Tennyson and Browning lived about the same time and are therefore _____ poets. (A) contemporary (B) contrary (C) similar (D) contemporaneous.
7. If you travel by air you will be given an allowance to cover _____. (A) a luggage (B) luggage (C) luggages (D) a baggage.
8. Last week, the _____ at the theatre was the largest I had ever seen. (A) assembly (B) crowd (C) fans (D) audience.
9. The train rattled along _____ full speed. (A) is (B) at (C) with (D) on.
10. His horrible high-pitched laugh _____ on my nerves. (A) jabs (B) jams (C) jars (D) jeers.
11. As he was still owing me one thousand naira, I was careful not to _____ him any more money. (A) loan (B) lend (C) borrow (D) credit.
12. Before the operation, the dentist found that the patient's teeth _____ (A) have long decayed (B) have long been decayed (C) had long decayed (D) had been decayed.
13. The employer, not the salesman and his representative, responsible for the loss of revenue. (A) are (B) have been (C) us (D) are being.
14. When the beggar was tired, he _____ down by the roadside. (A) lied (B) laid (C) lay (D) layed.
15. He did not like _____ leaving the class early. (A) us (B) we (C) our (D) ourselves.
16. In presenting the case, the Vice-Chancellor warned that the Senate should not cite it as a (A) precedence (B) precedence (C) president (D) precedent.
17. We got to the viewing centre after the football match _____ (A) has started (B) had started (C) was starting (D) have started.
18. In Nigeria, the _____ of their blindness is about 25 percent. (A) incident (B) incidence (C) accident (D) accident.
19. We should take extra precaution _____ the kidnappers come back. (A) may be (B) should in case (C) in case (D) perhaps.
20. What a relief that the strike _____ when it did. (A) would end (B) was ending (C) ended (D) has ended.
21. He played the piano _____ an hour or two. (A) around (B) in about (C) during (D) for.
22. He sent the children out to play _____ he might be alone. (A) because (B) since (C) so that (D) while.
23. It is time we _____. (A) should be going (B) ought to go (C) go (D) went.
24. Do you know if the new teacher _____ yet? (A) is arrived (B) will be arriving (C) has arrived (D) had arrived.
25. Oji is not far from here, it is only an _____ (A) hour of driving (B) hour by driving (C) hour drive (D) hour's drive.
26. The new leader has good intentions but he is unable to _____. (A) carry them with him (B) carry them on (C) carry them out (D) carry them all.
27. We travelled all night and arrived _____ the Jibowu motor park six o'clock in the morning. (A) at (B) by (C) on (D) in.
28. During the swearing in ceremony for a second term, the Governor the activities of his government for the past four years. (A) reiterated (B) reviewed (C) restated (D) recited.
29. The giant hydro-electric project is among the _____ of colonial rule in northern Nigeria (A) inheritance (B) evidence (C) legacies (D) remnants.
30. The Vice-Chancellor will be travelling to China. In his absence the Deputy Vice-Chancellor, (Administration) will _____ the University. (A) take over (B) overlook (C) care for (D) look after.
31. The prices of cars have become _____. (A) painful (B) unbearable (C) harsh (D) exorbitant.
32. I had _____ trust in the boy before he woefully disappointed me. (A) essential (B) flagrant (C) absolute (D) effective.
33. We need to _____ our resources in these hard times. (A) squander (B) economize (C) minimize (D) withhold.
34. Paul's soothing remarks were made to _____ John's anger. (A) rekindle (B) accommodate (C) mollify (D) petrify.
35. The poor boy was _____ when he stepped on live wire. (A) blazed (B) electrified (C) burnt (D) electrocuted.
36. The politician ran to another country to seek _____ (A) refuge (B) safeguard (C) safety (D) privacy.
37. The Governor ordered that the work done by any contractor should be properly _____ so as to know the correct amount to pay. (A) processed (B) accounted (C) investigated (D) probed.
38. The University awarded doctorate degrees to four distinguished members of the community. (A) honourable (B) ceremonial (C) honorary (D) honourary.
39. The students threatened to embark on a _____ of lecturers if their demands were not met. (A) suspension (B) boycott (C) rejection (D) boycott.
40. The late politician had an _____ ambition to rule the country. (A) insipid (B) infantile (C) inordinate (D) obtuse.
41. The slope of a straight line displacement time graph indicates the (A) distance traveled (B) uniform velocity (C) uniform speed (D) uniform acceleration.
42. A man will exert the greatest pressure on a when he (A) lies flat on his back (B) lies flat on his belly (C) stands on one foot only.
43. A ball of mass 0.5kg moving at 10m/s collides with another ball of equal mass at rest. If the two balls move off together after the impact, calculate their common velocity. (A) 0.2ms⁻¹ (B) 0.5ms⁻² (C) 5.0ms⁻¹ (D) 2.0ms⁻¹.
44. A ball is thrown vertically upwards from the ground with an initial velocity of 50cm/s. What is the total time spent by the ball in the air? (g = 10ms⁻²). (A) 2.5s (B) 5.0s (C) 10.0s (D) 15s.
45. Which of the following cannot be used to measure the temperature of a substance? (A) variation of pressure with temperature (B) Expansivity of a liquid (C) Change in colour with temperature (D) Thermoelectric effect.
46. The clinical thermometer is characterized by having a (A) wide range of temperature (B) wide bore (C) narrow bore (D) construction.
47. Which of the following is a reason why a concrete floor feels colder to the bare feet than a mat on the same floor during the rainy season? (A) mat is a better conductor of heat than the feet (B) Mat loses heat to the bare feet at a faster rate than concrete floor (C) Mat is a better conductor

- of heat than the floor (D) Concrete floor is a better conductor of heat than the mat.
48. In which of the following is the expansion of solids a disadvantage? (A) The fitting of wheels in rims (B) Fire arms (C) The balance wheel of a watch (D) The thermostat.
49. The temperature at which the water vapour present in the air is just sufficient to saturate it, is called the (A) ice point (B) boiling point (C) saturation point (D) dew point.
50. Which of the following instruments may be used to measure relative humidity? (A) hydrometer (B) Barometer (C) Hygrometer (D) Manometer.
51. An object is placed 36cm from a converging lens of focal length 24cm. If a real image which is 4cm high is formed, calculate the height of the object (A) 2.0cm (B) 4.0cm (C) 6.0cm (D) 8.0cm.
52. The ability of the eye to focus objects at different distances is called (A) power (B) accommodation (C) normal vision (D) long sight.
53. The change of the direction of a wave-front because of a change in the velocity of the wave in another medium is called (A) refraction (B) diffraction (C) reflection (D) dispersion.
54. A sounding tuning fork is brought near the end of a pipe containing an air column and the loudness of the sound increases. The effect is due to (A) an echo (B) resonance (C) reverberation (D) interference.
55. The unit of inductance is the (A) farad (B) hertz (C) Henry (D) coulomb.
56. Which of the following is not correct about isotopes of an element? They have (A) the same neutron number (B) the same proton number (C) different physical properties.
57. The motion of the prongs of sounding tuning forks is..... (A) random (B) rotational (C) vibratory (D) vibratory and rotational.
58. A thermometer has its stem marked in millimeter instead of degree Celsius. The lower fixed point is 30mm and the upper fixed point is 180mm. Calculate the temperature in degrees Celsius when the thermometer reads 45mm. (A) 67.5°C (B) 30.0°C (C) 15.0°C (D) 10.0°C.
59. Which of the following surface will radiate heat energy best? (A) red (B) White (C) Black (D) Blue.
60. Which of the following statements is not correct? (A) Evaporation takes place only at the surface of a liquid (B) Boiling takes place throughout the volume of a liquid (C) Evaporation takes place at all temperatures (D) The boiling point of a liquid is not affected by impurities.
61. An add present in proteins is (A) lactic acid (B) amino acid (C) propanoic acid (D) palmitic acid.
62. The following are uses of sulfur except (A) manufacture of tetraoxosulphate (VI) acid (B) prevention of the growth of fungi (C) coating of steel to prevent rusting (D) manufacture of dyes.
63. Which of the following compounds is aromatic? (A) Benzene (B) Cyclobutane (C) Hexane (D) Ethene.
64. Which of the following statements is not correct? (A) Carbon exhibits allotropy (B) Sulphur exhibits allotropy (C) Chlorine exhibits allotropy (D) Argon is a noble gas.
65. Which of the following correctly explains why iodine crystals change directly into the gaseous state when heated? (A) iodine crystals sublime (B) iodine molecules are held together by weak forces (C) iodine molecules are covalent (D) iodine atoms are held together by strong forces.
66. A salt which loses mass when exposed to air is (A) hygroscopic (B) efflorescent (C) effervescent (D) deliquescent.
67. Which of the following is a neutral oxide? (A) Nitrogen (IV) oxide (B) Carbon (IV) oxide (C) Sulphur (VI) oxide (D) Nitrogen Oxide.
68. Detergents are better than soaps for laundry because (A) detergents are synthetic while soaps are not (B) detergents are more soluble in water than soaps (C) sum is precipitated when soaps are used with hard water but not with detergents (D) soaps form soluble salts with ions causing hardness of water while detergents do not.
69. During the electrolysis of dilute tetraoxosulphate (VI) acid solution, 0.05 mole of electrons were passed. What volume of gas was produced at the anode? (Gaseous molar volume = 22.4dm³ at s.t.p.) (A) 0.224m³ (B) 0.280dm³ (C) 2.24dm³ (D) 2.80dm³.
70. The Solvay Process is used in the manufacture of (A) sodium (VI) oxide (B) Sodium trioxocarbonate (IV) (C) Sodium Oxocarbonate (IV) (D) Sodium trioxochloride (IV).
71. Aluminum is above iron in the electrochemical series, yet iron corrodes easily on exposure to air while aluminum does not. This is because aluminum (A) has a lower density than iron (B) is a better conductor than iron (C) forms a thin layer of inert oxide in moist air (D) does not corrode spontaneously.
72. A catalyst which increases the rate of a chemical reaction does so by (A) increasing the reaction pathway (B) increasing the surface area of the reactions (C) decreasing the activation energy of the reaction (D) decreasing the temperature at which the reaction occurs.
73. A sample of orange juice is suspected to have been contaminated with a yellow dye. Which of the following methods can be used to detect the dye? (A) Decantation (B) Distillation (C) Chromatography (D) Filtration.
74. Which of the following compounds has hydrogen bonds between its molecules? (A) HBr (B) HF (C) HCl (D) HI.
75. Which of the following properties of atoms generally increases down a group in the periodic table? (A) Electron affinity (B) Electronegativity (C) Ionic radius (D) Ionization energy.
76. When sodium atom forms the ion Na⁺, (A) it gains one electron (B) it gains one proton (C) it achieves a noble gas configuration (D) its atomic number increases.
77. A transition metal would be expected to (A) form oxides with different formulae (B) have strong oxidizing ability (C) have low density (D) have an atomic structure with an incomplete outermost shell.
78. What product is formed at the cathode during the electrolysis of concentrated sodium chloride solution using carbon electrodes? (A) chlorine (8) Hydrogen (C) oxygen (D) Sodium.
79. Which of the following substances is a suitable solvent for perfumes? (A) Benzene (B) Ethanol (C) Water (D) Turpentine.
80. Which of these metals will not liberate hydrogen from dilute HCl? (A) Copper (B) Iron (C) Magnesium (D) Zinc.

81. A sales girl gave a balance of N1.15 to a customer instead of N1.25. calculate her percentage error. (A) 10% (B) 0.10% (C) 8.0% (D) 0.8%.
82. What value of K makes the given expression a perfect square? $M^2 - 8m + k$ (A)2 (B)4 (C)8 (D)16.
83. Factorize $5y^2 + 2ay - 3a^2$. (A) $(5y-a)(y+3a)$ (B) $(5y+a)(y-3)$ (C) $(5y+2a)(2y-3a)$ (D) $(5y - 3a)(y + a)$.
84. Find the quadratic equation whose roots are $x = -2$ or $x = 7$ (A) $x^2 + 2x - 7 = 0$ (B) $x^2 - 5x - 14 = 0$ (C) $x^2 - 2x + 7 = 0$ (D) $x^2 + 5x + 14 = 0$.
85. A student measured the length of a room and obtained the measurement of 3.99m. if the percentage error of his measurement was 5%, what is the length of the room? (A) 3.78m (B) 4.18m (C) 4.20m (D) 4.78m.
86. A rope of length 18m is used form a sector of a circle of radius 3.5m on a school playing field. What is the size of the angle of the sector, correct to the nearest degree? (A) 400 (B) 1800 (C) 33° (D) 2700.
87. If $3 \log a + 5 \log a - 6 \log a = \log 64$, what is a? (A)4 (B)6 (C)8 (D)16
88. The angle of elevation of X from Y is 30°. If $XY = 4\text{Dm}$, how high is X above the level of Y? (A) 1Dm (B) 20m (C) 40m (D) 5Dm.
89. Instead of recording the number 1.23cm of the radius of a tube, a student recorded 1.32cm. find the percentage error correct to one decimal place. (A) 6.8% (B) 7.3% (C) 14.4% (D) 15.4%.
90. An arc of a circle radius 7cm is 14cm long. What angle does the arc subtend at the centre of the circle? (A) 25.7° (B) 44° (C) 114.55° (D) 98°.
91. If 5 times a certain integer is subtracted from twice the square of the integer, the result is 63. Find the integer. (A) 21 (B) 9 (C) 7 (D) 4.
92. White doing his Physics practicals, Okoli recorded a reading as 1.12cm instead of 1.21cm. calculate the percentage error. (A) 1.17% (B) 6.38% (C) 7.44% (D) 9.00%.
93. In a class of 80 students, every student had to study Economics or Geography, or both Economics and 50 studied Geography, how many studied both subjects? (A) 15 (B) 30 (C) 35 (D) 45.
94. Solve the equation: $7y^2 = 3y$. (A) $y = 3$ or 7 (B) $y = 0$ or 7 (C) $y = 0$ or $3/7$ (D) $y = 0$ or 9 .
95. Calculate the surface area of a sphere of radius 7cm. (A) 86cm² (B) 154cm² (C) 616cm² (D) 1434cm².
96. Find the total surface area of a cylindrical container closed at both ends, and with a radius of 7cm and height of 5cm. (A) 35cm² (B) 154cm² (C) 220cm² (D) 528cm².
97. Find the volume of the container in the question above (A) 35cm³ (B) 15cm³ (C) 528cm³ (D) 770cm³.
98. From the top of a building 1Gm high, the angle of depression of a stone lying on the horizontal ground is 69°. Calculate correct to 1 decimal place, the distance of the stone from the foot of the building (A) 3.6m (B) 3.8m (C) 6.0m (D) 9.3m.
99. The bearing of a point X from a point Y is 0740. What is the bearing of Y from X? (A) 106° (B) 148° (C) 254° (D) 286°.
100. The population of a village is 5846. Express this number to three significant figures. (A) 5850 (B) 5846 (C) 5840 (D) 585.

**ANSWERS TO NAU POST-LIME SCREENING EXERCISE (201 0/2011) SESSION
FOR ENGINEERING, ARCHITECTURE, BUILDING, QUANTITY SURVEYING AND GEOINFORMATICS**

- | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1. C | 2. B | 3. D | 4. B | 5. C | 6. A | 7. C | 8. D | 9. C | 10. A | 11. B | 12. D |
| 13. C | 14. B | 15. A | 16. A | 17. B | 18. A | 19. C | 20. C | 21. D | 22. C | 23. B | 24. C |
| 25. C | 26. C | 27. D | 28. C | 29. C | 30. D | 31. D | 32. C | 33. B | 34. C | 35. B | 36. A |
| 37. B | 38. A | 39. D | 40. A | 41. D | 42. B | 43. C | 44. B | 45. D | 46. C | 47. C | 48. C |
| 49. C | 50. C | 51. B | 52. B | 53. A | 54. C | 55. C | 56. D | 57. C | 58. C | 59. C | 60. D |
| 61. B | 62. C | 63. A | 64. C | 65. A | 66. D | 67. A | 68. D | 69. C | 70. B | 71. C | 72. C |
| 73. C | 74. B | 75. C | 76. C | 77. A | 78. C | 79. D | 80. A | 86. D | 87. C | 89. B | 90. C |
| 91. C | 92. C | 93. C | 94. C | 95. C | 96. B | 97. D | 98. B | 99. D | 100. D | | |

NNAMDI AZIKIWE UNIVERSITY, AWKA

POST-UTME SCREENING EXERCISE, 2012/2013 FOR ENGINEERING, ENVIRONMENTAL SCIENCE, PHYSICAL SCIENCES

INSTRUCTION:

1. SHADE FIRMLY ONLY ONE ANSWER USING HB PENCIL ONLY
2. YOU ARE ALLOWED TO MAKE A SECOND CHOICE OF COURSE INTO THE FOLLOWING: FACULTY OF AGRICULTURE, GEOPHYSICS, ANATOMY, SCIENCE EDUCATION, FEDERAL COLLEGE OF EDUCATION (TECHNICAL) UMUNZE, ENUGU STATE COLLEGE OF EDUCATION (TECHNICAL). (SEE THE BACK OF THE OMR SHEET FOR DETAILS).
3. SHADE YOUR SECOND CHOICE OF COURSE IN THE COLUMN PROVIDED (COLUMN 8)

FILL IN THE BLANK IN THE FOLLOWING SENTENCES MAKING US OF THE BEST OF THE OPTION

1. Njoku — as a mechanic when he was young, but now he is a driver. A. had been working B. used to work C. would work D. would have worked E. had worked
2. If Ikenna performs poorly in her forthcoming examination, then either her mother or I _____ to blame. A. must B. has C. will be D. are E. am
3. No sooner had the examination ended the students started vacating the halls. A. when B. that C. than D. before E. and
4. 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 this room E. a lion is going to come into this room
5. When we were coming back from the picnic last Friday, there on Niger Bridge.
A. were many traffics B. was much traffic C. were plenty of traffic D. were lots of traffic E. was a few traffic

Choose the word or phrase closest in meaning to the underlined word or phrase.

6. My friend will hate his uncle for ever because he left him in the lurch in his hour of need. A. abandoned him B. punished him C. disrespected him D. disinherited him E. despised him
7. For all he cared, the game was as good as lost. A. He did not care if the game was lost (B) He could not care less if the game was lost C. He was almost certain that the game would be lost (D) He was afraid the game would be lost E.

The game was very good and he cared very much about losing it.

8. Some people are naturally belligerent. A. naughty B. benevolent C. barbaric D. warlike E. wicked
9. This is a mundane thing. A. natural B. secular C. familiar D. clear E. crazy
10. The word caligynophobia means. A. fear of smile B. fear of nudity C. fear of pregnancy D. fear of beautiful women E. fear of being touched.

Choose the option opposite in meaning to the word(s) or phrase underlined.

11. The man who had been seriously ill was convalescing at a sea-side resort. A. regaining health B. deteriorating in health C. recuperating D. relaxing E. hallucinating.
12. Ben will soon get to the zenith of his career. A. peak B. low C. nadir D. bottom E. foot
13. The antonym of the word verbose is? A. lose B. concise C. intractable D. overdue E. heterodox.

Choose the word / expression which best completes each sentence

14. You — to know better than an illiterate farmer. A. are suppose B. are supposed C. suppose D. may suppose E. will suppose.
15. The passenger waited patiently whilst they transferred his from the taxi to the bus. A. properties B. baggages C. baggage D. property B. baggages.

Choose the best of the options from the Questions below.

16. If hydrogen sulphide gas is passed into a solution of a pure iron chloride, a yellow deposit appears. If the deposit is filtered, a pale green solution is left behind. The pale green solution is A. dilute sulphuric acid B. dilute hydrochloric acid C. unreacted hydrogen sulphide in water D. iron (III) chloride E. iron (II) chloride
17. A solid x when heated gives off a brown gas. If x is soluble in excess sodium hydroxide solution but insoluble in excess ammonium hydroxide solution, then x is A. basic lead carbonate B. lead (II) trioxonitrate C. sodium carbonate D. zinc nitrate E. sodium nitrate
18. When excess ethanol is heated to 145°C in the presence of concentrated sulphuric acid, the product is. A. diethylether B. ethyne C. diethyl, sulphate D. acetone E. ethanoic acid
19. Given the mean atomic mass of chlorine prepared in the laboratory to be 35.5 and assuming that chlorine contains two isotopes of mass numbers 35 and 37, what is the percentage composition of the isotope of mass number 35? A. 20 B. 25 C. 50 D. 75 E. 90
20. The oxidation state of manganese in KMnO_4 is. A. +1 B. +3 C. +5 D. +7 E. +2
21. 28.8cm³ of nitrogen at 15°C is cooled to 0°C at constant pressure, the new volume of nitrogen is. A. 17.4cm³ B. 14.7cm³ C. 27.3cm³ D. 31.7cm³ E. 34.7cm³
22. The electronic configurations of elements X and Y are. X = 2,8,6 ; Y = 2,8,7 The bond in the compound formed by X and Y is expected to be. A. ionic B. covalent C. dative covalent D. metallic E. none of the above.
23. If 1 mole of aluminum contains 6×10^{23} atoms of aluminum, how many atoms are contained in 0.9g of

- aluminum? A. 1.0×10^{21} B. 6.6×10^{21} C. 2.0×10^{22} D. 6.0×10^{22} E. 5.4×10^{23}
24. 1 .Og of the oxide of metal x (atomic mass = 64) gave 0.80g of the metal when reduced with hydrogen. The formula of the oxide is. A. X_2O B. XO C. XO_2 D. X_2O_3 E. X_3O_4
 25. Cotton is almost pure. A. starch B. protein C. animal fibre D. cellulose E. mineral fibre
 26. The cracking process is very important in the petroleum industry because it. A. gives purer products B. yields more lubricants C. yields more engine fuels D. yields more asphalt E. yields more candle wax.
 27. Stainless steel is an alloy of A. carbon, iron and lead (B) carbon, iron and chromium (C) carbon, iron and copper D. carbon, iron and silver (E) carbon and iron only.
 28. The ratio of the number of molecules in 2g of hydrogen to that in 16g of oxygen is A. 2:1 B. 1:1 C. 1:2 D. 1:4 E. 1:8
 29. If the molar mass of X is 36g, the number of moles of X dissolved at 343k is A. 0.2 mole B. 0.7 mole C. 1.5 moles D. 2.0 moles E. 3.0 moles
 30. What process would coal undergo to give gas, coal tar, ammoniacal liquor and coke?
A. steam distillation (B) Destructive distillation (C) Liquefaction (D) Hydrolysis E. Sublimation
 31. If $X_2 + 4 = 0$, then $X =$ A. 4 B. -4 C. 2 D. -2 E. none of the above
 32. A pyramid is constructed on a cuboid. The figure has. A. Twelve faces B. Thirteen vertices C. fourteen edges D. Fifteen edges E. Sixteen edges
 33. $(3.2)^2 - (1.8)^2$ equals. A. 7.0 B. 2.56 C. 13.48 D. 2.0 E. 0.07
 34. The annual profits of a transport business were divided between the two partners A and B in the ratio 3:5. If B received \$3000 more than A, the total profit was A. \$5000 B. \$1800 C. \$12000 D. \$24000 E. \$5000
 35. Which of the following is not a factor of $12 - 5$? A. 7 B. 13 C. 17 D. 49 E. 169
 36. The media of the set of numbers 4, 9, 4, 13, 7, 14, 10, 17 is A. 13 B. 7 C. $19/2$ D. 10 E. $39/4$
 37. Simplify $102 + \log_{10} 5$ A. 500 B. $2\log_{10} 5$ C. 10 D. $\log_{10} 7$ E. none of the above.
 38. A micrometer is defined as one millionth of a millimeter. A length of 12,000 micrometers may be represented as A. 0.00012m B. 0.0000012m C. 0.000012m D. 0.00000012m E. 0.000000012m
 39. The positive root of tin the following equation, $4t^2 - 7t - 1 = 0$, correct to 4 places of decimal, is A. 1.0622 B. 10.6225 C. 0.1328 D. 0.3201 E. 2.0132
 40. In a regular polygon of n sides, each interior angle is 144° . Find n. A. 12 B. 11 C. 10 D. 8 E.
 41. A temperature of $20^\circ C$ is the same as A. $36^\circ F$ B. $68^\circ F$ C. $11.1^\circ F$ D. $43.1^\circ F$ E. $25^\circ F$
 42. A guitar string is 75cm long. The wavelength of the fundamental note is A. 75cm B. 150cm C. 37.5cm D. 112.5cm E. 50cm
 43. A man standing between two parallel mirrors in a barber's shop will see the following number of his own image A. Eight B. Two C. Four D. One E. Infinite
 44. Which of the following electromagnetic waves has the shortest wavelength? A. Radio waves B. X-rays C. Infra-red D. Blue light E. Ultraviolet
 45. In an electrolysis experiment, a cathode of mass 5g is found to weigh 5.01g after a current of 5A flows for 5 second. What is the electrochemical equivalent of the deposited substance? A. 0.00004g/c B. 0.00002g/c C. 0.02500g/c D. 0.05000g/c E. 0.00001g/c
 46. The activity of a radioactive substance depends on A. temperature and purity (B) temperature and age (C) purity and age D. age, purity and temperature (E). none of the above
 47. The resistance of an open series circuit is A. zero B. half the normal resistance of the circuit C. double the normal resistance of the circuit D. one E. infinite
 48. The resistance of a 240V, 60 watt electric filament bulb is A. 0.25ohms B. 480ohms C. 60ohms D. 240ohms E. 960ohms
 49. A transformer has 300 turns of wire in the primary coil and 30 turns in the secondary coil. If the input voltage is 100 volts, the output voltage is..... A. 5 volts B. 10 volts C. 15 volts D. 20 volts E. 25 volts.
 50. A 10g mass placed on the pan of a spring balance causes an extension of 5cm. if a 15g mass is placed on the pan of the same spring balance the extension is. A. 3.3cm B. 6.5cm C. 7.5cm D. 1 0.8cm E. 15.0cm

**NNAMDI AZIKIWE UNIVERSITY, AWKA
POST-UTME SCREENING EXERCISE, 2012/2013 ANSWER**

1	B	2	C	3	A	4	A	5	B	6	A	7	A	8	D	9	A	10	D	11	B
12	C	13	B	14	C	15	B	16	E	17	B	18	A	19	D	20	D	21	C	22	B
23	C	24	A	25	D	26	A	27	E	28	A	29	B	30	B	31	D	32	E	33	A
34	C	35	D	36	C	37	E	38	C	39		40	C	41	A	42	C	43	B	44	B
45	B	46	E	47	D	48	E	49	B	50	C										