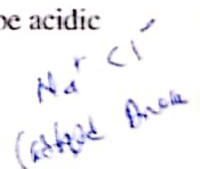


SECTION B: GENERAL PAPER

Answer all questions

1. One of the factors that must be considered for safe blood transfusion is
(a) social class of the donor (b) rhesus factors of the donor and the recipient (c) age of the recipient (d) nationality of the donor
2. A certain radioactive source emits radiations that were found to be deflected by both magnetic and electric fields. The radiations are
(a) infra-red rays (b) x-rays (c) gamma rays (d) beta rays
3. Which of the following is not a contact force?
(a) gravity (b) viscosity (c) tension (d) reaction
4. Which of the following instruments has a pure tone?
(a) vibrating string (b) tuning fork (c) siren (d) violin
5. Which of the following mammalian feature acts as a shock absorber to the developing embryo?
(a) umbilical cord (b) amniotic fluid (c) placenta (d) amnion
6. What is not found in an atom?
(a) electron (b) molecules (c) neutron (d) proton
7. Which of the following consists of a pair of fundamental quantities only?
(a) luminous intensity, time (b) current, weight (c) mass, velocity (d) length and speed
8. A cube of side 20cm floats in water with 15cm of its height submerged. What is the density of the material of the cube?
(a) 1.85gm.cm^{-3} (b) 0.85gm.cm^{-3} (c) 0.75gm.cm^{-3} (d) 0.65gm.cm^{-3}
9. The path described by a projectile motion is
(a) convex (b) concave (c) parabolic (d) straight line
10. Which does not decolorize bromine water?
(a) C_2H_2 (b) C_2H_4 (c) C_2H_6 (d) C_3H_6
11. The maintenance of a constant internal environment is called
(a) environmental regulation (b) balance in nature (c) peristalsis (d) homeostasis
12. What change will occur during the electrolysis of brine using carbon electrodes?
(a) chlorine will be given off at the cathode (b) hydrogen gas will be given off at the cathode
(c) sodium will be deposited at the cathode (d) the resulting solution after electrolysis will be acidic
13. The theory of use and disuse of organs was propounded by
(a) Charles Darwin (b) Jean Lamarck (c) Louis Pasteur (d) Robert Hooke
14. Aluminum materials should not be exposed to alkalis because aluminum is
(a) basic (b) acidic (c) amphoteric (d) a reducing agent
15. Which of the following sources of energy is renewable?
(a) petroleum (b) coal (c) nuclear (d) ocean
16. A certain mass of gas has a volume of 241cm^3 at 18°C and 53mmHg pressure. What would its volume be at s.t.p.?
(a) 224cm^3 (b) 15.77cm^3 (c) 22.4cm^3 (d) 0.0224cm^3

$V = 8000\text{cm}^3$
 $P = \rho h g$
 $P = \frac{F}{A}$



17. Auxins are produced in the
(a) petiole of leaves (b) epidermis of roots and shoots (c) parenchyma of roots and shoots
(d) apical regions of roots and shoots
18. If the solubility of a salt at 25°C is 45g per 1000g of water. How much of the salt is obtained from 50g of the solution?
(a) 2.25g (b) 20g (c) 12g (d) 25g $45 \rightarrow 1045$
19. If the pH of a solution of dilute hydrochloric acid solution is 2. The concentration of the solution in mol dm^{-3} is
(a) 0.01 (b) 0.02 (c) 1.0 (d) 2.0
20. Hydra is able to perform all the following except
(a) feeding (b) photosynthesis (c) moving (d) digestion
21. The motion of the prongs of a tuning fork can rightly be described as
(a) oscillatory (b) translational (c) random (d) rotational 2
22. The bleaching action of chlorine water is because
(a) of its reducing property (b) of its oxidizing power (c) it is an oxygen producing agent (d) it is a weak acid
23. Spherical bacterial cells in long chains are called
(a) staphylococci (b) streptococci (c) cocci (d) bacilli
24. Which of the following crop disease is caused by a fungus?
(a) groundnut rosette (b) blackpod disease of cocoa (c) yam mosaic (d) cassava blight
25. Which of these is not a function of the kidney?
(a) production of urine (b) production of bile (c) enzyme regulation (d) concentration of urine
26. People in the blood group which receive blood from any other group fall into
(a) AB blood group (b) O blood group (c) A blood group (d) B blood group
27. What is formed when starch is completely hydrolyzed
(a) fructose (b) glucose (c) lactose (d) maltose
28. Which of the following type of motion is least exhibited by the toy top?
(a) random (b) rotational (c) oscillatory (d) translational
29. Sulphur
(a) forms two alkaline oxides (b) is spontaneously flammable (c) burns with a blue flame (d) conducts electricity in the molten state
30. Hot water is added to four times its mass at 20°C and the resulting temperature 30°C . What is the initial temperature of the hot water?
(a) 50°C (b) 60°C (c) 70°C (d) 80°C

mass of water Hot water
 $m_c \Delta\theta = m_c \Delta\theta$
 $4m_c(20) = m_c(10)$