



CHEMISTRY

BOOKS - ICSE

SPECIMEN PAPER 2

Section I

1. Choose the correct word from the brackets to complete the sentences.

Sulphur dioxide turns _____ (acidic/alkaline) potassium dichromate paper green.



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2. Choose the correct word from the brackets to complete the sentences.

The element which shows variable valency is _____ (Iron, Sodium, Aluminium)



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3. Choose the correct word from the brackets to complete the sentences.

Pressure-volume relationship is given by _____ (Boyle's, Charles's) law.



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4. Choose the correct word from the brackets to complete the sentences.

Hydrogen gas is adsorbed by metal _____ (Copper, Aluminium, Palladium)





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5. Choose the correct word from the brackets to complete the sentences.

Acid reacts with base to give salt and water.

The reaction is known as _____

(Decomposition, Neutralisation,

Displacement.)



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6. Give reasons for the following

The physical properties of isotopes are different.



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7. Give reasons for the following

Conc. sulphuric acid is used as a dehydrating agent.



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8. Give reasons for the following

$AlCl_3$ is known as Aluminium chloride while

PCl_3 is known as phosphorus trichloride.



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9. Give reasons for the following

Hydrogen is kept in I A group of the periodic table.



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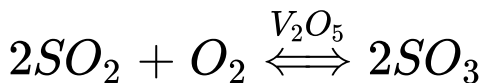
10. Give reasons for the following

Table salt absorbs moisture during the rainy season.



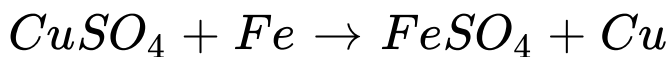
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11. Name the type of reactions for the following chemical equations.



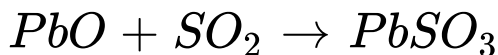
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12. Name the type of reactions for the following chemical equations.



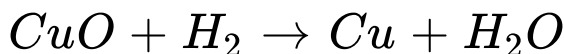
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13. Name the type of reactions for the following chemical equations.



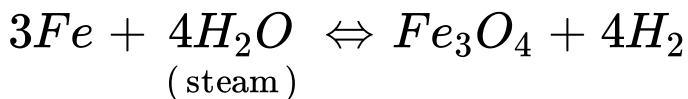
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14. Name the type of reactions for the following chemical equations.



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15. Name the type of reactions for the following chemical equations.



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Element	At. No.	Mass No.	P	N	electronic configuration
B	11	23	11	—	—
C	17	35	—	18	2, 8, 7
D	—	37	17	—	—

16.

- (i) Study the above table and fill in the blanks.
- (ii) What is the relationship between C and D elements ?
- (iii) Define the term stated in (ii).
- (iv) Write the formula of compound formed between D and B.



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17. Name the following

Chemicals responsible for ozone layer

destruction



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18. Name the following

An element which does not contain any
neutron



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19. Name the following

A salt which has zinc in its anion



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20. Name the following:

Green house gases



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21. Name the following

Drying agent for hydrogen chloride gas



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22. Define or explain :

Charles's Law



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23. Define or explain :

Absolute zero



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24. Define or explain :

Deliquescence



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25. Define or explain :

Efflorescence



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26. Define or explain :

Modern periodic law.



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27. What volume would a gas occupy at 2 atm.
and $227^{\circ}C$ if its volume at S.T.P. is 2-5 litres.



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28. An element X form a hydroxide $X(OH)_3$.

Find the valency of X



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29. An element X form a hydroxide $X(OH)_3$.

Write the formula of its carbonate.



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30. Give one example of each

Solid oxidising agent



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31. Give one example of each

Negative catalyst



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32. Give one example of each

Hygroscopic solid substance



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33. Give one example of each

A non-metallic reducing agent



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34. Give one example of each

A gaseous substance which acts as an oxidising as well as a reducing agent.



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Section II

1. Give reasons :

Sodium is kept in an inert solvent.



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2. Give reasons :

Hydrogen is collected by downward displacement of water.



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3. Give reasons :

Hydrogen is not prepared by reacting conc H_2SO_4 with Zn



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4. Give reasons :

Conc. sulphuric acid is used as drying agent.



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5. Give reasons :

Detergents are better than soap.



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6. Give the test of the gas evolved when dilute sulphuric acid is added to the following:

Magnesium metal



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7. Give the test of the gas evolved when dilute sulphuric acid is added to the following:

Sodium carbonate



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8. Give the test of the gas evolved when dilute sulphuric acid is added to the following:

Sodium sulphide



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9. Give the test of the gas evolved when dilute sulphuric acid is added to the following:

Potassium sulphite



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10. Give an example of a reaction where heat is released.



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11. Name the substances responsible for permanent hardness



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12. Explain one method of removing permanent hardness.



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13. Complete the table by writing the following as basic and acidic radicals and then their formulae :

Name	Basic radical	Acidic radical	Formula
(i) Magnesium hydrogen sulphate			
(ii) Aluminium sulphate			
(iii) Ammonium phosphate			



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14. State the cause of acid rain and mention its impact.



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15. Explain why : Fused $CaCl_2$ or conc. H_2SO_4 is used in a desiccator.



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16. Explain why?

conc. sulphuric acid should be stoppered.



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17. Write balanced equations for the following reactions.

Water is reacted with sodium.



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18. Write balanced equations for the following reactions.

Steam is passed over red hot iron.



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19. Write balanced equations for the following reactions.

Ammonium dichromate is heated.



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20. Write balanced equations for the following reactions.

Lead reacts with hot and conc. caustic soda



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21. Write balanced equations for the following reactions.

Copper reacts with conc. sulphuric acid to produce copper sulphate, sulphur dioxide and water.



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22. What are isotopes ? Draw the structures of the isotopes of hydrogen.



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23. Compare three properties of hydrogen which resembles the alkali metals.



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24. At what centigrade temperature will the volume of a gas at $0^{\circ}C$ triple itself if the pressure remains constant.



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25. Hydrogen is prepared by Bosch process ?

Write the balanced equations of the reactions with conditions.



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26. Hydrogen is prepared by Bosch process ?

How are the products separated ?



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27. Write the name of the product formed and give balanced equation of the reaction when :
ammonium chloride is heated



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28. Write the name of the product formed and give balanced equation of the reaction when :
calcium is reacted with cold water



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29. Write the name of the product formed and give balanced equation of the reaction when :
lead nitrate is heated



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30. Give a general idea of Dobereiner triads with one example.



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31. State Mendeleev's periodic law.



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32. An element X has atomic number 17 and has mass no. 37.

Draw its orbital structure and state the position of X in the periodic-table.



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33. Write the molecular formula of magnesium phosphate.



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34. What is the percentage of phosphorus in magnesium phosphate ?

[At. Mass : Mg = 24, P = 31, O = 16]



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