

Imo State College of Nursing and Midwifery

Entrance Examination

Past Questions and Answers

2017-2024

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Time allowed: 1 hour

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- Do not open your question booklets until you are told to do so.
-
- The examination consists of six sections labelled A to F. All the questions irrespective of the sections carry equal marks.
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- Section A- English language 20 questions
Section B- mathematics 20 questions
Section C- Biology 20 questions Section D-
chemistry 15 questions Section E –
Physics 15 questions Section F – Current
affairs 10 questions
- Answer all questions appropriately
- Use the answer sheet provided
-
- Use HB pencil to shade the correct answer for each question. Ensure that any shading made in error is thoroughly erased.
- Write your **NAME, EXAMINATION NUMBER** and other needed information in the appropriate space with the same number or letter as each digit or letter.
- Any candidate caught cheating in the course of the examination will be duly penalized.
-
- The interview date will be made known to the public as soon as possible.

SECTION A

ENGLIS LANGUAGE

In the following passage the numbered gaps indicate missing words. Against each number in the list below each passage, five choices are offered in columns lettered A to E. for each question choose the word that is the most suitable to fill the numbered gap in the passage.

I made a visit to the University Teaching Hospital the other day. At the (1) department, where accident (2) are treated, the doctors were battling to save the life of a man who had just been knocked down in a road accident. They (3) the injured man thoroughly with the aid of several (4) instruments such as the (5) used in measuring body temperature and the (6) used in listening to the sound of the heart and the lungs. By using (7) several internal parts of the patient's body were photographed. (8) and pain killing injections were given. His bleeding was stopped. The nurses (9) his wounds and he was carried on a (10) to the special care (11) where those under (12) care are kept. The doctor asked the nurse to keep the patient under close (13).

A

B

C

D

E

1.	Mortuary	Psychiatry	Pediatrics	Anatomy	Casualty
2.	Drivers	Victims	Motorists	Convicts	Culprits
3.	Examined	Inspected	Tested	Consulted	Healed
4.	Biology	Laboratory	Scientific	Clinical	Pathological
5.	Barometer	Odometer	Speedometer	Ammeter	Thermometer
6.	Microscope	Heliotrope	Stethoscope	Horoscope	Telescope
7.	Xerox	x-ray	Xylophone	Heat rays	Sun ray
8.	Anti-malaria	Immunization	Pathological	Anti-tetanus	Cerebral
9.	Decorated	Plastered	Rinsed	Bathed	Dressed
10	Stretcher	Trolley	Bed	Coffin	Lift
11	House	Ward	Cell	Compartment	Room

12	Critical	Fatal	Potent	Serious	Intensive
13	Restriction	Diagnosis	Observation	Inspection	confinement

From the words lettered A to E choose the word or group of words that best completes each of the following sentences.

14. The prices of cars have become _____
- a) Painful
 - b) Unbearable
 - c) Stringent
 - d) Harsh
 - e) Exorbitant
15. I had _____ trust in the boy before he woefully disappointed me
- a) Essential
 - b) Flagrant
 - c) Absolute
 - d) Effective
 - e) Fruitful
16. The poor boy was _____ when he stepped on a live wire
- a) Blazed
 - b) Electrified
 - c) Radiated
 - d) Burnt
 - e) Electrocuted
17. The politician ran to another country to seek _____
- a) Refuge
 - b) Safequard
 - c) Retreat
 - d) Safety
 - e) Privacy

18. The governor ordered that the work done by any contractor should be properly _____ so as know the correct amount to pay
- Processed
 - Investigated
 - Accounted
 - Screened
 - Probed
19. The University awarded _____ doctorate degrees to four distinguished member of the community
- Honourable
 - Expensive
 - ceremonious
 - Ceremonial
 - Honorary
20. The students threatened to embark on _____ of lectures if their demands were not met
- Condonation
 - Suspension
 - Rejection
 - Strike
 - Boycott.

SECTION C

BIOLOGY

- The ability of the human eyes to focus both distant and near objects is called?
 - Normal adjustment
 - Visual pathway
 - Reflex blinking
 - Accommodations
- The organ that supplies nutrient to a foetus and also plays a protective role is called _____
 - Umbilical cord
 - Cervix

- c) Placenta
 - d) Uterus
3. The total number of thoracic vertebra in humans is ?
(a) 7 (b) 5 (c) 13 (d) 12
 4. The functional and basic unit of the mammalian kidney is the
 - a) Cortex
 - b) Nephron
 - c) Medulla
 - d) Pyramid
 - 5.odontoid process is a feature of;
 - a) Atlas vertebra
 - b) Thoracic vertebrae
 - c) Sacral vertebrae
 - d) Axis vertebra
 6. What is the blood group of Mr bright if he donate blood anybody irrespective of the person's blood group.
(a) A (b) O (c) AB (d) B
 7. The sense of balancing is a function of which part of the mammalian ear
 - a) Auditory meatus
 - b) Cochlea
 - c) Eardrum
 - d) Semicircular canals
 8. Tapeworm has alimentary tract simply because
 - a) It is a pseudo multicellular organism
 - b) Its body can absorb already digested food from its host
 - c) It has piercing and sucking mouth part
 - d) All of the above
 9. Dental formula
1-3/3; C-1/1; PM-4/4; M-2/3 denotes that of;
 - a) Human
 - b) A snake
 - c) Dog
 - d) Sheep
 10. A disease condition that can be completely associated with the riverine areas is ?
 - a) Onchocerciasis
 - b) Malaria
 - c) Leprosy
 - d) Tuberculosis

11. The liquid portion of any cells called _____

- a) Cytoplasm
- b) Endoplasmic reticulum
- c) Solvent
- d) Isotonic solution

12. Enzymes are:

- I. Proteins
 - II. Need cofactors for their activation
 - III. Specific in their actions
 - IV. Mostly active under high temperature which of the statements above is /are correct
- a) I&IV
 - b) I, II, III
 - c) II, III, & IV
 - d) All are correct

13. The character producing factors in living organisms are;

- a) Genes
- b) Chromosomes
- c) Alleles
- d) Chromatids

14. Magnesium aids the formation of;

- a) Cambium
- b) chlorophyll
- c) ATP
- d) Amino acids

15. Adrenalin is;

- a) A growth hormone
- b) A fight or flight enzyme
- c) Secreted within the testes
- d) A fight or flight hormone
- e) None of the above

16. Ultra-filtration takes place in the renal

- a) Nephron
- b) Cortex

- c) Bowman's capsule
 - d) Henle's loop
 - e) Papillae
17. The deficiency of protein and carbohydrate in the body leads to _____ & _____ respectively
- a) Kwashiorkor & Marasmus
 - b) Marasimus & kwashiorkor
 - c) Beri-Beri & Marasmus
 - d) Marasimus & Beri-Beri
18. Bile is produced in the;
- a) Gall bladder
 - b) Liver
 - c) Pancrease
 - d) Spleen
 - e) Duodenum
19. Secchi disc is used o determine or measure;
- a) Turbidity
 - b) Wind velocity
 - c) Rainfall
 - d) Tides
20. If a tall variety (Tt) of pig is cross breed with a short variety (tt), the ratio of tall to short in their off springs will be?
- a) 1:1
 - b) 1:3
 - c) 3:1
 - d) 2:1

SECTION D

CHEMISTRY

1. Blood cells and plasma are separated by?
- a) Centrifugality
 - b) Distillation
 - c) Electrophoresis
 - d) Centrifugation

- e) Options B and C
2. Which of the following represents the order in which orbitals should be filled.
- $s \rightarrow d \rightarrow f$
 - $s \rightarrow p \rightarrow d$
 - $s \rightarrow p \rightarrow f$
 - $s \rightarrow f \rightarrow d$
 - $f \rightarrow s \rightarrow p \rightarrow d$
3. Chlorine is used in water treatment as _____
- An aerating agent
 - Alaxative
 - A germicide
 - A coagulant
4. _____ and _____ are the metallic ions commonly present
- Al^{3+} and Ca^{2+}
 - Na^{2+} and Mg^{2+}
 - Ca^{2+} and Zn^{2+}
 - Ca^{2+} and Mg^{3+}
 - Cu and Al
5. Gases can be generated intermittently in the laboratory without the application of heat with the aid of a device called
- Scintillation apparatus
 - Liebig's condenser
 - Cold-gas gauze
 - Kipp's apparatus
 - Options C and D
6. I-High melting and boiling points
II- Good conductor of heat and electricity in the molten or aqueous state
- I and III only
 - II and III only
 - I and II only
 - I, II and III
 - II only
7. An example of covalent compound is ?
- NaCl
 - $MgSO_4$

c. C_2H_5OH

- d. CaO
 - e. CaCl₂
8. The pH of 0.1 molar HCl is equivalent to?
- a. -1.0
 - b. 2.0
 - c. +1.0
 - d. -2.0
 - e. -0.1
9. What is the molecular mass of NaNO₃? a) 85.0
- b) 75.0
 - c) 65.0
 - d) 55.0
 - e) 45.0
10. Which of the following is a property of a transition metal? a) Easy malleability and ductility
- b) Dissolves easily in water
 - c) Conducts heat and electricity readily
 - d) Showing of variable oxidation states
 - e) Perfectly forms covalent compounds
11. An element X whose atom contains 11 protons, 11 protons, 11 electrons and 12 neutrons has a mass number of _____
- a) 23
 - b) 22
 - c) 21
 - d) 11
 - e) 12
12. Which of the following is mostly used in the determination of the age of excavated human skeleton
- a) Carbon tracker
 - b) Cosmic Iodine
 - c) Carbon-dating
 - d) Radio-isotopy
 - e) C and D
13. Calculate the oxidation number of phosphorous in Al₂(PO₄)₃

- a) 18
- b) 3
- c) 4
- d) 6
- e) -18

14. Hydrogenation of pentene yields _____

- a) Pentone
- b) Pentyne
- c) Pentane
- d) Pentanol
- e) Pentanel

15. $\Delta G = H - TS$

- I. - ΔG = enthalpy change
- II. - ΔH = Free energy change
- III. - ΔT = Temperature
- IV. - ΔS = entropy change

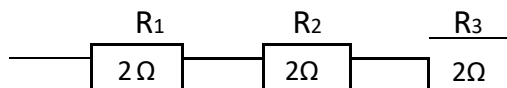
Which of the above statement is / are correct.

- a) III and IV only
- b) I and III only
- c) II and IV only
- d) IV only
- e) All of the above

SECTION E

PHYSICS

1. The diagram below shows the arrangement of three different resistors. Find the total resistance of the resistors



- a) 14 Ohms
 - b) 7/8 Ohms
 - c) 8/7 Ohms
 - d) 1/14 Ohms
2. A typical instrument built by physicists for designers to obtain colour patterns is termed.
- a) Astroscope
 - b) Periscope
 - c) Colouroscope

- d) Kaleidoscope
3. The weight of any object can be easily measured by;
- A beam balance
 - A spring balance
 - Finding the force necessary to give it a certain acceleration
 - None of the above methods.
4. The exact value of 59°F in degree Celsius?
- 15°C
 - 45°C
 - 30°C
 - 60°C
5. A machine gun with a mass of 5kg fires a 50g bullet at a speed of 100m/s. the recoil velocity of the machine gun is?
- 0.5m/sec
 - 1.5 m/sec
 - 1.0 m/sec
 - 4 m/sec
6. An object 3cm high placed on the axis 7cm from a converging lens forms an image 70cm from the lens.
- 30cm
 - 3.0cm
 - 10cm
 - 1.0cm
 - 30mm
7. A 10.0kg car which was initially at rest traveled with an acceleration of 2m/sec², its kinetic energy after 2 seconds was?
- 80.0J
 - 8.0x10³ J
 - 7.5 x 10² J
 - 7.0 x 10² J
8. The anomalous behavior of water occurs between what and what temperature range?
- +4°C to -3°C
 - 4°C to 0°C
 - 100°C to +100°C
 - 100°C to 0°C
9. The total number of images that can be seen by a man standing between two parallel mirrors in a hair-dressing shop is?
- Only two
 - Infinite
 - Just sixteen

- d) Multiple
- e) None of the above

10. Provided an elastic limit is not exceeded, the extension is
- a) Inversely proportional to the load or applied force
 - b) Directly proportional to the load or applied force and temperature
 - c) Simply constant
 - d) Directly proportional to the load or applied force
 - e) Proportional to the sliding scale used.

11. The addition of impurities to semi-conductors to boost their activities is termed.
- a) skimming
 - b) Dopping
 - c) Boosting
 - d) Catalyzing
 - e) None of the above

12. The ability of a body to set another body into vibration but in its own fundamental frequency is termed
- a) Superposition
 - b) Resonance
 - c) Forced vibration
 - d) Interference
 - e) Paraposition

13. An orange fruit 10m above the ground drops from the branch where it was attached.

Calculate its velocity just before it hits the ground. (take $g = 10 \text{ m/s}^2$)

- a) $10 \frac{1}{2} \text{ m/s}$
- b) 10 m/s
- c) 100 m/s
- d) $5\sqrt{2} \text{ m/s}$
- e) $\sqrt{2} \cdot 10$

14. A simple pendulum with period of 2.0 sec has its length doubled its new period is?
- a) 1.00 sec
 - b) 1.41sec
 - c) 0.35 sec
 - d) 2.83 sec
 - e) 4.00 sec

15. All of the following parameters are forced except _____
- a) Weigh
 - b) Upthrust
 - c) Friction
 - d) Tension
 - e) Impulse

SECTION F
CURRENT AFFAIRS

1. Nelson Mandela died on;
th
- a) 5 October 2013
 - b) 5th December 2013
 - c) 7th December 2013
 - d) 7 October 2013
2. 2013 ASSUU strike began on;
- a) June 1, 2013
 - b) July 1, 2013
 - c) January 1, 2013
 - d) June 1, 2013
3. One of the following is an ex-director general of NAFDAC
- a) Dr Joshua Dariye
 - b) Prof. Eytayo Lambo
 - c) Prof. Olikoye Ransom-Kuti
 - d) Dr Dora Akunyili
4. UN implies;
- a) Unity Nursary
 - b) United Nigerians
 - c) United Nations
 - d) United Nurses
5. A citizen of Nigeria is called a Nigerian while that of Niger republic is _____
- a) Nigerien
 - b) Nigger
 - c) Republican
 - d) Nigeriana

6. In the football game, a score of 2 & 3 by any player in any match are called _____ and _____ respectively.

- a) Brace & hat-trick
- b) Hat-trick & brace
- c) Duplet & hat-trick
- d) None of the above

7. The capital city of Abia state is

- a) Umuahia
- b) Umayya
- c) Yola
- d) Owerri
- e) Umuaha

8. NDDC means

- a) Niger Delta Development Commission
- b) Nigeria Dredger Due and Commission
- c) Niger Delta Development Council
- d) Nigeria and De Democratic republic of Congo

9. OPEC

10. NACA

SECOND YEAR

TIME ALLOWED: 1 Hour

- Υ Do not open your question booklets until you are told to do so.
- Υ The examination consists of six sections labeled A to F. all the questions irrespective of the sections carry equal mark.
- Υ Section A- English language 20 questions
- Υ Section B- mathematics 20 questions
- Υ Section C- Biology 20 questions
- Υ Section D- Chemistry 15 questions
- Υ Section E- Physics 15 questions
- Υ Section F- Current Affairs 10 questions
- Υ Answer all questions appropriately
- Υ Use the answer sheet provided
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SECTION A

ENGLISH LANGUAGE

In the passage below, the numbered gaps indicate missing words against each number in the list below the passage, four choices are offered in columns lettered A-D. for each question, choose the word that is the most suitable to fill the numbered gaps in the passage.

PASSAGE:

Science and technology have proved both the heat of the sun and waterfalls as important natural (1) that can be (2) for the advantage of man. While it is possible to exploit the heat of the sun for (3) it is also possible to (4) the force of falling water for electricity.

Man can 'create' the (5) by building a (6) across a fast flowing river. This construction obstructs and therefore (7) the flow of water for a special purpose.

The use of specially designed machines for the control and regulation of the flow of water (8) the required electricity. Before the dam, electricity could only be generated in power (9) by burning (10) or oil.

	A	B	C	D
1.	Form	Ways	Resources	Sources
2.	Exploited	Neglected	Remember	Examined
3.	Water Energy	Solar energy	Heavenly Energy	Hydro Energy
4.	Process	Examine	Manufacture	Harness
5.	Lake	Water fall	Waterstred	Contract
6.	Obstacle	Bridge	Dam	Pillar

7.	Calculates	Facilitates	Stops	Regulation
8.	Generates	Produces	Forces	Forms
9.	Forces	Stations	Generators	Mines
10	Fire	Wood	Coal	Gas

From the options A-E, select a word that is nearly opposite in meaning to the underlined word and that at the same time fills the blank space in the sentence correctly.

11. He proved unreliable in his dealings with the electorate but would want everybody to believe that he was quite _____
- Resistible
 - Resolute
 - Resourceful
 - Responsive
 - Dependable
12. Tolu lost a lot of things in his school days because he was impatient but age and experience have taught him to be at all times _____
- Anxious
 - Patient
 - Careful
 - Diligent
 - Intransigent
13. The story I heard on the radio was interesting but the one Aina Narrated was rather _____
- Monstrous
 - Dull
 - Truthfull
 - Realistic
 - Incredible
14. Although the events in the company showed that he was innocent the management still insisted that he was _____
- Nocent
 - Gullible
 - Guilty
 - Honest

e) Innocuous

15. Although the president was the target of calumny after the election, he now enjoys the _____ of all and sundry
- a) Defamation
 - b) Commendation
 - c) Aspiration
 - d) Condemnation
 - e) Backbiting

From the option A-D choose the appropriate word or word group that best completed each of the following sentences.

16. The leader of the Red Cross team and Chairman of the political party in the state _____ my friend
- a) Are
 - b) Is
 - c) Were
 - d) Have
17. Bread and butter _____ our favorite meal
- a) Were
 - b) Is
 - c) Are
 - d) Is bearing
18. When Musa arrived, Obi as well as the son _____ in the shop
- a) Were
 - b) Is
 - c) Are
 - d) Was
19. In order to succeed in life you _____ very hard.
- a) Must have work
 - b) Must have to work
 - c) Ought must have to work
20. The student said _____
- a) He want
 - b) He wanted
 - c) That he want
 - d) What he wanted

SECTION B

MATHEMATICS

- Express the product of 0.09 in standard form
 - 5.4×10^{-3}
 - 5.4×10^{-2}
 - 5.4×10^{-1}
 - 5.4×10^2
 - 5.4×10^3
- What is the 8th term of the A.P-31,1,.....
 - 13
 - 11
 - 8
 - 11
 - 17
- A sales boy gave a change of N1.15 to a customer instead of N1.25. calculate his percentage error
 - 10%
 - 8.7%
 - 8.0%
 - 2.4%
 - 0.10%
- A fair die is tossed once, what is the probability of having an even number
 - $1/3$
 - $1/6$
 - $1/2$
 - $2/6$
 - $5/6$
- If $\sin \theta = 3/5$, find $\tan \theta$ if $0 < \theta < 90$

- a) $\frac{4}{5}$
- b) $\frac{3}{4}$
- c) $\frac{5}{8}$
- d) $\frac{1}{2}$
- e) $\frac{3}{8}$

6. Evaluate $(27^{\frac{1}{3}})^2$

- a) $4\frac{1}{2}$
- b) 6
- c) 9
- d) 18
- e) 81

7. For what value of y is the expression $(y+2)$ undefined?

$$Y^2-3y-10$$

- a) $Y=0$
- b) $Y=2$
- c) $Y=3$
- d) $Y=5$
- e) $Y=10$

8. Express 0.0000814 in standard form

- a) 8.14×10^5
- b) 8.14×10^{-5}
- c) 814×10
- d) None of the above

9. If the bearing of N from M is 50° , what is the bearing of M from N

- a) 230°
- b) 50°
- c) 40°
- d) -50°
- e) 90°

10. Factorize $3p^2 - 11p + 6$

- a) $(3p-2)(p-3)$
- b) $(2p-2)(p-3)$
- c) $(3p-2)(p+3)$
- d) $(3p+2)(p-3)$

11. e) $(2p-3)(p+2)$
 Simplify $\frac{x^{x+2}}{2^{-2}}$
- a) $2^{x^2-2^x}$
 b) 2^{2x-1-2^x}
 c) 2
 d) 0.

12. Simplify: $\log_{10} 9 - \log_{10} 27$
- a) -3
 b) 0
 c) 3
 d) 9
 e) -9

13. If $2y + a + b = 7$ and $3a - 2b = 3$, by how much is $7a$ greater than $10b$?
- a) 1
 b) 3
 c) 7
 d) 10
 e) 17

14. If the angle of elevation off A B is 30° and $AB = 40\text{m}$, how high is A above the level of B?
- a) 10m
 b) 20m
 c) $20\sqrt{3}\text{m}$
 d) 40m
 e) 50m

15. An arc of a circle of radius 7cm is 14cm long. What angle does the arc subtend at the centre of the circle? (take $\pi = 22/7$)
- a) 25.7°
 b) 44°
 c) 51.43°
 d) Ninety 8°
 e) 114.55°

16. 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
- e)

17. If $3^y=243$, find the value of y . Consider the following data: 8,1,2,9,2,3,5,2,8,9,8,2

- a) 2
- b) 3
- c) 4
- d) 5
- e) 6

18. What is the mode of the above data?

- a) 8
- b) 9
- c) 2
- d) 8 and 2
- e) No answer

19. The median value of the data is ?

- a) 3
- b) 2
- c) 8
- d) 9
- e) 5

20. The range of the data is?

- a) 8
- b) 2
- c) 5
- d) 9
- e) 3

SECTION C

BIOLOGY

1. _____ is the site in a cell where energy is being produced.
 - a) Golgi Apparatus
 - b) Contractile Vacuole
 - c) Mitochondria
 - d) Lysosomes
2. The ability of any organism to maintain constant internal environment is termed.
 - a) Heamostasis
 - b) Dieresis
 - c) Plasmolysis
 - d) Homeostasis
3. Cretinism is a disease condition caused by the deficiency of;
 - a) Insulin
 - b) Glucagon
 - c) Oxytocin
 - d) Thyroxin
4. Akin swam in a river some weeks ago and later discovered that the urine he has been passing since few days ago contained blood. This could be due to?
 - a) Schistosomiasis
 - b) Elephantiasis
 - c) Plasmosium SP
 - d) Enterobiasis
5. A dwarf plant can be stimulated to grow to normal size and height by the application of;
 - a) Prostaglandin
 - b) Ascorbic acid

- c) Gibberelin
 - d) Adrenalin
6. The skin and the hair are usually kept moist and lubricated by the _____
- a) Perfumes and jellies
 - b) Sebum from sebaceous gland
 - c) Sweet from sweat gland
 - d) Erector muscles
7. A collection of similar cells performing the same function is termed?
- a) Cells aggregate
 - b) Organ
 - c) Tissue
 - d) System
8. The left and right lungs have _____ and _____ number of lobe (s) respectively
- a) 2 and 3
 - b) 3 and 2
 - c) 1 and 2
 - d) 2 and 2
9. The longest bone in the body is called _____
- a) Humerus
 - b) Patella
 - c) Femur
 - d) Tibia
10. Sympathetic and parasympathetic are branches of the;
- a) Central Nervous system
 - b) Somatic Nervous System
 - c) Autonomic Nervous System
 - d) All of the above
11. The end products of protein and fat/oil digestion are?
- a) Amino acid and glycerine
 - b) Amino acid, fatty acid and glycerol
 - c) Albumin and fatty acid
 - d) Peptides and glycerol
12. The total number of bones in the skeletal system is _____
- a) 310
 - b) 306
 - c) 206
 - d) 106
13. Deoxygenated blood enters the heart through
- a) Superior and inferior venacavae

- b) Arch of Aorta and pulmonary vein
- c) Jugular vein and inferior vena-cava
- d) None of the above

14. Vitamin B12 is otherwise known as?

- a) Cyanocobalamin
- b) Retinol
- c) Niacin
- d) Thiamine

15. The number of ribs in male and female are _____ and _____ respectively

- a) 12 and
- b) 12 and 12
- c) Nine and nine
- d) and 12

16. In human, fertilization of Ovum occurs at the _____

- a) Ampulla
- b) Ovary
- c) Uterus
- d) Cervix

17. All veins carry deoxygenated blood except _____

- a) Inferior Vena-Cava
- b) Pulmonary Veins
- c) Jugular Vein
- d) Renal Vein

18. Which of the following organs has no known function s) in human

- a) Gallbladder
- b) Pancrease
- c) Appendix
- d) Spleen

19. Blood is produced in the

- a) Thymus gland
- b) Bone marrow
- c) Liver
- d) Intestine

20. Internal respiration implie?

- a) The exchange of gases between the blood and the tissues of the body
- b) The exchange of gases between the lungs and the blood vessels
- c) A and b
- d) None of the above

SECTION D

CHEMISTRY

1. A typical example of shell in chemistry is?

- a) F-shell
- b) K-shell
- c) S-shell
- d) D-shell
- e) Q-shell

2. Alkanes mainly undergo?

- a) Reduction reaction
- b) Addition reaction
- c) Substitution reaction
- d) Hydrogenation reaction
- e) Addition & substitution reaction

3

3. A liquid X of volume 8m has a pressure of 10.0pa. What is the volume of the liquid when the pressure is reduced to 5.0pa?

- a) 16.00m^3
- b) 160.0m^3
- c) 80.0m^2
- d) 8.00m^2
- e) 16.00dm^3

3

4. What is the pH of an acid whose concentration is 0.001 mol/dm^3

- a) 3.00
- b) 1.00
- c) 2.00

- d) -3.00
e) -1.00
5. The hardening of rubber through cross-linkages is termed
- Rubberization
 - Vulcanization
 - Desulphurization
 - Restructurization
 - Hydrogenation
6. The 22nd element in the periodic table is?
- Titanium
 - Scantium
 - Vanadium
 - Chromium
 - Aluminium
7. The "atomic radius" in the periodic table;
- Increases down the grow the groups
 - Increases across the periods
 - Decreases down the group
 - Decreases across the periods
 - Is always unchanged
8. $A+B \rightleftharpoons C+D$
- In the equation above, increase in pressure will cause the equilibrium to shift;
- To the right
 - To the left
 - To neither the left nor the right
 - None of the above
 - All of the above
9. If the mass of an element is denoted by "A" and its molar mass by "B" then its number of mole is equivalent to?
- $n=\frac{A}{B}$
 - $n=\frac{B}{A}$

- c) $n = \frac{A-1}{B}$
- d) $n = \frac{B-1}{A}$
- e) $n+1 = \frac{A}{B}$

10. Element X has a valency of 3 and that of element Y is 2. What is the formula of the compound formed by both X and Y

- a) X_2Y_3
- b) X_3Y_2
- c) X_2Y_3 or X_3Y_2
- d) X_4Y_6
- e) X_6Y_4

11. The product obtained when starch is completely hydrolyzed is?

- a) Coal
- b) Maltose
- c) Fructose
- d) Galactose
- e) Glucose

12. Coal tar, coal gas, coke and Ammoniacal liquor are obtained by;

- a) Crystallization
- b) Filtration
- c) Destructive distillation
- d) Fractional distillation
- e) Evaporation

13. The number of replaceable hydrogen atom s) in an acid is called?

- a) Basicity
- b) Laxicity
- c) Acidity
- d) Conductivity
- e) Relativity

14. I-SO₂

II-H₂O,

III-CaO,

IV-Co₂

Which of the above is/ are acid anhydride s)

- a) I, II & III only
- b) II & IV only
- c) I, II, III & IV

- d) I&IV
- e) II&IV

15. A student obtain his 1st, 2nd and 3rd titre as 25.,26.1 and 26.0 respectively his average titre value is ?
- a) 26.00cm³
 - b) 25.0cm³
 - c) 26.10cm³
 - d) 14.00cm³

SECTION E

PHYSICS

1. The surface area of a thin metallic plate at 20⁰ c is 1.5m² calculate its surface area when it finally cooled to exactly 20⁰ c. (the value for the linear expansivity of the metal is 2.5x10⁻⁵/k)
- a) 1.503m²
 - b) 1.500m²
 - c) 1.48m²
 - d) 1.47m²
 - e) 1.40m²
2. The knowledge of one of the following is used in the management of a fractured bone.
- a) Pulley
 - b) Block and tackle
 - c) Mangnetism
 - d) Optics
3. The atomic and the mass numbers of the element ⁵⁰**A** are _____ and _____ respectively ₂₀
- a) 50 and 20
 - b) 20 and 50
 - c) 20 and 50
 - d) 30 and 20
 - e) 70 and 50
4. The three basic means of heat transfer are _____, _____ and _____
- a) Conduction, convection and radiation
 - b) Conduction, combustion and radiation

- c) Conduction, convection and radioactivity
 d) Conduction, contraction and radioactivity
5. Which of the following is true about any luminous object?
 a) It cannot produce its own light
 b) It can generate its own heat
 c) It can easily produce its own light
 d) All of the above
 e) None of the above
6. The definition of the mechanical advantage of a machine is?
 a) Stress divided by strain
 b) Effort divided by load
 c) Strain divided by effort
 d) Load divided by effort applied
 e) A and D
7. A spring of constant 0.5 N/m is stretched by 8m. what is the value of the force applied?
 a) 4.5N
 b) 3.5N
 c) 2.5N
 d) 4.0N
 e) 1.5N
8. The formula for the decay constant of any radioactive element is given by;
 a) $\lambda = \frac{0.693}{N^0}$
 b) $\lambda = \frac{N^0}{0.693}$
 c) $\lambda = \frac{0.693}{T_{1/2}}$
 d) $\lambda = \frac{T_{1/2}}{0.693}$
9. All of the following are derived units except
 a) Unit of force
 b) Unit of momentum
 c) Unit of impulse
 d) Unit of mass
 e) Unit of capacitance
10. All the following physicist contributed immensely to the field of physics except
 a) Michael Faraday
 b) Henry Becquerel

- c) Marie Curie
 - d) Silvester Cannon
 - e) Isaac Newton
11. X and Y are two parameters in physics, if X is inversely proportional to Y then;
- a) X increases as Y decreases
 - b) X increases as Y increases
 - c) X increases only when Y is kept constant
 - d) X increases wether Y increases or decreases
12. A cone resting on its slant edge is in a state of
- a) Simple equilibrium
 - b) Stable equilibrium
 - c) Unstable equilibrium
 - d) Neutral equilibrium
 - e) Parallel equilibrium
13. Given that the refractive index of material x is 15, then the critical angel at the air –x interface if x is made from glass is?
- a) $\sin^{-1} \frac{2}{3}$
 - b) $\sin^{-1} \frac{1}{2}$
 - c) $\sin^{-1} \frac{3}{4}$
 - d) $\sin^{-1} \frac{8}{9}$
14. A D. celectric comprises of the following parts except
- a) Transformer
 - b) Commutator
 - c) Armature
 - d) Field-magnet
15. The exact form of energy stored in a dry leclanche cell I s ?
- a) Kinetic energy
 - b) Chemical energy
 - c) Heat energy
 - d) Leclanche energy value
 - e) Electro kinetic energy

SECTION F
CURRENT AFFAIRS

1. The most wanted terrorist in Nigeria is;
 - a) Abubakar Rime
 - b) Abubakar Shetima
 - c) Abubakar Ali
 - d) Abubakar Shekau
2. The approved rate for a liter of petrol in Nigeria in 2013 is
 - a) N97
 - b) N92
 - c) N97.50k
 - d) N96,50k
3. Which of the following is not an international organization?
 - a) UNICEF
 - b) UNDP
 - c) UNESCO
 - d) NAFDAC
 - e) WHO
4. _____ is the present UN secretary general
 - a) Goodluck Jonathan
 - b) Kelvin Little
 - c) Henry Jones
 - d) Ban ki-moon
 - e) Julius Ephrame

5. Nigeria won the 2013 edition to the under -17 world cup in:
- a) United state of America
 - b) United Arab Emirate
 - c) United kingdom
 - d) Democratic Republic of Congo
 - e) Philadelphia

Write the full meaning of the following abbreviations;

- 6. NANNM
- 7. PATHS
- 8. ECWA
- 9. SIM
- 10. NCC
- Υ DFID
- Υ MJOS
- Υ ILO
- Υ NAFDAC
- Υ HIV
- Υ MTN
- Υ WHO
- Υ UNICEF
- Υ UNESCO
- Υ UAE

THIRD YEAR

TIME ALLOWED: 1 Hour

- Υ Do not open your question booklets until you are told to do so.
- Υ The examination consists of six sections labeled A to F. all the questions irrespective of the sections carry equal mark.
- Υ Section A- English language 20 questions
- Υ Section B- mathematics 20 questions
- Υ Section C- Biology 20 questions
- Υ Section D- Chemistry 15 questions
- Υ Section E- Physics 15 questions
- Υ Section F- Current Affairs 10 questions
- Υ Answer all questions appropriately
- Υ Use the answer sheet provided
- Υ Use HB pencil to shade the correct answer for each question. Ensure that any shading made in error is thoroughly erased.
- Υ Write your **NAME, EXAMINATION NUMBER** and other needed information in the appropriate spaces on the answer sheet. Shade carefully the space with the same number or letter as each digit or letter.
- Υ Any **candidate caught cheating** in the course of the examination will be duly penalized.
- Υ The **interview date** will be made known to the public as soon as possible.

SECTION A

ENGLISH LANGUAGE

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

1. The kidnappers demanded a _____ of N80,000 before they would release the rich business man.
 - a) Fee
 - b) Reward
 - c) Freelance
 - d) Condition
 - e) Ransom
2. The governor scolded the contractors for the poor _____ of the project
 - a) Vacation
 - b) Termination
 - c) Foundation
 - d) Execution
 - e) Installation
3. His decision to terminate the agreement was _____ as he did not consult the other party
 - a) Unnecessary
 - b) Blased
 - c) Cruel
 - d) Unilateral
 - e) Unequivocal

4. More often than not the law _____ on individual's freedom
- Overrules
 - Oversteps
 - Encroaches
 - Oversteps
 - Ex-terminates
5. Simply because of the hard times, many workers now live in a state of _____ poverty.
- Serious
 - Absolute
 - Abject
 - Affluent
 - Imaginable
6. The threat that he would be expelled from school if he failed his examination again _____ him into seriousness.
- Coaxed
 - Lured
 - Jolted
 - Hypnotized
 - Incensed
7. It is really a _____; the more you look, the less you see,
- Hyperbole
 - Simile
 - Paradox
 - Fact
 - stress
8. The new car is strikingly attractive but I very much doubt its _____
- Hyperbole
 - Durability
 - Longevity
 - Complexity
 - Homogenixity
9. Francis should not have taken offence at collins' seemingly _____ comments.
- Innocuous
 - Notorious
 - Ridiculous
 - Ludicrous
 - Raucous
10. As garuba was first offender, the magistrate merely _____ and discharged him
- Sanctioned

- b) Threatened
- c) Cautioned
- d) Bullied
- e) Sentenced

From the words lettered A to E choose the word that RHYMES with the give word.

11. Corps

- a) Queue
- b) Corpse
- c) Coup
- d) Core

12. Fuel

- a) Quail
- b) Field
- c) Duel
- d) Freak

13. Table

- a) Status
- b) Label
- c) Tablet
- d) Cater

14. Chair

- a) There
- b) Fear
- c) Fiery
- d) Cheer

15. Sour

- a) Pour
- b) Sore
- c) Drawer
- d) Power

From the word lettered A to D choose the one that has the CORRECT STRESS.

16. Circumstances

- a) CIR-cum-stan-ces
- b) Cir-CUM-stan-ces
- c) Cir-cum-STAN-ces
- d) Cir-cum-stan-CES

17. Contribution

- a) CON-tri-bu-tion
- b) Con-TRI-bu-tion
- c) Con-tri-BU-tion
- d) Con-tri-bu-TION

18. Criticism

- a) CRI-ti-ci-sm
- b) cri-ti-Cl-sm
- c) cri-TI-ci-sm
- d) cri-ti-ci-SM

19. Inadequate

- a) in-ad-E-quate
- b) IN-ad-e-quate
- c) in-ad-e-QUATE
- d) in-AD-e-quate

20. manipulate

- a) MA-nip-u-late
- b) ma-NIP-u-late
- c) ma-nip-U-late
- d) ma-nip-u-LATE

SECTION B
MATHEMATICS

1. a chord is 4cm from the centre of a circle of radius 5cm. what is the exact length of the chord?
 - a) 5.4cm
 - b) 4.0cm
 - c) 3.0cm
 - d) 6.0cm

2. Factorize $5b^2 - 11b + 6 = 0$
 - a) $1/5$ and 6
 - b) $5/6$ and 1
 - c) 5 and 6
 - d) $6/5$ and 1

3. The fourth term of an A.P is 65 and its seventh term is 80. What is the sum of its first term a) and common difference d)
 - a) 45
 - b) 55
 - c) 65
 - d) 75

4. The area A) of a square whose radius is 11mm is ?
 - a) 121mm^2
 - b) 22mm^2
 - c) 121cm^2
 - d) 22cm^2

5. Solve $7\sqrt{5} - 3 = 12 + \sqrt{1}$
 - a) $3 - \sqrt{2}$
 - b) $8 + 5\sqrt{1}$

c) $\sqrt{3+1}$
 d) $2\sqrt{3+1}$

6. Express 0.000085 in standard form

- a) Nine.85 x 10⁵
 b) 8.ninety5 x 10⁵
 c) Ninety8.5 x 10⁻⁵
 d) Nine.85 x 10⁻⁵

7. The arithmetic means of 2,8,5,q, 18 and 12 is 10. What is the possible value of q?

- a) 10
 b) 15
 c) 20
 d) 25

8. The distance measured along the great circle is give by;

a) $\frac{\theta \times 2\pi r}{360}$

b) $\frac{\theta \times 2\pi r}{360}$

c) $\frac{\theta \times 2\pi r}{360}$

d) $\frac{\theta \times 2\pi r}{360}$

9. Solve the inequality $4q+20>8$

- 3
 a) $q < 1$
 b) $q > -1$
 c) $q > 1$
 d) $q > 1$

10. which of the following is a factor of $f[x]= 5x^3 +2x^2-6x-1$.

- a) X-1
 b) X-1
 c) X-1
 d) -1

$$\begin{matrix} X \\ 0 & 0 \end{matrix}$$

11. If A [50 N, 62 S] and B [50N, 28W0] are two locations on the earth's surface, calculate the difference in their longitudes.
- a) 50°
 - b) -9°
 - c) -50°
 - d) Nine
12. The locus of a point Q which is equidistant from two points M and N is?
- a) A circle of chord /MN/
 - b) A tangent Q to /MN/
 - c) A straight line perpendicular to Q
 - d) A straight line perpendicular to /MN/
13. What is the probability that a man will not die on his birthday if 365 days equals a year.
- a) $\frac{1}{365}$
 - b) $\frac{364}{365}$
 - c) $\frac{1}{12}$
 - d) $\frac{1}{2}$
14. The sum of the angles at a point is;
- e) Equal to zero
 - f) Is two times the sum of the angles on a straight line
 - g) Equivalent to 1800
 - h) None of the above
15. Solve the simultaneous equations: $X+3y=1$
 $-X+y=3$
- a) 1 and -1
 - b) 1 and -2
 - c) 2 and -2
 - d) 1 and 2

16. A is inversely proportional to the square-root of B. but when is 10, B just 81. What is the relationship between A and B?

a) $A = \frac{90}{\sqrt{B+1}}$

b) $\sqrt{A} = \frac{90}{B}$

c) $A = \frac{90}{\sqrt{B}}$

d) $A = \frac{90}{B}$

17. If S represents the sum of all the interior angles of any polygon, then S equals?

a) $2n-4] 180^0$

a) $4n-2] 90^0$

b) $\frac{2n-4}{n}] 90^0$

c) $[2n-4] 90^0$

18. a rectangle whose dimension is xcm by Ycm has a perimeter of _____

a) $2 [xY]$

b) $4 [x+y]$

c) $2 [x+y]$

d) $[xy]^2$

Nineteen. A straight line drawn from one part of the circumference of a circle through the centre to another part is called?

- a) Chord
- b) Tangent
- c) Parabola
- d) Quadrant
- e) Duaneter

21. Sine, consine and tangent values are all positive in which quadrant?

- a) Forth quadrant
- b) First quadrant
- c) Second quadrant
- d) Third quadrant

SECTION C

BIOLOGY

1. In the human eye, image is usually formed at the _____ and it is usually _____
 - a) Optic nerve and inverted
 - b) Retina and inverted
 - c) Retina and erect
 - d) Lens and erect
 - e) Lens and inverted
2. _____ is often refers to as the master gland in the endocrine system.
 - a) Hypothalamus
 - b) Corpus callosum
 - c) Adrenal gland
 - d) Thalamus
 - e) Pituitary gland
3. The first set of teeth in human are called _____
 - a) Infant dentition
 - b) Primitive dentition
 - c) Involuntary teeth
 - d) Milk or primary teeth
 - e) None of the above
4. I-Ultra filtration II-
 Selective reabsorption
 III-Tubular secretion
 Which of the processes above is/are involved in the urine formation?
 - a) I and II only
 - b) II and III only
 - c) I and III only
 - d) II only

- e) I, II and III
5. Parasites that live and feed inside their hosts are called _____
- a) Tenoparasites
 - b) Ectoparasites
 - c) Holoparasits
 - d) Endoparasites
 - e) Indoparasites
6. The name given to the harmful substances produced by micro-organism are?
- a) Poisons
 - b) Endorphins
 - c) Toxins
 - d) Venonms
 - e) Kinins
7. The three parts of the small intestine of man are _____, _____ and _____ respectively
- a) Ileum, jejunum and appendix
 - b) Duodenum, appendix and ileum
 - c) Duodenum, jejunum and ileum
 - d) Jejunum, appendix and caecum
 - e) Jejunum, duodenum and rumen
8. The right lung has _____ number of lobes?
- a) Two
 - b) Four
 - c) One
 - d) Three
 - e) Half
9. Enzymes are organic catalysts that;
- a) Speed-up the rate of biochemical reactions
 - b) Slow-down the rate of biochemical reactions
 - c) Halt every biochemical reaction
 - d) Maintain equilibrium in any reaction
10. Blood from the legs, abdomen, pelvis, and perineum return to the hart through _____
- a) Abbominal Aorta
 - b) Abdomno-pelvic veins
 - c) Inferior vena-cava
 - d) Superior vena-cave

- e) Hepatic portal vein
11. The outer and the inner parts of the kidney are called _____ and _____ respectively
- a) Medulla & cortex
 - b) Pyramid & medulla
 - c) Cortex and nephron
 - d) Cortex and medulla
 - e) Medulla and nephron
12. The total number of bones in the skeletal system of man is?
- a) 406
 - b) 306
 - c) 206
 - d) 56
13. The cerebrum is found in the;
- a) Mid-brain
 - b) Hindbrain
 - c) Forebrain
 - d) Spinal cord
 - e) Peri-thalamus
14. An Important muscle of respiration is the;
- a) Tricep muscler
 - b) Bicep muscle
 - c) Jugular sport
 - d) Diaphragm
 - e) C and D
15. Which of the following is not a member of the vitamin B family?
- a) Vitamin B₁
 - b) Vitamin B₁₂
 - c) Vitamin B₁₀
 - d) Vitamin B₃
 - e) Vitamin B₆
16. The functional unit of the nervous system is?
- a) Nephron
 - b) Pneumocytes
 - c) Neuron
 - d) hepatocytes
 - e) nerve endings

17. _____ are term the body soldiers
- a) Leucocytes
 - b) Lymphocytes
 - c) Thrombocytes
 - d) Erythrocytes
 - e) Bone marrow
18. Eyes spot is a feature of:
- a) *Euglena viridis*
 - b) *Plasmodium sp*
 - c) *Amoeba proteus*
 - d) *Paramecium caudatum*
 - e) *Volvox colony*
19. Cell was discovered by _____ in the year _____
- a) Robert Hooke, 1665
 - b) Robert Hooke, 1665
 - c) Thomas Hooke, 1866
 - d) James Hooke, 1665
 - e) Albert Hooke, 1865
20. Deep knowledge of biology is important to the study of;
- a) Nursing science
 - b) Medicine and surgery
 - c) Chemical engineering
 - d) Architecture
 - e) Options A and B

SECTION D

CHEMISTRY

1. It was observed that substance X has the ability to lose mass when exposed to air, then X is likely to be _____ salt.
 - a) Efflorescent
 - b) Deliquescent
 - c) Hygroscopic
 - d) Effervescent
 - e) Fluorescent
2. An organic compound used as an aesthetic agent is?
 - a) CH_4
 - b) $\text{C}_6\text{H}_5\text{Cl}$
 - c) CHB_3
 - d) CHCl_3
 - e) CH_3OH
3. Consider the reaction given below;

0

If the reaction was carried out about 27°C & the enthalpy and entropy changes were $+4500\text{ J}$ and $+12\text{ J}$ respectively. Then calculate the Gibb's free energy change

- a) $+800\text{ J}$
 - b) $+9000\text{ J}$
 - c) -800 J
 - d) -9000 J
 - e) $+700\text{ J}$
4. The common substance used in the manufacturing of photographic chemicals is?
 - a) Sodium chloride
 - b) Lead chloride
 - c) Ammonium chloride

- d) Zinc chloride
 - e) Silver chloride
5. What is the total number of carbons in every phenol ring?
- a) 4
 - b) 5
 - c) 6
 - d) 7
 - e) 3
6. The separation technique that suits the petroleum industry is?
- a) Chromatography
 - b) Fractional chrySTALLIZATION
 - c) Centrifugation
 - d) Distillation
 - e) Fractional distillation
7. The number of substitutable hydrogen atom[s] in an acid is called?
- a) Acidity
 - b) Corrosivity
 - c) Basicity
 - d) Activity
 - e) Reactivity
8. A substance that conducts electricity either in liquid or molten state is termed?
- a) Ferrolyte
 - b) Lead accumulator
 - c) Electrode
 - d) Moltar
 - e) Electrolyte
9. The structure of benzene was drawn by _____
- a) Benjamin Kekule
 - b) Thomas martins
 - c) Henry bexquerel
 - d) Graham
 - e) August Kekule
10. A metal that forms a dirty green precipitate when NaOH is added in drops is?
- a) Fe^{3+}
 - b) Al^{3+}
 - c) Pb^{2+}

- d) Fe²⁺
- e) Cu²⁺

11. Consider the reaction; $2\text{NaNO}_3 + \text{H}_2\text{SO}_4 \longrightarrow 2\text{HNO}_3 + \text{Na}_2\text{SO}_4$ it can be concluded that the reaction is a?

- a) Displacement reaction
- b) Combination reaction
- c) Decomposition reaction
- d) Oxidation reaction
- e) Combustion reaction

12. Bronze is an alloy of copper and _____

- a) Lead
- b) Zinc
- c) Tin
- d) Cobalt
- e) Nickel

13. Ammonia is largely produced by;

- a) Contact process
- b) Solvay process
- c) Bosh process
- d) Haber process
- e) Electrolysis

14. The name given to the acid present in all proteins is?

- a) Citric acid
- b) Palmitic acid
- c) Uric acid
- d) Amino acid
- e) Alkanoic acid

15. The pOH of 0.1 molar HCl is equivalent to?

- a) 1.0
- b) 2.0
- c) -1.0
- d) -2.0
- e) 13.0

SECTION E

PHYSICS

1. The ability of any fluid to move up in a narrow capillary tube is termed?
 - a) Capillary refill
 - b) Capillarology
 - c) Capillarity
 - d) Capillarity
 - e) Osmo-capillary
 - f) A and D only
2. It is now a true phenomenon that evaporation causes?
 - a) Regelation
 - b) Cooling
 - c) Tingling
 - d) Staining
 - e) All of the above
3. The inverse of resistivity is called?
 - a) Conductivity
 - b) Impedance
 - c) Relativity
 - d) Elasticity
 - e) Phase angle
4. The velocity of radio waves is 3×10^8 m/s. what is the frequency of the wave if the wave length of the radio waves is just 1.5×10^{-2} m.
 - a) 2.0×10^{-10} Hz
 - b) 2.0×10^6 Hz
 - c) 2.0×10^{10} Hz
 - d) 0.2×10^6 Hz
 - e) 2.0×10^{-6} Hz

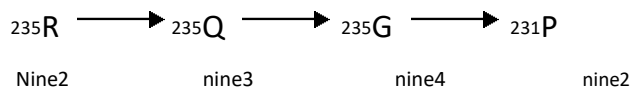
5. Which of the following is true about cathode rays?
 - a) They are fast moving protons
 - b) They can be found in the electromagnetic field
 - c) They are just helium particles
 - d) Streams of electrons
 - e) Options B and D
6. Calculate the period of a wave whose frequency is 0.5Hz
 - a) 0.5sec
 - b) 1.0 sec
 - c) 1.5 sec
 - d) 2.0 sec
 - e) 2.5 sec
7. The ray commonly used in the hospital settings is?
 - a) Alpha rays
 - b) Gamma rays
 - c) Theta rays
 - d) Infrared rays
 - e) X-rays
8. Long sightedness can be easily corrected by using _____
 - a) A convex mirror
 - b) A plane mirror
 - c) A concave lens
 - d) A concave mirror
 - e) A convex lens
9. Three capacitors of capacitance 2uf, 4uf and 8uf are connected in parallel and a p.d of 6v is maintained across each capacitor, the total energy stored is
 - a) $2.54 \times 10^{-4} \text{ J}$
 - b) $6.9 \times 10^{-4} \text{ J}$
 - c) $2.52 \times 10^{-6} \text{ J}$
 - d) $6.9 \times 10^{-6} \text{ J}$
 - e) $2.52 \times 10^4 \text{ J}$
10. A well arranged open series circuit has a resistance which is equivalent to _____
 - a) Double the normal value of the series
 - b) Zero percentage of that of the actual value.

- c) Infinite
- d) One quarter of the actual value expected
- e) None of the above

11. The optimum range of accommodation of a normal human eye is

- a) -25m to 25m
- b) From infinite to about 25m
- c) 0m to 0.25m
- d) 0.25m to infinite
- e) From infinite to infinite

12. Consider the series given below;



The particles emitted are respectively

- a) α, B, Y Particles
- b) B, B, Y Particles
- c) B, B, α Particles
- d) α, α, B Particles

13. which of the following is correct according to Albert Einstein

- a) $E = Mc^2$
- b) $M = Ec^2$
- c) $M = hf^0$
- d) $f = Mc^2$
- e) $E = \underline{Mf}$

14. Calculate the half life of a radio active element whose decay constant is 0.330/sec

- a) 2.10sec
- b) 0.50 sec
- c) -2.10 sec
- d) -0.50 sec
- e) 1.20 sec

15. The process by which electron exit the surface of hot element is called?

- a) Electro-ejection
- b) Hot-targeting
- c) Illumination
- d) Thermionic emission

e) Radicalization

SECTION F

CURRENT AFFAIRS

1. A US drone strike in northwest Pakistan killed al-Qaida's second in-command _____?
 - a) Ayman al-zawahiri
 - b) Abu yahya al-libi
 - c) Hasan Qayid
 - d) Osama Bin Laden
2. The largest dam in Africa is _____ located in _____
 - a) Akosombo, Cotonou
 - b) Ero, Nigeria
 - c) Aquarua, Warri
 - d) Akomombo, Ghana
3. MBBS is to medicine and surgery as _____ is to nursing science
 - a) BSC
 - b) BRN
 - c) LLB
 - d) BNSC
 - e)
4. The richest man in Africa in the year 2012/2013 ranking is?
 - a) Bill gate
 - b) Obama
 - c) Otedola
 - d) Dangote
5. The tallest building in Oyo state is ?
 - a) Alafin's palace

- b) Adedibu's plaza
 - c) Cocoa house
 - d) New governor's office
6. The following are the qualities of a good nurse except
- a) Neatness
 - b) Punctuality
 - c) Arrogancy
 - d) Thruthfulness
7. The first federal capital of Nigeria was
- a) Calabar
 - b) Ibadan
 - c) Jos
 - d) Lagos
8. The total number of the local governments Ekiti State is _____
- a) 14
 - b) 18
 - c) 16
 - d) 12
9. The approved number of years for any political holder in Nigeria is?
- a) 8 years for simple term
 - b) 4 years for single term
 - c) 6 years for single term
 - d) 2 years for single term
10. In recent times, Nigeria changed from military rule to civilian rule in the year _____
- a) 1nine60
 - b) 1nine84
 - c) 1ninten ninety-nine
 - d) 2000

FOURTH YEAR

Time Allowed: 1 Hour

- Υ Do not open your question booklets until you are told to do so.
- Υ The examination consists of six sections labeled A to F. all the questions irrespective of the sections carry equal mark.
- Υ Section A- English language 20 questions
- Υ Section B- mathematics 20 questions
- Υ Section C- Biology 20 questions
- Υ Section D- Chemistry 15 questions
- Υ Section E- Physics 15 questions
- Υ Section F- Current Affairs 10 questions
- Υ Answer all questions appropriately
- Υ Use the answer sheet provided
- Υ Use HB pencil to shade the correct answer for each question. Ensure that any shading made in error is thoroughly erased.
- Υ Write your **NAME, EXAMINATION NUMBER** and other needed information in the appropriate spaces on the answer sheet. Shade carefully the space with the same number or letter as each digit or letter.
- Υ Any **candidate caught cheating** in the course of the examination will be duly penalized.
- Υ The **interview date** will be made known to the public as soon as possible.

SECTION A

ENGLISH LANGUAGE

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

PASSAGE

You would think that the common cold should be easy enough to study. But it is not so easy as it looks. Colds often seem to spread from one person to another, so it is often assumed that the cold must be infectious, but there are some puzzling observations which do not fit in with this theory. An investigator in Holland examined some eight thousand volunteers from different areas and came to the conclusion that in each group of thousand volunteers from different areas, the colds all appeared at the same time-transfer of infection from case to case, could not account for that. Yet at the common cold research unit in Salisbury, the infection theory has been tested out, two series of about two hundred people each were inoculated, one with salt water and the other with secretions from known cold victims. Only one of the salt-water group got a cold, compared with seventy-three in the other group.

In the British medical journal the other day, there was a report of a meeting, "the common cold-fact and Fancy" at which one of the speakers reported a study of colds made in Cirencester over the last five years. Three hundred and fifty volunteer had kept dairy records of their colds and on an average each had seven every year with annual morbidity of seventy days. So nearly one fifth of our lives is spent in more or less misery, coughing and sneezing, some widely held beliefs about the common cold have turned out not to be true. It seems that old people are just liable to colds as the young. Sailors in isolated weather ship have just as many colds while on board and not in contact with the outside world as when on shore. It is a truism that common illnesses pose more problems than the rare, the rare disease is but

comparism much easier to handle. There are not so many cases and all of them have been intensively studied. Some have read up all the literature about the disease and published a digest of it. There will be more facts and fewer fancies.

Questions:

1. Which of the following statements can be implied from the passage?
 - a) People catch more colds in winter
 - b) The origin of colds is inconclusive
 - c) People catch more colds in warm weather
 - d) People catch colds equally in warm and cold weather
2. A rare disease can be easily death with than the common cold because
 - a) Medical experts are fed-up with the rampant cases of common colds
 - b) People easily develop resistance to the common colds
 - c) Adequate research exists to uncover facts about such rare diseases
 - d) Common colds are easily not in the province of the orthodox medical experts.
3. According to the writer, some widely held beliefs about the common colds are:
 - a) Inevitable
 - b) Irreconcilable
 - c) Fallacious
 - d) Societal
4. From the information in the passage, there is evidence;
 - a) Against the theory that the common cold is infectious
 - b) For the theory that the common cold is indeed infectious
 - c) That old people are immune against common cold
 - d) That medical reports are silent on facts about common colds
5. The Cirencester volunteers kept a record of their colds through;
 - a) The British medical journal
 - b) Morbidity rates
 - c) Temperature recordings

d) Personal diaries.

SECTION B

Select a word from the options A-E that is nearest in meaning to the underlined word and a the same tie fills te blank space in the sentence correctly

6. The dissidents held several CLANDESTINE meetings before the attack.
 - a) Secret Ticket Office
 - b) Important
 - c) Impromptu
 - d) Exclusive
7. The principal warned the final year students about the implications of PROCRASTINATION
 - a) Haste
 - b) Delay
 - c) Protesting
 - d) Rioting
8. The guest speaker was described a man of very ALLURING personality
 - a) Tempestuous
 - b) Mercurial
 - c) Voluble
 - d) Intricate
9. The professor showed much ERUDITION in the lecture he delivered
 - a) Quotation
 - b) Learning
 - c) Ostentation
 - d) Acclamation
 - e) Tautology

10. The evidence of the witness CORROBORATED that of the accused,
- a) Contradicted
 - b) Prosecuted
 - c) Confirmed
 - d) Sentenced
 - e) Suspended

SECTION C

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

11. The _____ of all the states in the federation are having a meeting at Abuja
- a) Attorney-generals
 - b) Attorney- generals
 - c) Attorney- generals
 - d) Attorney- generals
12. Toyin's fever was so acute that she _____ an injection
- a) Had to have
 - b) Had to had
 - c) Must have
 - d) Ought to have
13. The press must cater for the needs of the _____ public
- a) Readers
 - b) Readable
 - c) Reading
 - d) Reader
14. People are always afraid to visit Mr Ade because he is _____
- a) An army
 - b) A soldier
 - c) An army man
 - d) A military

From options A-E select a word that is nearly opposite in meaning to the underlined word and at the same time fills the blank space in the sentence correctly.

15. People enjoy stories with _____ settings rather than those with FAR-FETCHED background
- a) Practical
 - b) Realistic
 - c) Artificial
 - d) Undefined
16. I thought that the comments made by the secretary were INNOCUOUS but the chairman considered them _____
- a) Polite
 - b) Inappropriate
 - c) Antagonistic
 - d) Unnecessary
 - e) Harmful
17. People who are normally _____ oftenturn to be DAUNTLESS heroes inthe face of red anger
- a) Unsteadily
 - b) Colourless
 - c) Cowardly
 - d) Bashful
 - e) Unfriendly
18. The principal announced that the cleaning of the school garden would be VOLUNTARY and not _____
- a) Obligatory
 - b) Deliberate
 - c) Essential
 - d) Impromptu
 - e) Increased
19. On hearing that one of her colleagues had been promoted over her head, many felt a great deal of RESENTMENT but derived some _____ from the remarks made by her boss.
- a) Pleasure
 - b) Compensation

- c) Indebtedness
- d) Superiority

20. A teacher's job can often be very TAXING but sometimes it can be _____

- a) Exasperating
- b) Well paid
- c) Inspiring
- d) Boring
- e) Easy

SECTION B

MATHEMATICS

1. Which of the following bearing is equivalent to $S50^{\circ}W$?

- a) 040°
- b) 130°
- c) 220°
- d) 230°

2. Given that $\log_4^a = -3$, what is the value of a?

a) $\frac{1}{81}$

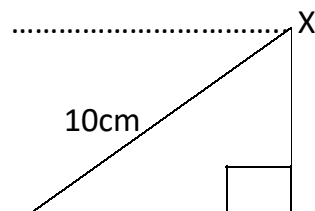
b) $\frac{1}{64}$

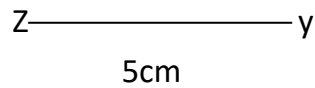
c) 64

d) 81

3. In the diagram below xy is a vertical pole and zy is the horizontal.

Given that $xz = 10\text{cm}$ and $yz = 5\text{cm}$, calculate the angle of depression of z from x





- a) 63°
 - b) 60°
 - c) 45°
 - d) 27°
- [1+y]

4. What is the value of y if $27^{\circ} = \text{nine}$

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

5. If $104n = 68$, find the value of n.

- a) 5
- b) 7
- c) 8
- d) Nine

6. If the interior angles of a hexagon are 107° , 150° , ninety-five, $[2x - 15]^{\circ}$ and 123° , find x.

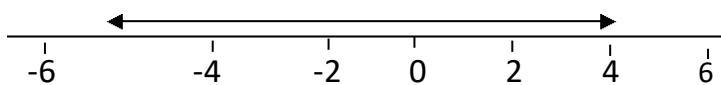
- a) $57\frac{1}{2}$
- b) 65
- c) 106

- d) 120

7. If y is inversely proportional to the square root of x and $x = 16$ when $y = 2$, then find x when $y = 24$

- a) $1/9$
- b) $1/6$
- c) $1/3$
- d) $2/3$

8. The number line below represents;



- a) $-6 < y < 4$
- b) $-6 < y < 4$
- c) $-6 < y < 4$
- d) $-6 < y < 4$

9. Evaluate $y^2 + y - 2$ when

$$Y=1$$

$$2y + y - 3$$

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

10. All of the following are quadratic equations except;

- a) $Y = x^2 + 3x$
- b) $Y = 4[x+2]^2$
- c) $Y = 8x - 5$
- d) $Y = x[x+1]$

11. The formula 2^{2n-1}

12

- a) 11^{th} denotes the nth term of a sequence. Which term of the sequence is 2
- b) 6
- c) 10^{th}
- d) 8

12. The height of a right circular cone is 4cm. the radius of its base is 3cm. find its curved surface are

- a) $9\pi\text{cm}^2$
- b) $15\pi\text{cm}^2$
- c) $16\pi\text{cm}^2$
- d) $20\pi\text{cm}^2$

13. A number is selected at random from the set $\{18, 1, 20, \dots, 28, 29\}$. Find the probability that the number is a prime

- a) 1/4
- b) 1/8
- c) 1/2
- d) 3/4

14. Simplify $5\frac{1}{4} \div [1\frac{2}{3} - 1]$

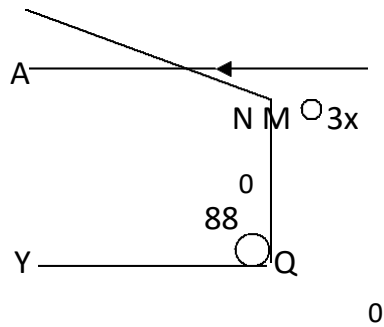
- a) $1\frac{3}{4}$
- b) $3\frac{1}{2}$
- c) $4\frac{1}{2}$

-

2

- d) $\frac{81}{2}$

15.



In the diagram above, $\frac{AN}{YQ}$ and $\frac{MQ}{Y} = 88$. What is the value of x .

- a) Ninety-two
- b) 680
- c) 670
- d) 230

16. Solve $\sqrt{12 + 10\sqrt{3}} - \frac{6}{\sqrt{3}}$

- a) $7\sqrt{3}$
- b) $10\sqrt{3}$
- c) $14\sqrt{3}$
- d) $18\sqrt{3}$

17. The logarithm of any number or alphabet to the base of itself equals?

- a) Zero
- b) Minus one
- c) The square of the number or alphabet
- d) One

18. The identity $\tan^2 \theta + \cos^2 \theta$ equals

- a) Minus half
- b) Plus one

- c) $\cot \theta$
- d) All of the above

19. A prime number is any number that;

- a) Can only be divided by one and itself
- b) Can be divided by 2
- c) Cannot be divided by any other number
- d) Takes any value

20. Find the value of n which $\frac{1}{2n^2-13n+15}$ is not defined

$$2n^2-13n+15$$

- a) 5 or $\frac{3}{2}$
- b) 1 or $\frac{15}{13}$
- c) 2 or 15
- d) 13 or 15

SECTION C

BIOLOGY

1. Which of these is the terminal portion of the alimentary canal of a mammal
 - a) Duodenum
 - b) Oesomosis
 - c) Rectum
 - d) Appendix
2. The movement of molecules from a region of higher concentration to region of lower concentration until they are evenly distributed is?
 - a) Osmosis
 - b) Transpiration
 - c) Diffusion
 - d) Translocation
3. Malaria parasite is spread by;
 - a) Culex mosquito
 - b) Male anopheles mosquito
 - c) Female anopheles mosquito
 - d) Aedes mosquito
4. Blood clotting is initiated by:
 - a) Platelets
 - b) Leucocytes
 - c) Erythrocytes
 - d) Haemoglobin
5. A site of respiration within a cell where energy is produced from simple sugar is the
 - a) Chromosome
 - b) Nucleus

- c) Mitochondria
 - d) Cytoplasm
6. Germination which results in the cotyledons being brought above the ground is called
 - a) Epicotyls
 - b) Epigeal
 - c) Episperm
 - d) Epiphytal
 7. All of these are caused by bacteria except
 - a) Typhoid
 - b) Oncerchiasis
 - c) Gonorrhoea
 - d) Tuberculosis
 - e) Cholera
 8. The function of clitellum in the earthworm is to
 - a) Secrete concho
 - b) Prevent desiccation
 - c) Aid digestion
 - d) Aid locomotion
 9. The part of your brain that is giving you answers to all these question is;
 - a) Cerebellum
 - b) Pons
 - c) Corpus callosum
 - d) Cerebrum
 - e) Medulla oblongata
 10. The vitamin which is important in the formation of the retina pigment is
 - a) Retinol
 - b) Cyanocobalamin
 - c) Riboflavin
 - d) Thiamine
 - e) Pyridoxine
 11. Fatigue of leg muscles may occur after riding many kilometers on a bicycle because of
 - a) Excess protein
 - b) Insufficient O₂
 - c) Insufficient Glucose
 - d) None of the above
 12. I cells II tissues III organs IV systems. Which of these sequences is correct.
 - a) II → IV → I → III
 - b) I → II → III → IV
 - c) IV → III → II → I
 - d) I → III → II → IV

13. In the respiratory system of mammals, gaseous exchange occurs at the;
- Lungs
 - Alveoli
 - Bronchus
 - Bronchiole
 - Trachea
14. During cell division, the two strands of chromosomes are joined at a point called
- Aster
 - Centromere
 - Spindle
 - Chromatid
15. The presence of two alleles of the same type in the genotype of an organism implies that the organism is
- Homozygous
 - Heterozygous
 - Homologous
 - Heterologous
16. _____ attaches a bone to a muscle
- Ligament
 - Tendon
 - Cartilage
 - Sutures
17. An example of organ that functions as endocrine and also secretes digestive juices is
- Liver
 - Gallbladder
 - Pancreas
 - Spleen
 - Gizzard
18. An example of some harmful substance into the environment is termed
- Degradation
 - Conflagration
 - Pollution
 - Pollination
19. The element common to protein, carbohydrate and lipid is
- Nitrogen
 - Hydrogen
 - Phosphorus
 - Calcium
 - Sulphur

20. Sting-cells are normally found in;

- a) Tapeworm
- b) Paramecium
- c) Hydra
- d) Flatworm
- e) Guineeworm

SECTION D

CHEMISTRY

1. Which of the following is not an orbital?

- a) f-orbital
- b) k-orbital
- c) p- orbital
- d) d- orbital
- e) s- orbital

2. which of the following halides is used in photography?

- a) Silver chloride
- b) Ammonium iodide
- c) Sodium bromide
- d) Silver bromide
- e) None of the above

3. What is the oxidation number of Q in CaQO_3 ?

- a) +4
- b) -4
- c) -2
- d) +2
- e) -3

4. A gas that turns lime water milky is?

- a) Carbon monoxide
- b) Calcium oxide
- c) Carbon [iv] oxide
- d) Sulphur [iv] oxide
- e) Ammonia

5. Pyrogallol is used to absorb _____

- a) Oxygen gas

- b) Nitrogen gas
- c) Oxygen vapour
- d) Water vapour
- e) None of the above

6. For an element to have a stable electronic configuration, it must conform to;

- a) Octet or duplet rule
- b) Hybridization principles
- c) Hund's rule
- d) A and C
- e) All of the above

7. Calculate the basicity of H_3PO_4 .

- a) 3
- b) 4
- c) 2
- d) 1
- e) -4

8. The addition of oxygen to any element is an example of?

- a) Redox reaction
- b) Oxidation reaction
- c) Reduction reaction
- d) None of the above

9. If the molar mass of an acid is 40.0g/mol and its concentration in grammes per dm^3 is 200.0, find its concentration in mol/ dm^3

- a) 5.00mol/ dm^3
- b) 0.50mol/d
- c) 0.005 mol/d³
- d) 50.0 mol/d³
- e) 500 mol/d

d)

10. The general formula for the Alkanes is?

- a) $C_nH_{2n+1}COOH$
- b) C_nH_{2n+2}
- c) C_nH_{2n}
- d) $C_{n+1}H_n$
- e) $C_{2n}H_{4n}$

11. With respect to Graham's law, the rate of diffusion of any gas is?

- a) Proportional to the square of its density
- b) Inversely proportional to the cube-root of its density
- c) Partly constant
- d) Directly proportional to the square-root of its density
- e) Inversely proportional to the square-root of its density

12. $CH_3COOH + C_2H_5OH \xrightarrow{\hspace{2cm}} CH_3COOC_2H_5 + H_2O$

The above reaction is an example of?

- a) Saponification reaction
- b) Rehydration reaction
- c) Rectification reaction
- d) Esterification reaction
- e) None of the above

13. Which of these ions usually produce blue precipitate when aqueous NaOH is added in drops

- a) Cu^{2+}
- b) Ca
- c) Cu^{2+}
- d) Zn^{2+}
- e) Fe

14. A group of atoms that possess an electric charge is called?

- a) Valency
- b) Complex ions
- c) Radicals
- d) Carbonic
- e) Ion exchanger

15. In the periodic table, group one elements are called

- a) Alkaline metals
- b) Alkali metals
- c) Alkaline noble metals
- d) Noble metals
- e) Alkali transitional metals

SECTION E

PHYSICS

1. The force [F] in newton requires to make an object M of mass Q, travelling with velocity [k] turns circle of radius P is?

a) $F = \frac{QK^2}{P}$

b) $F = \frac{KQ^2}{P}$

c) $\frac{PK^2}{Q}$

d) $\frac{Kp^2}{Q}$

2. Mercury is a better thermometric fluid than water because I-it needs no colouring II-its density is many times greater than that of water III- its does not wet glass

IV- it has a high vapour pressure

V- it has a high boiling point

Which of the statements above are correct?

a) I and II only

b) I, II and III only

c) III and IV only

d) IV and V only

e) III, IV and V only

3. Which of the following is true of an electrical charges?

a) Positive charge means deficit of electrons

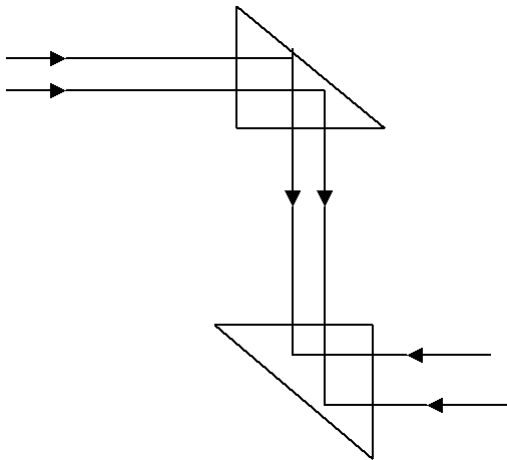
b) Negative charge means excess of electrons

c) Electric current means movement of electrons

d) All of the above [A,B or C]

e) A and B only

4. The figure below shows the prism arrangement in a _____



- a) Projector
- b) Kaleidoscope
- c) Periscope
- d) Gyroscope
- e) Microscope

5. The fundamental particles that can be emitted by any radioactive element are;

- a) α - particles and γ - particles
- b) α - particles, γ - rays, X-rays and β -rays
- c) α - particles, β -rays and γ - rays
- d) α - particles, β – particles

6. in sunlight a blue flower looks blue because we see the flower by the light it _____

- a) refracts
- b) reflects
- c) deflects
- d) disperses
- e) absorbs

7. Which of the following rays is mostly used in the hospital settings?

- a) γ - ray
 - b) X-rays
 - c) Oxygen- rays
 - d) β -rays
 - e) all of the above
8. One of the following expresses the principle of transmissibility of pressure in a fluid at rest in directions
- a) Pascal's law
 - b) Newton's law
 - c) Charles' law
 - d) Principle of floatation
 - e) Archimedes principle
9. What is the resistance of a 240v, 60W electric filament bulb.
- a) 0.25Ω
 - b) 480Ω
 - c) 60Ω
 - d) 240Ω
 - e) 960Ω
10. If a cell supplies a current of 0.5A when its E.M.F is 2v and internal resistance is 10Ω calculate its external resistance.
- a) 0.5 Ohms
 - b) 1 Ohms
 - c) 2 Ohms
 - d) 2.5 Ohms
 - e) 3 Ohms
11. A scalar quantity has;
- a) Magnitude and direction
 - b) Magnitude only
 - c) Direction only
 - d) All of the above
 - e) None of the above
12. The velocity ratio of an incline plane whose angles is A is?
- a) $VR = \frac{1}{\sin A}$

- b) $V.R = \frac{1}{\tan A}$
- c) $V.R = \frac{1}{\cos A}$
- d) $V.R = \cot A$

13. Which of the following units is equivalent to kgm/s

- a) N/S
- b) Nms
- c) NS
- d) J/s

14. The wavelength of ultraviolet radiation is 400m. if the speed of light in air is exactly 3×10^8 m/s, then the frequency of the ultraviolet radiation is?

- a) 1.3×10^{12} HZ
- b) 7.5×10^5 HZ
- c) 1.2×10^{11} HZ
- d) 7.5×10^{14} HZ

15. The vacuum in a thermo flask helps to reduce heat loss by?

- a) Conduction, convection and radiation
- b) Radiation only
- c) Convection and radiation
- d) Conduction and radiation
- e) Conduction and convection

SECTION F
CURRENT AFFAIRS

1. The total number of local governments in Nigeria
 - a) 712
 - b) 774
 - c) 513
 - d) 773
2. _____ introduced the National Youth Service Corps [NYSC] in _____
 - a) Dr Nnamdi Azikwe nineteen-sev nty
 - b) General Yakubu Gowon nin teen, seventy-three
 - c) General Olusegun Obansanjo nineteen, seventy-six
 - d) Alhaji Shehu Shagari nineteen, seventy-nine
3. The mother of modern nursing is _____
 - a) Florence Nightingale
 - b) Princess Diana
 - c) Funmilayo Kuti
 - d) Florence Shaw
4. A Nigeria whose image is printed on twenty naira note is
 - a) Alfa Murtala Muhammed
 - b) Gen. Murtala Abubakar
 - c) Hon. Murtala Ahmed
 - d) Gen. Murtal Muhammed
5. State of emergency was declared by president Goodluck Jonathan in which states
 - a) Borno, yobe and Nasarawa
 - b) Borno, Yobe and Adamawa
 - c) Borno, Yobe and Uyo
 - d) Borno, Yobe and Abuja
6. A terrorist attack was carried in USA on the;

- a) 11th of September, 2001
 - b) 25th of November, 2001
 - c) 18th December 2001
 - d) 2th of October 2001
7. This bomb blast was later confirmed as a terrorist's attack sponsored by Saudi-born Arab terrorist called
- a) Osama bin Laden
 - b) Yasser Arafat
 - c) Osama Bin Laden
 - d) Abubakar Shekau
8. AIDS a scourge of the modern day, can best be avoided through;
- a) Avoidance of casual sex
 - b) Avoidance of sharing of injection needles
 - c) The use of condoms
 - d) Avoidance of multiple sexual partners
 - e) All of the above
9. The world's environmental day is observed annually on _____
- a) 5th July
 - b) 6th July
 - c) 7th August
 - d) 8th September
 - e) None of the above
10. _____ issues license to nurses in Nigeria
- a) NANNM
 - b) nursing council of Nigeria
 - c) Nigeria labour congress
 - d) ASUU

FIFTY YEAR

Time Allowed: 1 Hour

- Υ **Do not** open your question booklets until you are told to do so.
- Υ The examination consists of six sections labeled A to F. all the questions irrespective of the sections carry equal mark.
- Υ Section A- English language 20 questions
- Υ Section B- mathematics 20 questions
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SECTION A

ENGLISH LANGUAGE

Read the passage below carefully and answer the question that follow.

It is possible to have a glimpse of life after death. Man has always believed in an after life, but only today do we have scientific reports of people who seem to have experienced the sensation of dying but lived to tell about it. Ongoing research is documenting hundreds of cases each year of the near-death experience [NDE] and scientists think they are finding a clearly identifiable pattern: usually a man dying and, as he reaches the point of greatest physical distress he hears himself pronounced dead by his doctor. He begins to hear an uncomfortable noise, a loud ringing or buzzing and at the same time feels himself moving very rapidly through a long dark tunnel. After this he suddenly finds himself outside of his own physical body, but still in the immediate physical environment and he sees his own body from a distance as though he is a spectator. He watches the resuscitation attempt from his unusual vantage point and is in a state of emotional upheaval.

After a while, he collects himself and becomes accustomed to his odd condition. He notices that he still had a "body", but one of a very different nature and with very different powers from the physical body he has left behind. Soon after, things begin to happen. Others come to meet and to help him.

He glimpses the spirits of relatives and friends who have already died, and a loving, warm spirit of a kind he had never encountered before "a being of light" - appears before him. This being asks him a question, nonverbally - to make him evaluate his life - and helps him along by showing him a panoramic instantaneous playback of the major events of his life. Then he finds that he must go back to the earth that the time for his death has not yet come. At this point he resists, for by now he is taken up with his experiences in the afterlife and does not want to return. He is overwhelmed by intense feelings of joy, love and peace. Despite his attitude, though, he somehow reunites with his physical body and lives

[Adapted from moody, R.A [1975] life after life]

1. The NDE man appears to be a spectator in the flurry of activities around him because
 - a) His new "body" would not allow him to participate
 - b) He is moving rapidly through a long dark tunnel
 - c) He can only watch as the events unfold
 - d) He is now a dead man
2. According to the passage, scientific evidence has made it possible
 - a) To make conjectures about what happens after death
 - b) To know a little about what happens in the world of the dead
 - c) For one to experience the sensation of dying and living again
 - d) For the dead to return and tell their experience
3. The expression as "he reaches the point to greatest physical distress", as used in the passage means when
 - a) The man's system finally collapses
 - b) The sick man finally stops breathing
 - c) His doctor is ready to pronounce him dead
 - d) His condition seems to get worse
4. A suitable title for the passage is
 - a) A glimpse into the world of the dead
 - b) Visions of an afterlife
 - c) Research into the lives of the dead
 - d) The sensation of death and the afterlife
5. That the man shown "a panoramic playback of the major events of his life" suggests that
 - a) He needs to be entertained to take his mind away from the noise around him
 - b) He needs to see the difference between his past life and his new life
 - c) There are video machines in the world beyond
 - d) He was to assess his deeds in life

In each of the questions 6 to 15, fill each gap with the most appropriate option from the list provided

6. The man declared his intention from the _____
- Outset
 - Inset
 - Onset
 - Offset
7. The team manager told us that the race could only be won by the _____
- Flat-footed
 - Bare-footed
 - Swift-footed
 - Fore-footed
8. The governor rejected the bill and withheld its _____
- Accent
 - Assent
 - Access
 - Ascent
9. The new school is not provided with _____ for science practical
- Enough equipment
 - Equipment
 - An equipment
 - Enough equipments
10. Much as I would love to visit him, I'm afraid _____
- I won't
 - I can't
 - I can't be able
 - Of visiting him
11. Ilesa witnessed the largest _____ of writers at any convention in recent times
- Turn-around
 - Turnover
 - Turn-out
 - Turn-on
12. The warring factions need words of _____
- Advise
 - Adverse
 - Advices
 - Advice
13. The politicians were _____ by the press
- Marooned
 - Ridiculed
 - Eclipsed

- d) Ostracized
14. There are many _____ to her personality
- a) Moods
 - b) Styles
 - c) Facets
 - d) Faces
15. There are several _____ in the farmyard
- a) Sheep
 - b) Ewe
 - c) Lamb
 - d) Goat

In Questions 16 to 20, choose the option nearest in meaning to the underlined.

16. The story has to be taken with a grain of salt. This means that
- a) You need some salt to listen to the story
 - b) There is no salt in the story
 - c) The story is questionable
 - d) The story is true
 - e) You have too much salt in the story
17. It is usually hard to change the course of action when one crosses the rubicon. The underlined expressions as used in the sentence, means to
- a) Pass through a place called rubicon
 - b) Cross a river called rubicon
 - c) Cross a bride called rubicon
 - d) Pass a special test
 - e) Be irrevocably committed.
18. The salesman tried to pull the wool over my eyes. This implies that the salesman tried to
- a) Force me to buy his goods
 - b) Offer me cotton wool
 - c) Make me buy his wool
 - d) Dupe me
 - e) Cover my eyes with wool
19. Ijoma counted her chickens before they were hatched. This means that Ijeoma
- a) Regarded each egg as a chicken
 - b) Hatched the eggs prematurely
 - c) Assumed that her expectations had already been realized
 - d) Protected her eggs from breaking
 - e) Insured the eggs
20. Sola has resigned his job with the Textile mills. He doesn't seem to worry about getting another job. His plans are still quite in the air. This means

- a) Airmailed
- b) Air-tight
- c) Uncertain
- d) Certain
- e) Air-borne

SECTION B

MATEMATICS

1. Given that $\log_a b = c$, express b in terms of a and c
 - a) $b = a + c$
 - b) $b = a/c$
 - c) $b = c$
 - d) $b = a^c$
 - e) $a = b$

2. simplify: $[1]^{-1} - 1 / 2^4$
 - a) $1/8$
 - b) $1/4$
 - c) 2
 - d) 4
 - e) 8

3. Given that $\sin A = \frac{1}{2}$ and $\cos A = \frac{\sqrt{3}}{2}$, find the value of A
 - a) 30°
 - b) 60°
 - c) $Ninety^\circ$
 - d) 120°
 - e) 150°

The scores of 10 students in a test are: 8,4,5,11,nine,8,6,5,8 and 6. Use this data to answer questions 4,5 and 6

4. What is the median score
 - a) 10

- b) Nine
 - c) 8.5
 - d) 8
 - e) 7
5. Find the positive difference between the modal score and the range of the scores
- a) 1
 - b) 2
 - c) 3
 - d) 4
 - e) 5
6. If 2 is added to every score in the distribution, then the new mean is?
- a) 7
 - b) Nine
 - c) 10
 - d) 11
 - e) 13
7. In a class of 33 students, 18 play football, 1 play basket ball and 7 play both games. How many students play none of the two games?
- a) 3
 - b) 8
 - c) 10
 - d) 5
8. Give that $\text{Log}_a^{16} - \text{Log}_a^8 = 1$. Find a
- a) 4
 - b) 2
 - c) 10
 - d) 5
9. Find the slope of the line $2y + 5x = -3$
- a) 5
 - b) $-5/2$
 - c) $2/5$
 - d) 3
10. What are the zeros of the function $y = x^2 - 3x + 2$
- a) 0,1
 - b) 1,2
 - c) -1,3
 - d) 2,-3
11. Find the size of each exterior angle of a regular Octagon

- a) 450
- b) 400
- c) 500
- d) 360

12. What are the prime factors of 2520?

- a) 2,nine,5
- b) 2, nine, 7
- c) 2,3,5,7
- d) 2,3,7,nine

13. What value of q makes the given expression a perfect square? $a^2 - 8a + q$

- a) 2
- b) 4
- c) 8
- d) 16

14. Given that $3^y = 243$, find the value of y

- a) 2
- b) 4
- c) 8
- d) 16

15. Simplify $9^{-1/2}$

- a) 1
- b) $1/2$
- c) $1/nine$
- d) $1/27$

16. Find the equation of a line whose slope is 8 and passes through the point [-2,1]

- a) $y = 8x - 2$
- b) $y = 8x + 17$
- c) $y = nine - 2x$
- d) $y = x + 6$

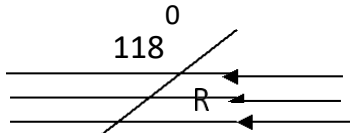
17. the logarithm of any number or alphabet to the base of itself equals

- a) half
- b) zero
- c) one
- d) constant

18. if the probability that a candidate will fail his/her nursing entrance examination is $\frac{1}{3}$, find the probability that he/she will pass

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

19.



The value of R in the diagram above is

- a) 1180
- b) 620
- c) 120
- d) 160

20. Consider;

$$\begin{array}{l} \text{I } x^2 + 1 \\ \text{II } 5x + 2 \end{array}$$

- a) I and III only
- b) I only
- c) III only
- d) II only

SECTION C

BIOLOGY

1. The process of formation of sex gametes in living organisms is termed?
 - a) Gametogenesis
 - b) Spirogenesis
 - c) Spermatogenesis
 - d) Sexogenesis
 - e) Organogenesis
2. Metabolism consists of two basic processes, namely;
 - a) Anabolism and catabolism
 - b) Parabolism and anabolism
 - c) catabolism and holobolism
 - d) tantabolism and superbolism
 - e) metabolism and hyperbolism
3. Robert Hooke was one of the scientists that discovered
 - a) Bone
 - b) Hair
 - c) Cell
 - d) Liver
 - e) Lung
4. When the concentration of the fluid surrounding a cell is less than the cell fluid concentration, the cell is?
 - a) Hypotonic
 - b) Isotonic
 - c) Endotonic

- d) Hypertonic
 - e) Turgid
5. Insulin hormone is produced by?
- a) Stomach
 - b) Kidney
 - c) Islet of langerhan
 - d) Caecum
 - e) Pancreas tone
6. The urethra in man is a common passage for both
- a) Sperm and Urine
 - b) Sperm and water
 - c) Eggs and sperm
 - d) Blood and urine
 - e) Cells and urine
7. Growth in living organism means
- a) Increase in length and weight
 - b) Decrease in mass and height
 - c) Static in mass and size
 - d) Decrease in size and height
8. When gametes from pure breeding parents with contrasting features as tallness and shortness are involved in monohybrid cross, the offspring in the first filial generation are usually _____
- a) Heterozygous dominant
 - b) Purer breed
 - c) Homozygous recessive
 - d) Mutants
 - e) Co-dominant
9. The function of optic nerves in the human eye is?
- a) To carry image formed on the retina to the brain
 - b) To form image on the retina
 - c) To interpret image on the retina
 - d) To stop image forming on the retina
 - e) To accept object on the retina
10. The development of diploid egg which has not been fertilized is known as?

- a) Oviparousity
- b) Viviparousity
- c) Partherogenesis
- d) Gametogenesis
- e) Oogenesis

11. Plants store most of their energy as _____

- a) Glucose
- b) Glycogen
- c) Starch
- d) Sucrose
- e) Cellulose

12. ATP

- a) Is an amino acid
- b) Has a helical structure
- c) Is a high-energy molecule that can break down to ADP and phosphate
- d) Provides enzymes for metabolism
- e) Is most energetic when in the ADP state

13. The restoration of the diploid chromosome number after having in meiosis is due to _____

- a) Synapsis
- b) Fertilization
- c) Mitosis
- d) DNA replication
- e) Chiasmata

14. In which location does fertilization usually takes place in a female human

- a) Ovary
- b) Fallopian tube
- c) Uterus
- d) Cervix
- e) Vagina

15. Which of the following is least likely to be hermaphroditic?

- a) Earthworm
- b) Barnacle
- c) Tapeworm
- d) Grasshopper
- e) Liver fluke

16. The active site of an enzyme

- a) Is similar to that of any other enzyme
- b) Can be used over and over again
- c) Is the part of the enzyme where its substrate can fit
- d) Is not affected by environmental factors like PH and temperature
- e) Both b and c are correct

17. The mammalian cervical vertebrae invariably numbered

- a) 4
- b) 7
- c) 12
- d) 5
- e) 13

18. *Candida virginalis* is a

- a) Bacterium
- b) Fungus
- c) Virus
- d) Protozoan
- e) Protist

19. Which of the following is air borne?

- a) Malaria
- b) Yellow fever
- c) Cholera
- d) Tuberculosis
- e) Green fever

20. Which of the following is not present in the nucleus of a cell?

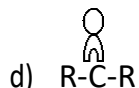
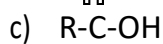
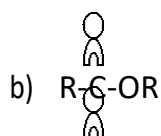
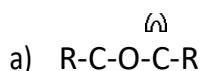
- a) Chromosome
- b) Nucleus
- c) Genes
- d) Mitochondria
- e) None of the above

SECTION D

CHEMISTRY

1. In the reaction $X + Y \rightleftharpoons g+h$, the backward reaction is favoured if the concentration of
- X is increased
 - Y is increased
 - X is reduced
 - G is reduced
2. Nuclear reaction can be used in the following except?
- Gauging the thickness of an object
 - Making atomic bombs
 - Curing cancer
 - Purifying water
3. A certain volume of a gas at 298K is heated such that its volume and pressure are now four times the original values, what is the new temperature?
- 629.0K
 - 431.0K
 - 1198.0K
 - 4768.0K
4. Dirty green precipitate is a property of
- Iron [II] salts
 - Iron [III] salts
 - Copper salts
 - Lead salts
5. The general formula for carboxylic acids is





6. Which of the following is an example of a chemical change?
- Freezing of water
 - Dissolution of NaCl in water
 - Rusting of iron
 - Separating a liquid mixture by distillation
7. Which of the following is not a redox reaction?
- $2\text{HNO}_2 + 2\text{HI} \rightarrow 2\text{H}_2\text{O} + 2\text{NO} + \text{I}_2$
 - $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$
 - $\text{BaCl}_2 + 2\text{AgNO}_3 \rightarrow \text{AgCl}_2 + \text{Ba}[\text{NO}_3]_2$
 - $4\text{FeO} + \text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$
8. The functional group [s] of an amino acid is/are
- $\text{NH}_2, \text{---CooH}$
 - $\text{C}_n \text{H}_{2n+1}, \text{---CooH}$
 - $\text{---CoCl}, \text{CooH}$
 - $\text{CooH}, \text{CoNH}_2$
9. Which of these substances burns in air to give a product that combines with water to give a solution whose pH is less than 7?
- Copper
 - Carbon
 - Zinc
 - Magnesium
10. Ammonia is the only common
- Alkane gas
 - Acidic gas
 - Alkaline gas
 - Soluble gas

11. Which of the following air pollution cause acid rain?

- a) Lead oxide
- b) Sulphur dioxide
- c) Carbon dioxide
- d) Hydrogen sulphide

12. Petrol can be obtained from diesel by

- a) Distillation
- b) Cracking
- c) Catalysis
- d) Polymerization

13. The oxidation number of sulphur in tetraoxosulphate [iv] acid is?

- a) -6
- b) +6
- c) -4
- d) +4

14. Substance which absorb water from the atmosphere without dissolving it are said to be

-
- a) Anhydrous
 - b) Hygroscopic
 - c) Insoluble
 - d) Hydrated

15. To which group does the compound with the following structure belong?



- a) Alkanol
- b) Alkanoate
- c) Alkanone
- d) Alkanoic acid

SECTION D

PHYSICS

a b c

1. The equation $P^a V^b T^c = \text{constant}$ reduces to Boyle's law only if
 - a) $A=1, b=0$ and $c=0$
 - b) $a=1, b=1$ and $c=0$
 - c) $a=0, b=0$ and $c=1$
 - d) $a=1, b=1$ and $c=1$
2. the formation of clouds results directly from _____
 - a) condensation
 - b) sublimation
 - c) fusion
 - d) vaporization
3. An instrument used to measure relative humidity is called _____
 - a) hydrometer
 - b) barometer
 - c) manometer
 - d) hygrometer
4. The action of a towel in drying the body after a bath is explained by _____
 - a) diffusion
 - b) capillarity
 - c) osmosis
 - d) evaporation
5. The heat from a fire in a room is transmitted to various parts of the room primarily by _____
 - a) convection

- b) conduction
 - c) diffusion
 - d) radiation
6. The frequency of a wave having wavelength 20cm and velocity 0.5/s is
- a) 0.0025Hz
 - b) 0.025Hz
 - c) 2.5Hz
 - d) 40.0Hz
7. The tension in a sonometer wire is tripled. The ratio of the new frequency of the initial frequency to the initial frequency is
- a) $1/3$
 - b) 3
 - c) $1/\sqrt[3]{3}$
 - d) $\sqrt[3]{3}$
8. A boy in a barber's shop sits between two parallel mirrors. The number of images observed by him will be.
- a) Infinite
 - b) Double
 - c) Triple
 - d) Eight
9. The refractive index of a medium is $\frac{3}{2}$. The critical angle is?
- a) 30°
 - b) 45°
 - c) 60°
 - d) 90°
10. A concave lens of focal length 15cm forms an image $1/3$ the size of the object. The object distance is?
- a) 10cm
 - b) 20cm
 - c) 30cm
 - d) 60cm
11. Which of the following is not a suitable dielectric materials?
- a) Brass

- b) Paraffin wax
- c) Glass
- d) Ebonite

12. A current of 180 mA passes through a conductor for 5 minutes the quantity of electricity transported is?

- a) 54C
- b) 0.nineC
- c) 3.6×10^{-2} C
- d) 6.0×10^{-4} C

13. An electric cell of internal resistance 0.5Ω delivers a current of 2.0A when a resistance of 3Ω is connected across it. The EMF of the cell is?

- a) 1.0v
- b) 1.5v
- c) 2.5v
- d) 7.0v

14. The mouthpiece of a telephone primarily converts sound energy into _____

- a) Mechanical energy
- b) Heat energy
- c) Electrical energy
- d) Chemical energy

15. Which of the following radiations will pass through a sheet of paper? I Alpha particles

III Gamma particles

- a) I only
- b) II only
- c) III only
- d) II and III only

SECTION F

CURRENT AFFAIRS

1. The popular cold and warm spring in Ekiti State is located at
 - a) Erinjiyan
 - b) Ado
 - c) Efon Alaaye
 - d) Ikogosi
2. The capital city of Jigawa State in Nigeria is _____
 - a) Jalingo
 - b) Ado-Ekiti
 - c) Dutse
 - d) Lafia
3. Which of the following dams is located in Nigeria?
 - a) Akosombo Dam
 - b) Ero Dam
 - c) Aswan Dam
 - d) Komba Dam
4. Who is the first black president of south Africa
 - a) Nelson Chukwura
 - b) Nelson Mandela
 - c) Nelson Paterson
 - d) Nelson Cole
5. What is the full meaning of MEND
 - a) Movement for the emancipation of Development
 - b) Movement for the Emancipation of Nigeria
 - c) Movement for the Emancipation of the Niger Delta

- d) Movement for the Emancipation of National Development
6. Who was the president of the Biafran State
- a) Chukwu Emeka Obama
 - b) Chukwu Ojukwu
 - c) Chukwu Emeka Ojukwu
 - d) Chukwu Merije
7. Who is the current Prime Minister of Britain?
- a) David Campbell
 - b) David Cole
 - c) David Cameron
 - d) David Jonathan
8. Nigeria was amalgamated in _____
- a) Nineteen- ten
 - b) Nineteen-twelve
 - c) Nineteen-sixty
 - d) Nineteen-fourteen
9. The basic problem of our National Unity is
- a) Sentiment
 - b) Aparthy
 - c) Diversity
 - d) Ethnicity
10. Who is the current chairman of INEC
- a) Mr. Segun Oni
 - b) Mr. Ope Bamidele
 - c) Prof. Charles Ukeje
 - d) Prof. Atahiru Jega

SIXTH YEAR

Time Allowed: 1 Hour

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SECTION A

ENGLISH LANGUAGE

In the passage below, the numbered gaps indicate missing words. Against each number in the list below the passage five choices are given in columns lettered A-E for each question. Choose the word that is most suitable to fill the numbered gaps in the passage.

PASSAGE:

Cheap cameras are [1] for most purposes, but they have certain [2]. If you try to take [3] with them the picture looks [4], and good results are only possible if the high good. On the other hand, clearer cameras are more difficult to [5] and are therefore not suitable for the [6]

The film used by most cameras is wound inside a sealed [7]. Every time you press the [8] of the camera in order to take a picture, a small length of film [nine] [9]. When the whole film of, say, twenty-four shots has been used, it is removed from the camera and given to a specialist to be [10]

A

B

C

D

E

1.	Relevant	Adequate	Equivalent	Eligible	Standard
2.	Restrictions	Minorities	Limitation	Rudiments	Limitation
3.	Approach	Close-ups	Upshots	Intakes	Microfilm shots
4.	Blunt	Blurred	Bleary	Shady	Slurred
5.	Operate	Operation	Function	Execute	Finger
6.	Recruit	Innovator	Pioneer	Novice	Pedant

7.	Reel	Drum	Cassette	Holder	Magazine
8.	Shutter	Trigger	Winder	Stop	Starter release
8.	Revealed	Refracted	Focused	Projected	Exposed
10.	Proceeded	Fixed	Impressed	Processed	Project

Choose from alternative A-E the word that is closest in meaning to the words underlined.

11. He left his home village to live a more licentious life in the big city
 - a) Free
 - b) Immoral
 - c) Gay
 - d) Highly paid
 - e) Expensive

12. The child's misdemeanours were never taken seriously by his parent
 - a) Wrong doings
 - b) Period of sickness
 - c) mistake
 - d) rude word
 - e) disappointment

13. the new play was a flop
 - a) a failure
 - b) very funny
 - c) a success
 - d) a satire
 - e) copied from another

14. I wrote out the telegram and handed it to very surly clerk for checking
 - a) Lazy
 - b) Haughty
 - c) Bad-tempered
 - d) Of senior rank
 - e) Ignorant

15. His latest work has done much to boost his reputation as a writer
 - a) Destroy
 - b) Increase
 - c) Advertise
 - d) Establish
 - e) Diminish

16. As he listened to my story ,his face remained inscrutable
 - a) Hard and cruel

- b) Impossible to understand
- c) Impossible to describe
- d) Still cheerful
- e) Not affected by grief

Choose from alternative A-E the word that best complete the sentence

17. Fashions in dress sometime last for only a few year and in many cases are even more

- _____
- a) Ephemeral
 - b) Incidental
 - c) Fragile
 - d) Versatile
 - e) Evasive

18. A guest should not make _____ remarks about the food he is offered

- a) Derogatory
- b) Distracting
- c) Degenerate
- d) Deficient
- e) Defective

19. She was very much upset by the _____ gossip to which she was subjected.

- a) Inclement
- b) Avarious
- c) Boisterous
- d) Ominous
- e) Malicious

20. Long after winning the election he continued to feel _____ towards those who opposed him

- a) Apprehensive
- b) Outrageous
- c) Intimidating
- d) Hateful
- e) Vindictive

SECTION B
MATHEMATICS

1. Given that $X = 101_{\text{three}} + 23_{\text{Five}}$ Find X, leaving your answer in base two,

- a) 1110
- b) 10111
- c) 11101
- d) 111100

2. Calculate the total surface area of a cupboard which measure 12mm by 10mm by 8.mm

- a) 1nine20mm²
- b) 5nine2mm²
- c) 2nine6mm²
- d) 148mm²

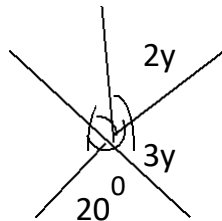
3. Solve the equation;

2

$$10 - 3y - y = 0$$

- a) Y=2 or -5
- b) Y= -2 or 5
- c) Y=-1 or 10
- d) Y= 2 or 5

4.



What is the value of y in the diagram drawn above

- a) 10^0
- b) 28^0
- c) 36^0
- d) 44^0

5. Given that the second and fourth terms of a G.P are 8 and 32 respectively, what is the sum of the first four terms?

- a) 28
- b) 40
- c) 48
- d) 60
- e) 68

6. Factorize $2m^2 + m - 5$

- a) $[2m+5][m-3]$
- b) $[2m-5]m+3$
- c) $[2m-5][m-3]$
- d) $[2m-3][m+5]$
- e) $[2m+5][m+3]$

7. In a class of 80 students, every student had to study Economics or Geography, or both. If 65 students studies Economics and 50 studies Geography. How many studies both subjects?

- a) 15
- b) 30
- c) 35
- d) 45
- e) 50

8. Express 0.00562 in standard form

- a) 5.62×10^{-3}
- b) 5.62×10^{-2}
- c) 0.562×10^{-2}
- d) 5.62×10^2
- e) 5.62×10^3

9. Find the equation whose roots are $-2/3$ and $-1/4$

- a) $12x^2 + 11x + 2 = 0$
- b) $12x^2 - 11x + 2 = 0$

c) $x^2 - \frac{11}{12}x + 2 = 0$

d) $12x^2 - 11x - 2 = 0$

e) $x^2 + 11x - 2 = 0$

10. If the probability that Ojo will pass his nursing entrance exam is $\frac{4}{5}$. What is the probability that he will fail the exam

- a) $\frac{4}{5}$
- b) $\frac{3}{5}$
- c) $\frac{2}{5}$
- d) $\frac{1}{5}$
- e) $\frac{5}{4}$

11. The difference between the smallest and the highest number in a set of data is called?

- a) Median
- b) Mode
- c) Mean
- d) Decile
- e) Range

12. The sum of opposite angles of a cyclic quadrilateral equals?

- a) Supplementary
Complementary
- b) Acute
- c) None of the above

13. The sum of all the angles in an acute angle triangle is?

- a) Ninety⁰
- b) 120⁰
- c) 180⁰
- d) 270⁰

14. Given that $\sin \beta = -0.963$, where $0 < \beta < 270$, find β .

- a) 65
- b) 115⁰
- c) 145⁰
- d) 245⁰
- e) 265⁰

15. What must be added to the expression $x^2 - 18x$ to make it a perfect square

- a) 3
- b) Nine
- c) 36
- d) 72
- e) 81

16. The locus of a point which is equidistant from point M and N is the

- a) Bisector of line MN
- b) Perpendicular bisector of line MN

c) Circumference of MN

d) Distance between M and N

17. The volume of a cone of height ninecm is 1848cm^2 . calculate radius[r]of the cone
.[$\pi=22/7$]

a) 7cm

b) 14cm

c) 28cm

d) Nine8cm

e) 1 nine6cm

18. Two point A and B are respectively 12m North and 5m East of point C. find AB

a) 7cm

b) 12cm

c) 13cm

d) 17cm

e) 18cm

19. Solve the inequality $3m+3>\text{nine}$

a) $m>2$

b) $m>3$

c) $m>4$

d) $m>6$

e) $m>12$

20. a house bought for N100,000 was later auctioned for N80,000 find the loss percentage

a) 20%

b) 30%

c) 40%

d) 50%

e) 60%

SECTION C

BOLOGY

1. Which of the following does virus have in common with animal cells?
 - a) Glycogen
 - b) Nucleus
 - c) DNA
 - d) Cytoplasm
2. Which Vitamin plays an important role in blood clotting?
 - a) Vitamin K
 - b) Vitamin B12
 - c) Vitamin C
 - d) Vitamin D
3. All the following help in the transportation of substances round the body except?
 - a) Plasma
 - b) Leucocytes
 - c) Erythrocytes
 - d) Lymph
4. The actual number of chromosomes in every somatic cell is denoted by;
 - a) n
 - b) 23
 - c) $2n$
 - d) $2n$
 - e) $2n+1$
5. Deamination is an essential process for the;
 - a) Formation of hormones

- b) Formation of Antibodies
 - c) Secretion of bile
 - d) Formation of Urea
6. The central Nervous system comprises of the;
- a) Brain and spinal cord
 - b) Brain and the sympathetic Nerves
 - c) Cerebrum and the medulla ablongata only
 - d) All of the above
7. The part of the stomach nearer the gullet is called
- a) Appendix
 - b) Pharynx
 - c) Cardiac sphincter
 - d) Acetabulum
8. Which of the following characters is not sex-linked?
- a) Haemophilia
 - b) Albinism
 - c) Baldness
 - d) Colour blindness
9. A distinguishing feature of mammals is the possession of;
- a) Scale
 - b) Nail
 - c) Skin
 - d) Hair
10. All the following are functions of the mammalian skin except
- a) Support
 - b) Protection
 - c) Beautification
 - d) Transportation
11. Which of the following is an organ?
- a) Guard cells
 - b) Xylem bundle
 - c) Phloem bundle
 - d) Liver
12. The division of a body into two equal halves along a longitudinal plane is called.
- a) Radial symmetry
 - b) Bilateral symmetry
 - c) Longitudinal section
 - d) Transverse section
13. The basic point of impact by changes which produce mutation is the

- a) Gametes
 - b) Centrioles
 - c) Chromatids
 - d) Chromosomes
14. After meal of yam has been digested, the highest concentration of glucose is to be found in the
- a) Renal Artery
 - b) Inferior vena-cave
 - c) Pulmonary vein
 - d) Hepatic portal vein
15. The lymphatic system of mammals rejoins the blood circulatory system at the
- a) Subclavian vein
 - b) Aortic junction
 - c) Common iliac vein
 - d) Renal vein
16. Bacteria multiply rapidly by means of
- a) Spore formation
 - b) Budding
 - c) Fragmentation
 - d) Binary fission
17. Vaccination is carried out in order to;
- a) Increase the number of red blood cells
 - b) Stimulate the production of antibodies
 - c) Check the production of poison
 - d) Augment the activity of white blood cells
18. The inner ear contains two main organs, namely the;
- a) Cochlea & semi-circular canals
 - b) Pinna & cochlea
 - c) Ossicles and oval window
 - d) Eustachian tube and ossicles
19. Atmospheric nitrogen is converted to soil nitrogen for plant use by
- a) Putrefaction & lightning
 - b) Lightning and nitrification
 - c) Nitrification & combustion
 - d) Combustion & putrefaction

20. An association between the root nodule of a leguminous plant and *Rhizobium* sp. is known as
- Mycorrhiza
 - Parasitism
 - Symbiosis
 - Commensalism

SECTION D

CHEMISTRY

- Cassiterite is an ore of which metal?
 - Aluminium
 - Gold
 - Lead
 - Tin
 - Copper
- The degree of disorderliness in a chemical reaction is measured by which of the following parameters?
 - Enthalpy change
 - Gibb's free energy change
 - Entropy change
 - Option A and C
 - None of the above
- The best separation technique for colour pigments is?
 - Chromatography
 - electrophoresis
 - fractional distillation
 - crystallization
 - decantation
- What is the exact value of one Farad in chemistry?
 - Ninety,500 Moles [M]
 - Ninety,500 Farad [F]

- c) Ninety,500 Coloumb [C]
 d) Ninety,500 Ampere [A]
 e) Ninety,500 Watt [W]
5. Two or more compounds with the same molecular formula but different structural formulae are called?
- a) Allotropies
 b) Isobers
 c) Polymers
 d) Isomers
 e) Epimers
6. A current of 0.5A is passed through a metal whose mass is 64 for just one hour. Find the electrochemical equivalence of the metal
- a) 3.6×10^{-2}
 b) 3.6×10^{-1}
 c) $2,6 \times 10^{-2}$
 d) 2.6×10^{-1}
 e) 3.6×10^2
7. The following are the uses of hydrogen except
- a) Manufacture of margarine
 b) Manufacture of Ammonia
 c) Conversion of coal to petroleum
 d) Extinguishing fire
 e) Synthesis of HCl
8. The maximum number of electrons that can be taken by s and f orbitals are _____ and _____ respectively
- a) 6 and 10
 b) 2 and 6
 c) 2 and 14
 d) 16 and 10
 e) 10 and 14
9. What is the number of atoms in about 32g of gas X. [X=16, Avog= 6.0×10^{23} mol⁻¹]
- a) 1.2×10^{24}
 b) 1.6×10^{23}
 c) 1.6×10^{-23}
 d) 6.0×10^{24}
 e) 1.2×10^{-24}

10. The standard unit of Molarity is?

- a) g/mol
- b) g/dm^3
- c) g/cm^3
- d) mol/dm^3
- e) $\text{mol/dm}^3/\text{k}$

11. the following metals are above hydrogen in the electrochemical series except.

- a) Na
- b) Pb
- c) Cu
- d) Sn
- e) Zn

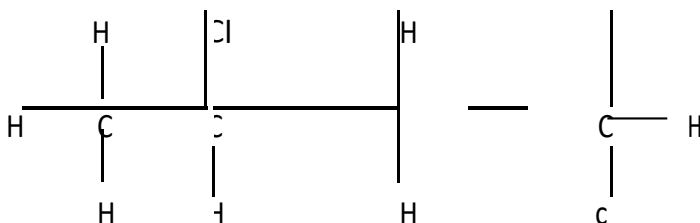
12. The following gases decolorize bromine water except?

- a) C_2H_2
- b) C_3H_4
- c) C_2H_6
- d) C_3H_6
- e) C_2H_4

13. The hardest ever known substance is?

- a) Graphite
- b) Dynamite
- c) Iron
- d) Diamond
- e) Shale

14.



- a) 1,2-dichlorobutane
- b) 1,3- dichlorobutane
- c) 1,3- trichlorobutane
- d) 2,4- dichlorobutane
- e) 1,3- dichlorobutane

15. The hardening of rubber through cross-linkages is termed

- a) Rubberization
- b) Vulcanization

- c) Desulphrization
- d) Restructurization
- e) Hydrogenation

SECTION E

PHYSICS

1. All the following are fundamental units except?
 - a) Newton
 - b) Kilogramme
 - c) Metre
 - d) Second

2. The velocity ratio of an inclined plane which makes an angle 30° with the horizontal is?
 - a) 2
 - b) 1
 - c) 0.866
 - d) 0.50

3. All eclipses [sun, moon] as well as shadows result from _____
 - a) Refraction of light
 - b) Rectilinear propagation of light
 - c) Defraction of light
 - d) Reflection of light

4. Given that the voltage of the domestic supply is represented By: $V=311 \sin 314.2t$. calculate the frequency of the A.C supply [take $\pi = 3.142$]
 - a) 50.0HZ
 - b) 100. 0HZ
 - c) 311. 0HZ
 - d) 314.2HZ
 - e) 500. 00HZ

5. A body x of mass 0.2kg moving vertically upwards has its velocity increased uniformly from 10m/s to 40m/s in just 4sec. neglecting air resistance, calculate the upward vertical force acting on the body.
- 15N
 - 20N
 - 35N
 - 45N

Note that $g=10\text{m/s}^2$

6. The similarity between light waves and the ripples on water is that both;
- Have the same frequency
 - Can be refracted and diffracted
 - Are longitudinal waves
 - Have the same velocity
7. Which of these electromagnetic waves is sensitive to significant temperature change
- Gamma-rays
 - X-rays
 - Visible-rays
 - Ultraviolet-rays
8. The heat from the sun reaches us by _____
- Insulation
 - Emission
 - Conduction
 - Radiation
 - Cooling
9. It has been scientifically proven that electric charge could be transmitted through
- Paper, rubber and stone
 - Paper, clay and plastic
 - Glass, acid and cloth
 - Human body, metals and water
 - None of the above
10. _____ is the required lens to correct Myopic defects in the human eye.
- A concave lens
 - A convex lens
 - Both convex and concave lenses
 - Normal prism
 - A concave mirror
11. The density of 400m³ of palm oil was 0.9kg/m³ before frying. If the density of the oil was exactly 0.6kg/m³ after frying, assuming no loss of oil due to spilling, its new volume was.

- a) 360m^3
- b) 600m^3
- c) 240m^3
- d) 800m^3
- e) 450m^3

12. Which of the following is the correct definition of "Half-life"?

- a) The average life-time of a radioactive material
- b) The time it takes a radioactive material to decay to half of its original quantity
- c) Half the period of a radioactive material to decay completely
- d) Half of the decay constant
- e) The decay constant times the life time

13. A motor tyre is inflated to pressure of $2.0 \times 10^5 \text{ Nm}^{-2}$ when the temperature of air is 27°C . what will be the pressure in it at 87°C assuming that the volume of the tyre does not change

- a) $2.6 \times 10^5 \text{ N/m}^2$
- b) $2.4 \times 10^5 \text{ N/m}^2$
- c) $2.2 \times 10^5 \text{ N/m}^2$
- d) $1.3 \times 10^5 \text{ N/m}^2$
- e) $-2.4 \times 10^5 \text{ N/m}^2$

14. The purpose of a dielectric material in a parallel plate capacitor is to _____

- a) Increase its capacitance
- b) Decrease its capacitance
- c) Insulate the plates from each other
- d) Increase the magnetic field between the plates.

15. I-its velocity is constant II-no work is done on the body

III- it has constant acceleration directed away from the centre. IV-the centripetal force is directed towards the centre.

Which combination of the above is true of a body moving with constant speed in a circular track?

- a) I and III
- b) I and IV
- c) II and III
- d) II and IV

SECTION F

CURRENT AFFAIRS

1. The first federal capital of Nigeria was
 - a) Lokoja
 - b) Jos
 - c) Lagos
 - d) Abuja
2. E.P.I stand for
 - a) Extended progamme on immunization
 - b) Expanded programme on immunization
 - c) Expanded programme of immunization
 - d) Extended programme of immunization
3. The highest mountain in the world is _____
 - a) Mount Owen
 - b) Mount Karmel
 - c) Mount Evarest
 - d) Mount tallest
4. The largest city in the United Arab Emirates is?
 - a) Abu Dhabi
 - b) Dubai
 - c) Quwain
 - d) Ajman
5. _____ is the first executive president of Nigeria
 - a) Alhaji Shehu Shagari
 - b) Gen. Olusegun Obasanjo
 - c) Gen. Yakubu Gowon

- d) Dr. Nnamdi Azikiwe
6. The most popular terrorist group in Nigeria is
- a) ACF
 - b) OPC
 - c) Bakassi boys
 - d) Boko haram
7. The total number of senators at the national house of assembly is _____
- a) 10nine
 - b) 108
 - c) 107
 - d) 106
 - e) 105
8. Kwara is to Ilorin as _____ is to Bayelsa State
- a) Yenagoa
 - b) Yenogoa
 - c) Yenagao
 - d) Yenogao
9. President Goodluck Ebele Jonathan contested and worn under which political party
- a) APC
 - b) ANPP
 - c) UNCP
 - d) PDP
 - e) APP
10. Using rough estimation
- i. $N160 = \$ 1$
 - ii. $N250 = E 1$
 - iii. $N45 = 1 \text{ Dirham}$

Which of the above statements is/are correct

- a) i & ii
- b) i, ii & iii
- c) ii & iii
- d) i & iii

SEVENTH YEAR
Time Allowed: 1 Hour

- Υ **Do not** open your question booklets until you are told to do so.
- Υ The examination consists of six sections labeled A to F. all the questions irrespective of the sections carry equal mark.
- Υ Section A- English language 20 questions
- Υ Section B- mathematics 20 questions
- Υ Section C- Biology 20 questions
- Υ Section D- Chemistry 15 questions
- Υ Section E- Physics 15 questions
- Υ Section F- Current Affairs 10 questions
- Υ Answer all questions appropriately
- Υ Use the answer sheet provided
- Υ Use HB pencil to shade the correct answer for each question. Ensure that any shading made in error is thoroughly erased.
- Υ Write your **NAME, EXAMINATION NUMBER** and other needed information in the appropriate spaces on the answer sheet. Shade carefully the space with the same number or letter as each digit or letter.
- Υ Any **candidate caught cheating** in the course of the examination will be duly penalized.
- Υ The **interview date** will be made known to the public as soon as possible.

SECTION A

ENGLISH LANGUAGE

The passage below has gaps numbered 1 to 10. Immediately followed each gap, four options are provide. Choose the most appropriate option for each gap.

On the 21st of June ninety, ninety-four, the Director-general received in his office a visitor, the first of its kind in his life. Even though he really could not make any meaning out of his name, the visitor's second statement that he was a court [1]

- [a] Baliff [b] messenger [c] litigant [d] Clerk

reality gave the Director-General a clear picture of the man's purpose. He immediately gave the Director-General two sets of papers. The first was a [2]

- [a]write of summons [b] Subpoena [c] Call notice [d] Letter

Which was to notify the Director-General that he and the agency he represented were being sued for [3]

- [a] Battery [b] Slander [c] Libel [d] Contempt

And that he should seek the services of a lawyer who would appear for him on the 6th of July when the case was for mention.

The second paper was on a motion of [4]

- [a] Summons [b] Order [c]decision [d] interlocutory injunction

Which, if granted by the court would restrain [5] _____

- [a] Defender [b] defendant [c] litigant [d] prosecution

From publishing further anything on the staff of the ministry or the [6]

[a] witness [b] exhibits [c] plaintiffs [d] perjurer

The motion was also slated for 6th July.

On the day of the mention and the motion the court became alive as early as 8:30am as the [7]

[a] presiding judge [b] court clerk [c] justice [d] prosecutor

Was known for his punctuality. He would sit at exactly nineam. The plaintiffs and their counsel were the first to come into the court room, then came the defence counsel. At the dot of the hour, three bangs were heard, immediately after which the court clerk announced the presence of the judge.

In no time the cout clerk read out the case and counsels announced their [8]

[a] presence [b] appearance [c] arrivals [d]

The counsel to the plaintiffs moved his motion rely on a six paragraph [nine]

[a] Oath [b] affidavit [c] presentation [d] argument

Which contained the fact of the case. In response, the offense counsel argued on the premise of an eight-paragraph _____

[a] counter affidavit [b] declaration [c] submission [d]

The motion was granted according to the merit of the argument of the first lawyer.

In each of the question 11 to 15, fill each gap with the most appropriate option from the list following the gap

11. Kindly _____ me your book because my friend has _____ me

- a) Borrow/Borrowed
- b) Borrow/Lent
- c) Lend/ Borrowed

12. Three-quarters of the bench _____ painted by members the previous day

- a) Were
- b) Was
- c) Is
- d) Are

13. Two young boys have been caught with parts of the stolen machine but _____ admitted stealing it.

- a) Neither of them has

- b) Neither of them have
 - c) None of them has
 - d) None of them have
14. Watching carefully, I could see the fish _____ along the bottom.
- a) Doting
 - b) Crawling
 - c) Diving
 - d) Darting
15. Emeka is now a _____ student but it took him years to _____
- a) Matured/mature
 - b) Mature/mature
 - c) Mature/matured
 - d) Matured/matured

In each of questions 16 to 20 choose the most appropriate option opposite in meaning to the word or phrase in italics.

16. To almost everyone in the little village, Ada's behavior was most *ODIOUS*
ODIOUS
- a) Repulsive
 - b) Difficult
 - c) Attractive
 - d) Charming
17. Aduma was so vociferous during the meeting of the congregation that he succeeded in incurring the *WRATH* of the chairman
- a) Anger
 - b) Admiration
 - c) Displeasure
 - d) Sympathy
18. It was an *INOPPORTUNE* moment for you to make that suggestion.
- a) An ideal
 - b) A wrong
 - c) An exact
 - d) A sad
19. He devoted too much time to the *PERIPHERAL* aspects
- a) Unimportant
 - b) Superficial

- c) Minor
- d) Main

20. The climate of Nigeria is an ENERVATING one

- a) A weakening
- b) An energy sapping
- c) An invigorating
- d) A sluggish

SECTION B

MATHEMATICS

1. If $\log_{10} y = 4$, what is y?
 - a) 0.4
 - b) 40
 - c) 400
 - d) 1000
 - e) 10000
2. What is the difference in longitude between B [50° N, 50° W] and T [50° N, 150° W]?
 - a) 300°
 - b) 200°
 - c) 130°
 - d) 100°
 - e) 30°
3. Find the probability of having an odd number in a single toss of a fair die?
 - a) $1/6$
 - b) $1/3$
 - c) $1/2$
 - d) $2/3$
 - e) $5/3$
4. Evaluate $0.009 \div 0.012$, leaving your answer in standard form
 - a) 7.5×10^2
 - b) 7.5×10^1
 - c) 7.5×10^{-1}
 - d) 7.5×10^{-2}
 - e) 7.5×10^{-3}

5. Given that $\sin A = \frac{1}{2}$ and $\cos A = \frac{3}{2}$, find the value of A.

- a) 30°
- b) 60°
- c) 90°
- d) 120°
- e) 150°

6. The population of a country is just 5846. Express this number to three significant figures.

- a) 5850
- b) 5846
- c) 5840
- d) 585
- e) 584

7. What is the third term of a sequence whose formula is $2n^2 - 1$

- a) 17
- b) 16
- c) 15
- d) 14
- e) 13

8. Calculate the slope of this line $x = 3y - 7$ with x and y axes

- a) 7
- b) 3
- c) 1
- d) $\frac{1}{3}$
- e) $\frac{7}{3}$

9. The intercept of the equation in question [8] above is

- a) $-\frac{7}{3}$
- b) $\frac{3}{7}$
- c) $-\frac{3}{7}$
- d) $\frac{7}{3}$
- e) $-\frac{1}{3}$

10. Which of the following is the set of factors of a perfect number?

- a) [1,2,4]
- b) [1,7]

- c) [1,2,3,6]
- d) [1,3,nine]
- e) [1,2,7,14]

11. Three people A,B and C are to share 40 oranges in the ratio 1:3:4 respectively. How many oranges did B get?

- a) 12
- b) 18
- c) 10
- d) 15

12. Solve the equations for x and y given that; $2^{\frac{x+y}{2x+y}} = 16$ and $3^{\frac{x+y}{2x+y}} = \text{nine}$

- a) X=2,y=3
- b) X=4,y=-1
- c) X=3,y=4
- d) X=2,y=6

13. If the volume of a cube is 8cm^3 , calculate the total surface area of the cube

- a) 12m^2
- b) 24m^2
- c) 16m^2
- d) 8m^2

14. Find the equation of a line whose slope is 3 and passes through the point [-2,1]

- a) $Y=3x-2$
- b) $y=3x+7$
- c) $y=1-2x$
- d) $y=x+2$

15. what must be added to m^2-7m to make a perfect square?

- a) 3.5
- b) $4\text{nine}/4$
- c) $4/4\text{nine}$
- d) 4nine

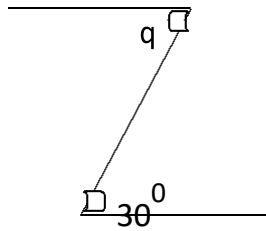
16. Give that $\text{Cos } A = 5/13$, what is the value of $\text{Tan } A$ for $0^\circ < A < 90^\circ$?

- a) 13
- b) 5
- c) $13/5$
- d) $12/5$

17. The value of $\text{Sin } 210^\circ$ is?

- a) $-1/2$
- b) $\sqrt[3]{2}$
- c) $1/2$
- d) $\sqrt{3/2}$

18. Find the value of q in the diagram below



- a) 60°
- b) 150°
- c) 30°
- d) Ninety $^{\circ}$

19. Express 0.005 as a fraction

- a) $5/200$
- b) $1/200$
- c) $5/100$
- d) $5/1000$

20. Factorize q^2-4 completely

- a) $[q+4] [q+2]$
- b) $[q-2] [q+2]$
- c) $[q-4] [q+4]$
- d) $[q+2] [q+2]$

SECTION E

BIOLOGY

1. When an organism moves its whole body towards a stimulus, the organism is said to exhibit
 - a) Trophic movement
 - b) Tropic movement
 - c) Tactic movement
 - d) Nastic movement
 - e) Tastic movement
2. All of these are vertebrates except?
 - a) Lizard
 - b) Rat
 - c) Star fish
 - d) Tilapia
3. The head of the femur articulates with the pelvic bone at the
 - a) Glenoid cavity
 - b) Olecranon process
 - c) Acetabulum
 - d) Carocoid process
4. Which of these is vestigial structure?
 - a) Appendix
 - b) Caecum
 - c) Pancreas
 - d) Sacculus motundus
5. Antibodies in mammalian blood are formed by
 - a) Platelets

- b) White blood cells
 - c) Red blood cells
 - d) Liver
6. In which of the following flower part does meiosis occurs?
- a) Anther
 - b) Petal
 - c) Receptacle
 - d) Style
7. When two genes for the same character [alleles] are contained in the same individuals, the character that shows is known as
- a) Important character
 - b) Dominant character
 - c) Superior character
 - d) Controlling character
8. The sum total of the biotic and abiotic factors that affect living thing is referred to as;
- a) Environment
 - b) Lithosphere
 - c) Hydrosphere
 - d) Atmosphere
9. Which of the following deaminates excess amino acids?
- a) Duodenum
 - b) Ileum
 - c) Liver
 - d) Kidney
10. The cockroach and grasshoppers have mouth parts adapted for
- a) Sucking
 - b) Piercing and sucking
 - c) Biting and chewing
 - d) Biting and lapping
11. Which of the following is not an example of a sex-linked character
- a) Baldness
 - b) Color blindness
 - c) Haemophilia
 - d) Height
12. Which of the following liquids supplies cells in the tissues of a mammal with oxygen and nutrients?

- a) Blood
 - b) Plasma
 - c) Serum
 - d) Blood vessels
13. Insulin hormone is produced by _____
- a) Stomach
 - b) Kidney
 - c) Gonad
 - d) Pancreatisone
 - e) Islets of langerhan
14. The process of formation of sex gametes in male human is termed?
- a) Gametogenesis
 - b) Spermatogenesis
 - c) Sexogenesis
 - d) Spirogenesis
15. Which of the following is not present in the cytoplasm of a cell?
- a) Mitochondria
 - b) Golgi apparatus
 - c) Ribosomes
 - d) Chromosome
16. In aerobic respiration, oxidative phosphorylation takes place in the _____
- a) Cytoplasm
 - b) Lysosome
 - c) Mitochondrion
 - d) Ribosomes
17. Which of the following components of an ecosystem has the greatest biomass?
- a) Primary producers
 - b) Primary consumers
 - c) Secondary consumers
 - d) Tertiary consumers
18. The name of a bacterium which derives its energy from oxidizing nitrites into nitrates is
- a) Nitrosomonas
 - b) Azotobacter
 - c) Nitrobacter
 - d) Escherichia coli
19. Which of the following organisms does not exist as a single free living cell?
- a) Amoeba
 - b) Euglena

- c) Chalmydomonas
 - d) Volvox
20. Which of the following is the medium of transportation of nutrients within unicellular organism
- a) Lymph
 - b) Plasma
 - c) Protoplasm
 - d) Serum

SECTION D

CHEMISTRY

1. Which of these compounds is termed macromolecule?
 - a) Silica
 - b) Mica
 - c) Protein
 - d) Krypton
2. Vulcanization of rubber
 - a) Stops the growth of fungus on the rubber
 - b) Increase the solubility of the rubber
 - c) Hardens the rubber through cross linkage
 - d) Decrease the elasticity of the rubber
3. Which of the following statement is an exception in the assumptions of the theory of gases? kinetic
 - a) The particles are of negligible size
 - b) The particles are in constant random motion
 - c) The particles are of negligible mass
 - d) The particles collide with each other
4. A saturated solution of Agcl was found to have a concentration of $1.30 \times 10^{-5} \text{ mol/dm}^3$. The solubility product of Agcl therefore is? mol/dm³
 - a) $1.30 \times 10^{-5} \text{ mol}^2/\text{dm}^6$
 - b) $2.60 \times 10^{-12} \text{ mol}^2/\text{dm}^6$
 - c) $1.30 \times 10^{-7} \text{ mol}^2/\text{dm}^6$
 - d) $1.6 \times 10^{-10} \text{ mol}^2/\text{dm}^6$
5. Which of the following methods cannot be used to protect iron from rusting?
 - a) Painting
 - b) Electroplating

- c) Oxidizing
d) Galvanizing
6. Atom R has an electronic configuration of 2:8:5. The most stable valency [ies] of R is?
a) Colour 1,3
b) 2,5
c) 3,5
d) 5 only
7. 70cm^3 of hydrogen are sparked with 25cm^3 of oxygen at S.T.P. the total volume of the residual gas is
a) 20cm^3
b) 25cm^3
c) 35cm^3
d) 45cm^3
8. Which of the following titration will have a solution with a pH greater than 7 at the end point of the titration?
a) Titration of sodium hydroxide with tetraoxo sulphate [vi] acid
b) Titration of sodium trioxocarbonate [iv] with hydrochloric acid
c) Titration of sodium hydroxide with oxalic [ethanoic acid]
d) Titration of ammonium hydroxide and trioxonitrate [v] acid
9. Which of the following compounds has the highest boiling point?
a) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$
b) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$
c) $\text{CH}_3\text{CH}_2\text{CH}_3$
d) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$
10. The following can be used in desiccators except
a) Fused calcium chloride
b) Silica gel
c) Copper II oxide
d) Calcium oxide
11. A change of state of matter directly from solid to gas is _____
a) Crystallization
b) Condensation
c) Sublimation
d) Ionization
12. The most common green house gas in the atmosphere is
a) Carbon [iv] oxide

- b) Carbon [II] oxide
- c) Chlorofluoro carbon
- d) Hydrogen bromide

13. Brine is a very strong solution of _____

- a) Soap
- b) Acid
- c) Bases
- d) Salt

14. Maltose equals

- a) Glucose + glucose
- b) Glucose + Fructose
- c) Glucose + Galactose
- d) Sucrose + Amylase

15. What amount of oxygen will be required for the complete combustion of 3 moles of methane according to the following equations?



- a) 2 moles
- b) 3 moles
- c) 6 moles
- d) 4 moles

SECTION E

PHYSICS

1. The dimension of power is ?
 - a) $ML^2 T^{-3}$
 - b) MLT^{-2}
 - c) $ML^2 T^{-2}$
 - d) $ML^{-2} T^3$
2. A herdsman walks 10m due west and then 10m due south his displacement s?
 - a) 10m, S30° w
 - b) 10m, S60° w
 - c) $10\sqrt{2}$ m, S45° w
 - d) $10\sqrt{2}$ m, S60° w
3. A girl runs a distance of 1.0km in just 5 minutes. Her average speed is?
 - a) 20.0m/s
 - b) 16.7m/s
 - c) 3.3m/s
 - d) 0.3m/s
4. A 70kg married woman ascends a flight of stairs of height 4m in 7s. the power expended by the woman is equivalent to
 - a) 40w
 - b) 100w
 - c) 280w
 - d) 400w
5. The velocity ratio of a plane inclined at an angle of β to the horizontal equals _____
 - a) $\sin \beta$

- b) $\tan \beta$
 - c) $1/\sin \beta$
 - d) $1/\tan \beta$
6. Which of the following has the highest surface tension?
- a) Cold water
 - b) Hot water
 - c) Oily water
 - d) Soapy water
7. The relative density of the acid in a car battery can be measured with _____
- a) Hydrometer
 - b) Hygrometer
 - c) Manometer
 - d) Battrometer
8. A thermocouple works on the principle of _____
- a) Variation of resistance with current
 - b) Variation of volume with heat
 - c) Variation of temperature with pressure
 - d) Variation of EMF with temperature
9. A metal cube of volume V and linear expansivity α is heated through a temperature rise of T . increase in volume of the cube is?
- a) $3 \alpha VT$
 - b) $2\alpha VT$
 - c) αVT
 - d) $\frac{\alpha VT}{3}$
10. The quantity of heat needed to raise the temperature of a body by 1k is the body's
- a) Internal energy
 - b) Specific heat capacity
 - c) Latent heat of fusion
 - d) Thermal capacity
11. The following phenomena are evidences of the particle nature of matter except
- a) Diffusion
 - b) Brownian motion
 - c) Photoelectric effect
 - d) Diffraction
12. The state in which the average speed of the molecules of water is highest is _____
- a) Ice
 - b) Water
 - c) Water-steam mixture
 - d) Steam

13. A wave of period 0.02sec has a frequency of

- a) 0.02HZ
- b) 0.2 HZ
- c) 5 HZ
- d) 50 HZ

14. The image in a simple microscope is?

- a) Magnified, real and erect
- b) Magnified, virtual and erect
- c) Magnified, virtual and inverted
- d) Magnified, real and inverted

15. The force acting on an electron carrying a charge of 1.6×10^{-19} C in an electric field of intensity 5×10^8 v/m is?

- a) 3.2×10^{-29} N
- b) 8.0×10^{-11} N
- c) 8.0×10^{-8} N
- d) 3.1×10^{27} N

SECTION F
CURRENT AFFIARS

1. The largest man-made lake in Africa is _____
 - a) Kainji
 - b) Volta
 - c) Malawi
 - d) Tana
2. General Murtala Mohammed died in _____
 - a) Ninety-76
 - b) Ninety-46
 - c) Ninety-65
 - d) Ninety-56
3. Which of the following link the common wealth countries together?
 - a) Currency
 - b) Political system
 - c) Electoral system
 - d) English language
4. The minister of health is
 - a) Prof. Onyebuchi Chukwu
 - b) Prof. Fasuba O.
 - c) Prof. Dibu Ojerinde
 - d) Prof. Fasasi Akinola
5. The following countries are OPEC members except _____
 - a) Kuwait
 - b) Venezuela
 - c) UAE

- d) Togo
6. The current senate president is _____
- a) David Cameron
 - b) Aminu Tambwal
 - c) Okonjo Iweala
 - d) David Mark
7. The total number of local governments in Lagos state is _____
- a) 20
 - b) 16
 - c) 18
 - d) 14
8. Naira was introduced on the _____ to replace pound
- a) 1st of January ninety-73
 - b) 2nd of February ninety-60
 - c) 3rd of March ninety-14
 - d) 1 of June ninety-5nine
9. The first female to drive a car in Nigeria is _____
- a) Mrs. Oduah
 - b) Stella Abiola
 - c) Fumilayo Kuti
 - d) Florence Shaw
10. The popular cold and warm spring in Ekiti State is located at
- a) Ipole-iloro
 - b) Erio
 - c) Efon-Alaaye
 - d) Ikogosi

ANSWERS

ENGLISH LANGUAGE

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. E	1. C	1. E	1. D	1. D	1. B	1. B
2. B	2. A	2. D	2. C	2. A	2. C	2. A
3. A	3. B	3. D	3. C	3. A	3. B	3. C
4. D	4. D	4. C	4. A	4. D	4. B	4. D
5. E	5. B	5. C	5. D	5. B	5. A	5. B
6. C	6. C	6. C	6. A	6. A	6. D	6. C
7. B	7. B	7. C	7. B	7. C	7. A	7. A
8. D	8. A	8. B	8. A	8. B	8. A	8. A
8. E	8. B	8. A	8. B	8. A	8. D	8. B
10. A	10. C	10. C	10. C	10. A	10. D	10. A
11. B	11. E	11. D	11. A	11. C	11. B	11. D
12. E	12. B	12. C	12. A	12. D	12. A	12. C
13. C	13. B	13. B	13. C	13. B	13. A	13. A

14. E	14. C	14. A	14. B	14. C	14. C	14. D
15. C	15. B	15. D	15. A	15. A	15. B	15. B
16. E	16. B	16. A	16. E	16. C	16. C	16. C
17. A	17. B	17. C	17. C	17. E	17. A	17. B
18 C	18. A	18. A	18. A	18 D	18. A	18. A
18 E	18. D	18. D	18. A	18 C	18. E	18. D
20. E	20. D	20. B	20. E	20. C	20. E	20. C

ANSWERS

MATHEMATICS

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. B	1. A	1. D	1. D	1. D	1. B	1. E
2. B	2. B	2. D	2. B	2. E	2. B	2. A
3. D	3. C	3. B	3. B	3. E	3. A	3. C
4. A	4. C	4. A	4. B	4. E	4. B	4. C
5. D	5. B	5. D	5. C	5. A	5. D	5. E
6. C	6. C	6. D	6. B	6. B	6. B	6. A
7. D	7. D	7. B	7. A	7. C	7. C	7. A
8. D	8. A	8. C	8. A	8. B	8. A	8. D
8. C	8. A	8. D	8. D	8. B	8. A	8. D
10. B	10. A	10. A	10. B	10. B	10. D	10. C
11. D	11. A	11. D	11. A	11. A	11. E	11. D
12. B	12. B	12. D	12. B	12. D	12. A	12. D
13. B	13. C	13. B	13. A	13. D	13. C	13. B

14. B	14. B	14. B	14. C	14. D	14. D	14. B
15. C	15. E	15. B	15. C	15. D	15. E	15. B
16. B	16. C	16. D	16. C	16. B	16. B	16. D
17. A	17. D	17. D	17. E	17. C	17. _	17. A
18 E	18. C	18. C	18. B	18 C	18. C	18. C
18 D	18. A	18. E	18. A	18 A	18. A	18. B
20. B	20. A	20. B	20. A	20. C	20. _	20. B

ANSWERS

BIOLOGY

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. D	1. C	1. B	1. C	1. A	1. C	1. C
2. C	2. D	2. E	2. C	2. A	2. A	2. C
3. D	3. D	3. D	3. C	3. C	3. B	3. C
4. B	4. A	4. E	4. A	4. D	4. D	4. B
5. D	5. C	5. D	5. C	5. E	5. D	5. A
6. B	6. B	6. C	6. B	6. A	6. A	6. A
7. D	7. C	7. C	7. B	7. D	7. C	7. B
8. B	8. A	8. D	8. A	8. A	8. B	8. A
8. C	8. C	8. D	8. D	8. A	8. D	8. C
10. A	10. C	10. C	10. A	10. C	10. D	10. C
11. A	11. B	11. D	11. C	11. A	11. D	11. D
12. B	12. C	12. C	12. B	12. C	12. B	12. A
13. A	13. A	13. C	13. B	13. B	13. D	13. E

14. B	14. A	14. D	14. A	14. B	14. D	14. B
15. D	15. B	15. C	15. A	15. D	15. A	15. D
16. A	16. A	16. C	16. B	16. E	16. D	16. C
17. A	17. B	17. A	17. C	17. B	17. B	17. A
18 B	18. C	18. A	18. C	18 B	18. A	18. C
18 A	18. B	18. B	18. B	18 D	18. B	18. D
20. A	20. A	20. E	20. C	20. D	20. C	20. C

**ANSWERS
CHEMISTRY**

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. D	1. B	1. A	1. B	1. C	1. D	1. C
2. A	2. C	2. D	2. D	2. D	2. C	2. C
3. D	3. A	3. B	3. A	3. D	3. A	3. C
4. D	4. A	4. E	4. C	4. A	4. C	4. D
5. D	5. B	5. C	5. A	5. C	5. D	5. C
6. D	6. A	6. E	6. A	6. C	6. A	6. C
7. C	7. A	7. C	7. A	7. D	7. D	7. A
8. C	8. C	8. E	8. B	8. A	8. C	8. C
8. C	8. A	8. E	8. A	8. B	8. A	8. C
10. A	10. A	10. D	10. B	10. C	10. D	10. C
11. D	11. E	11. A	11. E	11. B	11. C	11. C
12. C	12. C	12. C	12. D	12. B	12. C	12. C
13. B	13. A	13. D	13. C	13. B	13. D	13. D

14. C	14. D	14. D	14. C	14. B	14. E	14. A
15. A	15. A	15. E	15. B	15. A	15. B	15. C

ANSWERS

PHYSICS

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. A	1. E	1. C	1. A	1. B	1. A	1. A
2. D	2. A	2. B	2. B	2. A	2. A	2. C
3. B	3. B	3. A	3. D	3. D	3. B	3. C
4. A	4. A	4. C	4. C	4. B	4. E	4. D
5. A	5. C	5. D	5. C	5. D	5. A	5. C
6. A	6. D	6. D	6. B	6. C	6. B	6. A
7. A	7. D	7. E	7. B	7. D	7. D	7. A
8. B	8. C	8. E	8. A	8. A	8. D	8. D
8. B	8. D	8. A	8. E	8. B	8. D	8. A
10. D	10. D	10. C	10. E	10. C	10. A	10. D
11. B	11. A	11. C	11. B	11. A	11. B	11. D
12. B	12. D	12. C	12. A	12. A	12. B	12. D
13. A	13. A	13. A	13. C	13. D	13. B	13. D

14. D	14. A	14. A	14. D	14. C	14. A	14. A
15. E	15. B	15. D	15. E	15. D	15. D	15. B

ANSWERS

CURRENT AFFAIRS

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR	7TH YEAR
1. B	1. D	1. B	1. B	1. D	1. C	1. B
2. B	2. A	2. D	2. B	2. C	2. B	2. A
3. D	3. E	3. D	3. A	3. B	3. C	3. B
4. C	4. D	4. D	4. D	4. B	4. B	4. A
5. A	5. B	5. C	5. B	5. C	5. A	5. D
6. A	6. see below	6. C	6. A	6. C	6. D	6. D
7. A	7. see below	7. D	7. C	7. C	7. A	7. A
8. A	8. see below	8. C	8. E	8. D	8. A	8. A
8. see blow	8. see below	8. B	8. A	8. D	8. D	8. C
10. see below	10.see below	10.C	10. B	10. D	10. B	10. D

OPEC: ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES.

NACA: NATIONAL AGENCY FOR THE CONTROL OF AIDS.

NANM: NATIONAL ASSOCIATION OF NIGERIAN NURSES AND MIDWIVES
PATHS: PARTNERSHIP FOR TRANSFORMING HEALTH SYSTEM
ECWA: EVANGELICAL CHURCH OF WINNING ALL
SIM: SUBSCRIBER IDENTITY MODULE
NCC: NIGERIAN COMMUNICATION COMMISSION
DFID: DEPARTMENT FOR INTERNATIONAL DEVELOPMENT

NHIS: NATIONAL AGENCY FOR FOOD AND DRUG ADMINISTRATION AND CONTROL
ILO: INTERNATIONAL LABOUR ORGANIZATION
NAFDAC: NATIONAL AGENCY FOR FOOD AND DRUG ADMINISTRATION AND CONTROL
HIV: HUMAN IMMUNODEFICIENCY NETWORK
MTN: MOBILE TELECOMMUNICATION NETWORK
WHO: WORLD HEALTH ORGANIZATION
UNICEF: UNITED NATIONS INTERNATIONAL EMERGENCY CHILDREN'S FUND
UNESCO: UNITED NATIONS ORGANIZATION FOR EDUCATION, SCIENCE AND CULTURE
UAE: UNITED ARAB EMIRATES