

Full Syllabus Test

Time: 3 hrs.

(All questions are compulsory)

PHYSICS

1. How does a fuse work when connected to circuit? [2]
2. Name the mode of transfer of heat in which medium is not required? How does the heat travel in air? [1+1]
3. State whether the following motion is uniform or non-uniform? [3]
 - (i) A simple pendulum is oscillating.
 - (ii) A car moving on a busy road.
 - (iii) A vibrating spring in a sewing machine.
4. State the two factors on which the time period of a simple pendulum depend. [2]
5. Pijush moves along a rectangular path ABCD. He takes 2 min to travel each side. Plot a distance time graph and explain whether the motion is uniform or non-uniform. [3]

[AB = 8m, BC = 6m, CD = 8m, DA = 6m]
6. Name two effects of electric current. [1]
7. State the characteristics of image formed by a plane mirror. [1]
8. Can you get a real image which is double of the object, placed in front of a convex mirror? [1]
9. The letters on the front of an ambulance are laterally inverted like **ƎƆNƆA⅃BMA**. Give reason. [2]
10. What do you mean by overloading of an electric circuit? State two measures to avoid overloading. [1+2]
11. Draw a circuit diagram showing a bulb, a closed switch and a battery of four cells. Also show the direction of current flowing through the circuit. [3]
12. Find the angle of incidence and angle of reflection for the following cases. [2]
 - (i) A ray passing along the surface of the mirror.
 - (ii) A ray passing along the normal of the mirror.
13. Explain the phenomenon of dispersion. [2]

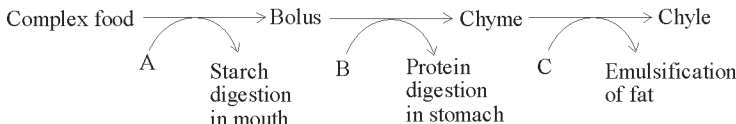
CHEMISTRY

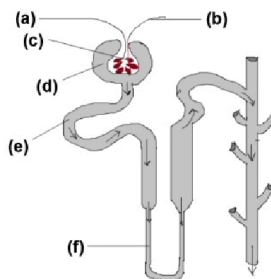
14. (i) (a) What is an indicator? [4]
 - (b) Three liquids are given to you. One is sulphuric acid, another is sodium hydroxide and the third is a salt solution. How will you identify them? You have only turmeric paper indicator.
- (ii) Which of the following bases is used as a cleansing agent? [1]
 - A. Magnesium hydroxide
 - B. Calcium hydroxide
 - C. Sodium hydroxide
 - D. Ammonium hydroxide
15. (i) (a) What is a salt? [4]
 - (b) What are the different types of salts? Give one example of each.
- (ii) Which of the following substances helps in reducing the irritation caused by the sting of an ant? [1]
 - A. Vinegar
 - B. Lemon juice
 - C. Calamine (zinc carbonate)
 - D. Orange juice
16. Name the cation and the anion in the salt – Calcium sulphate. [2]
17. Difference between basic radical and acid radical with suitable example. [2]
18. Dilute hydrochloric acid is added to sodium hydroxide, give a word equation and molecular equation of the same. [3]

Is the equation written, a balanced equation give reason.
19. Give symbol and charge of these following radical [2]
 - (a) Nitrate
 - (b) Ammonium

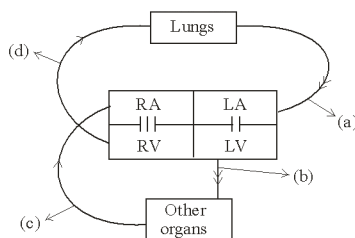
20. Give chemical formula of these following compounds. [2]
 (a) Barium sulphate
 (b) Sodium phosphate
21. Balance the equation: [5]
 (a) $\text{N}_2 + \text{H}_2 \rightleftharpoons \text{NH}_3$
 (b) $\text{P}_4 + \text{O}_2 \rightarrow \text{P}_2\text{O}_5$
 (c) $\text{NO} + \text{O}_2 \rightarrow \text{NO}_2$
 (d) $\text{NaHCO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{CO}_2 + \text{H}_2\text{O}$
 (e) $\text{C}_3\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

BIOLOGY

22. Name the inactive form of trypsin. [1]
 23. How do fallen leaves help the soil in forest? [1]
 24. 
 (i) Identify A, B and C. [1+1+1]
 (ii) At what pH does B work in? [1]
25. Define fertilization. [1]
 26. Apart from lungs, toads respire by their _____. [1]
 27. Name the covering of the heart. [1]
 28. Define blood pressure. What is its measuring unit? [2]
 29. What is canopy? How it prevents soil erosion? [2]
 30. Label (a) to (f). [3]



31.



- (i) What sort of blood is in (a) and (d)? [1]
 (ii) Identify (a) to (d). [2]
32. Describe the mechanism of breathing in humans. [3]
 33. Define respiration in a cell. What are its types? Write four differences between them. Define fermentation. [1 + 1 + 2 + 1]