



16. State two conditions necessary for rusting of iron.
17. Write the dental formula of rabbit?
18. Draw the structure of Human sperm and labelled parts.
19. Why is Archaeopteryx considered to be a connecting link?
20. Write the reaction for photosynthesis?
21. What is STAGE?
22. If the pH of a solution is 4.5, what is  $pOH$ ?

### Part - III

**Note : Answer any seven questions. Question No. 32 is compulsory.  $7 \times 4 = 28$**

23. List any four properties of light.
24. Differentiate the feature of Nuclear fission and nuclear fusion.
25. a) Define : Atomicity.  
b) Give any two examples for heteroditomic molecules.
26. a) Identify the bond between H and F in HF molecule.  
b) What property forms the basis of identification?  
c) How does the property vary in periods and in groups?
27. How does pH play an important role in everyday life?
28. Explain the male reproductive system of rabbit with labelled diagram.
29. Enumerate the function of blood?
30. a) What is bolting? How can it be induced artificially?  
b) What are chemical messngers?
31. How do you differentiate homologous organ from analogous organs?
32. Calculate the current and the resistance of a 100w, 200v electric bulb in an electric circuit.

### PART - IV

**Note : Answer all the questions. Draw diagram wherever necessary.  $3 \times 7 = 21$**

33. a) i) Define : Inertia. ii) What are the types inertia given example for each type.  
(OR)  
b) i) What is an echo? ii) State two conditions necessary for hearing an echo.  
iii) What are the medical application of echo?
34. a) i) Define - solubility. ii) Write notes on various factors affecting solubility.  
(OR)  
b) i) How do detergents cause water pollution? Suggest remedial measure to present this pollution?  
iii) Differentiate soap and detergents.
35. a) With a neat labelled diagram explain the structure of a neuron.  
(OR)  
b) Write the events involved in the sexual reproduction of a flowering plant.  
i) Discuss the first event and write the types.  
ii) Mention the advantages and the disadvantages of that event.

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