SECTION B: GENERAL PAPER (BIOLOGICAL SCIENCES)

1. Which of the structures below is peculiar in the axis vertebra
   A. Centrum B. Prezygapophysis C. Lateral spine D. Odontoid

2. A plant which has a horizontal underground stem us a .....
   A. Rhizome B. Creeper C. Tuber D. Bulb

3. Epigeal germination can be found in .....
   A. groundnut B. sorghum C. millet D. maize

4. The mammalian organ which acts both as a digestive and as an endocrine organ is the .....
   A. liver B. pancreas C. spleen D. adrenal gland

5. Which of the following does a virus have in common with animal cell?
   A. Glycogen B. Starch C. Nucleus D. DNA

6. Spirogyra, Euglena and Chlamydomonas share many characteristics except.....
   A. growth B. mobility C. reproduction D. irritability

7. Parasitic forms are not found among .....
   A. molluscs B. nematodes C. annelids D. plathyhelminthes

8. A good example of diploblastic organism is .....
   A. hydra B. insect C. roundworm D. amoeba

9. What is the number of an element if its atom contains 10 protons, 10 electrons and 12 neutrons?
   A. 32 B. 22 C. 20 D. 10

10. The loss of water of crystallization to the atmosphere by some crystalline salts is known as...
    A. efflorescence B. effervescence C. deliquescence D. phosphorescence

11. Carbon is often deposited in the exhaust pipe of cars because of the.....
    A. dehydrogenation of petrol B. incomplete combustion of petrol C. Presence of additives
    D. presence of carbon in petrol

12. Plastics are polymer whose production techniques involve all except.....
    A. high pressure B. low pressure C. salting D. high temperature

13. Which of the following gases is produced when ammonium trioxonitrate (V) is heated with sodium hydroxide?
    A. Oxygen B. Ammonia C. Nitrogen (IV) oxide D. Hydrogen

14. How many grammes of HCl will be required to react with 10g of NaOH (H = 1, Cl = 35.5, Na = 23, O = 16)?
    A. 9.125g B. 4.6g C. 10.1g D. 18.4g

15. The bond formed between H_2O and H^+ to form the hydroxonium ion is ....
    A. co-ordinate covalency B. Electrovalent C. Covalent D. Ionic

16. Common salt is dissolved in water and the mixture is evaporated. The vapour given off is condensed. The condensed vapour is a .....
    A. solute B. suspension C. solvent D. solution

17. When some substances are heated, they change directly into gases without appearing in the liquid state. An example is .....

A. copper B. iodine C. sodium D. sulphur

18. What is the IUPAC name of the compound $KMnO_4$?
A. Potassium manganate B. Potassium tetraoxo manganate(VII) C. Potassium trioxomanganate (IV) D. Potassium oxomanganate (IV)

19. Which of the following is the dimension of pressure?
A. MLT^2 B. $ML^{-1}T^{-2}$ C. ML^{-3} D. $ML^{-2}T^{-2}$

20. Which of the following statements is or are correct about a car moving round a circular track at a uniform speed? (i) Its velocity is uniform (ii) It undergoes an acceleration (iii) The friction between its tyres and the ground provides necessary centripetal force
A. (i) and (iii) only B. (i) only C. (iii) only D. (ii) only

21. A body initially at rest is accelerated at a rate of $0.2ms^{-2}$ for 5s under a constant force of 50N. The work done on the body is .....
A. 50J B. 2.5J C. 125J D. 250J

22. The formation of clouds results directly from.....
A. vaporization B. fusion C. condensation D. sublimation

23. Replenishing soil nutrients involves one of the following.....
A. Leaching B. Cover Cropping C. Bush Burning D. Grazing

24. For a wire of a specific material, which of the following will give the lowest resistance in a circuit?
A. A short, thick wire B. A short, thin wire C. A long, thin wire D. A long, thick wire

25. A change in temperature of 45°C is equivalent to a change in temperature on the Kelvin scale of .....
A. 25K B. 318K C. 45K D. 81K

26. A disease that causes abortion in cattle at the after stage of pregnancy is....
A. milk fever B. brucellosis C. pneumonia D. foot and mouth disease

27. Which of the following instruments is used to measure relative humidity?
A. barometer B. Hydrometer C. Manometer D. Hygrometer

28. Which of these statements is correct about cathode rays? They are fast moving.....
A. atoms B. protons C. neutrons D. electrons

29. On a day when humidity of the air is very high, evaporation from a water pond will be .....
A. rapid B. slow C. zero D. fast

30. The cells that surround the stomata are called .....
A. stomatal cells B. epidermal cells C. guard cells D. piliferous layer

31. On the induction of new students in a certain school, 800 students turned up at the opening ceremony, 600 students turned up for the novelty match and there is a total of 1234 students altogether in the school. How many students attended both ceremonies if a student attended at least one of the functions?
A. 1400 B. 1660 C. 140 D. 166

32. In how many ways can a committee of 5 comprising of 3 males and 2 females be formed from 6 males and 4 females?
A. 20 ways B. 6 ways C. 12 ways D. 120 ways

33. Which of the following is not an exterior angle of a regular polygon?
A. 24° B. 18° C. 15° D. 180°.

34. If the square root of $x^2 + 9 = x + 1$, solve for x
A. 5 B. 4 C. 3 D. 1

35. Simplify $\frac{3}{5} \div (\frac{2}{7} \times \frac{4}{3} \div \frac{4}{9})$
A. 4/5 B. 7/10 C. 6/7 D. 21/6

36. Which of these animals is radically symmetrical?
A. Squid B. Snail C. Hydra D. Earthworm

37. A food substance was treated with a few drops of Sudan II solution and red colouration was obtained. The food contained .....
A. starch B. vitamins C. protein D. fat

38. Members of the phylum protozoa use the contractile vacuole to.....
A. reproduce B. remove excess food C. digest food D. remove excess water

39. The primary secondary hosts of Bilharzias are.....
A. man and dog B. man and snail C. fish and snail D. snail and dog

40. Which of the following statements is true of blood group transfusion?
A. Group B can donate to group B only B. Group AB can donate to all C. Group A can donate to Group A only D. Group AB is the universal recipient.