

Time: 3 Hours

Max. Marks: 80

Instructions:

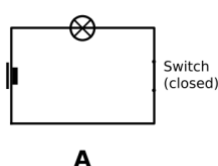
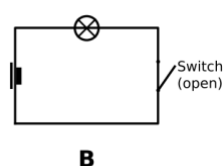
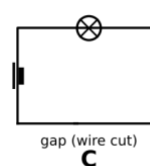
1. The question paper has 4 sections and 33 questions. Answer all the questions.
2. Section A: 20 multiple choice questions of 1 mark each. Write the letter of the correct answer.
3. Section B: 4 questions of 2 marks each. Section C: 5 questions of 4 marks each.
4. Section D: 4 questions of 8 marks each. Each question in Section D has an internal choice.
5. Draw neat, labelled diagrams wherever necessary.

SECTION – A

20 × 1 = 20

Choose the correct answer and write its letter.

1. Vinegar contains
A) citric acid B) acetic acid C) lactic acid D) tartaric acid
2. Curd is sour because it contains
A) acetic acid B) citric acid C) lactic acid D) formic acid
3. Red litmus paper turns blue in
A) an acidic solution B) a basic solution C) a neutral solution D) lemon juice
4. China rose indicator turns an acidic solution
A) dark pink (magenta)
B) green
C) blue
D) yellow
5. Solutions that do not change the colour of red or blue litmus are
A) acidic B) basic C) neutral D) salty
6. An antacid tablet taken for indigestion contains
A) an acid B) a base C) a salt only D) sugar
7. Which of the following is an insulator?
A) iron B) copper C) rubber D) aluminium
8. The thin wire inside a bulb that glows is called the
A) filament B) terminal C) switch D) fuse
9. In the circuits shown, the bulb does NOT glow in



- A) A only B) B only C) B and C D) A and C
10. A combination of two or more electric cells is called a
A) switch B) battery C) circuit D) bulb

11. Metals produce a ringing sound when struck. This property is called
A) ductility B) malleability C) sonority D) lustre
12. The metal that is a liquid at room temperature is
A) mercury B) sodium C) bromine D) iron
13. The 'lead' of a pencil is made of
A) lead metal
B) graphite (a form of carbon)
C) sulphur
D) iron
14. Oxides of metals are generally
A) acidic B) basic C) neutral D) sour
15. Formation of curd from milk is a
A) physical change B) chemical change C) reversible change D) change of state
16. Folding a sheet of paper is a
A) physical change
B) chemical change
C) permanent change
D) change that forms a new substance
17. Rust is chemically
A) iron sulphate B) copper oxide C) iron oxide D) magnesium oxide
18. Scientific knowledge changes when
A) new evidence is found
B) people stop asking questions
C) books are printed
D) nothing is observed
19. Which of the following is a healthy habit during adolescence?
A) a daily bath and clean clothes
B) skipping breakfast
C) eating only junk food
D) sleeping very little
20. Galvanisation means coating iron with a layer of
A) copper B) zinc C) paint D) oil

SECTION – B

4 × 2 = 8

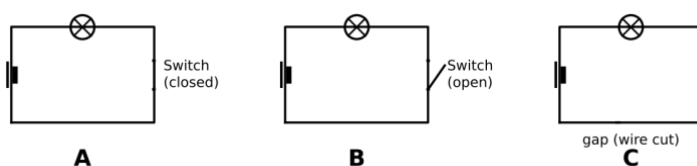
21. Why is an ant bite treated by rubbing baking soda solution on it?
22. Name two conductors and two insulators that you find at home.
23. Why is aluminium foil used for wrapping food? Name the property of metals involved.
24. Why is rusting harmful? Write two ways to prevent it.

SECTION – C

5 × 4 = 20

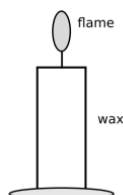
25. Classify the following as acidic, basic or neutral and write what happens to red and blue litmus in each:
lemon juice, soap solution, sugar solution, vinegar, lime water, common salt solution.

26. Look at the circuits A, B and C. In which circuit does the bulb glow? Explain why the bulb does not glow in the other two.



27. Write any four uses of metals in our daily life with examples.

28. When a candle burns, both physical and chemical changes take place. Identify them.



29. Why is a balanced diet important during adolescence? Name four foods that should be included in it.

SECTION – D

4 × 8 = 32

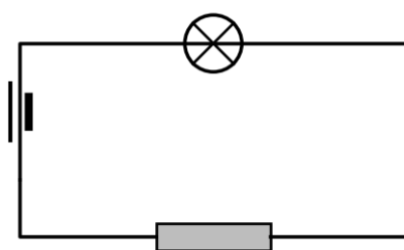
Each question has an internal choice. Answer either (a) or (b).

30. a) Describe an activity of adding dilute hydrochloric acid to sodium hydroxide solution with an indicator (phenolphthalein). What do you observe? Is heat given out or taken in? Write a word equation for the reaction.

(OR)

b) Make a table showing the colour of litmus, turmeric and China rose indicators in acidic and basic solutions. Why should we not taste substances in the laboratory to find out whether they are acids or bases?

31. a) Using the tester shown, test the following and record whether the bulb glows: iron nail, coin, rubber eraser, wooden scale, pencil lead, plastic comb. Classify them as conductors or insulators.



Object to be tested
(between the two free ends)

(OR)

b) Draw a labelled diagram of an electric cell and show its positive and negative terminals. Draw a circuit diagram with a battery of two cells, a switch and a bulb, and explain how it works.

32. a) Compare metals and non-metals on the basis of lustre, hardness, malleability, ductility, conduction of heat and electricity, and sonority, in a table.

(OR)

b) Describe the burning of a magnesium ribbon. What is formed? Dissolve the ash in water and test with litmus. What does the result show? Write a word equation.

33. a) Describe the reaction of vinegar with baking soda. Which gas is formed and how will you test it with lime water? List any four signs that show a chemical change has taken place.

(OR)

b) Explain with examples: (i) reversible and irreversible changes, (ii) physical and chemical changes. Classify: melting of butter, cooking of rice, rusting, dissolving sugar in water, burning of paper, stretching a rubber band.

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