



# **Series-B**

Roll No.....

Total No. of Questions-28] [Total No. of Printed Pages-16

**A-855-B-XII-2325**

## **CHEMISTRY**

### **(Theory)**

Time Allowed—3 Hours      Maximum Marks—60

Candidates are required to give their answers in their own words as far as practicable.

Marks allotted to each question are indicated against it.

### **Special Instructions :**

- (i) You must write Question Paper Series in the circle at top left side of title page of your Answer-book.

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- (ii) While answering your Questions, you must indicate on your Answer-book the same Question No. as appears in your Question Paper.
- (iii) Do not leave blank page/pages in your Answer-book.
- (iv) All questions are compulsory. Answer all parts of a question together.
- (v) Internal choices are given in some questions.
- (vi) Answers should be brief and to the point.
- (vii) Question Nos. 1 to 12 are MCQ (Multiple Choice Questions) carrying 1 mark each. Question Nos. 13 to 19 are very short answer type questions carrying 2 marks each. Question Nos. 20 to 24 are short answer type questions carrying 3 marks each. Question No. 25 is case study based question and carries 4 marks. Question Nos. 26 to 28 are long answer type questions carrying 5 marks each.



- (viii) All questions given in Section–A (Multiple Choice Questions) are to be attempt on OMR sheet provided with Answer book.

## **SECTION-A**

### **(Multiple Choice Questions)**

1. Molarity of pure water is : 1
- (a) 18
- (b) 5.56
- (c) 55.55
- (d) 100.
2. Value of one Faraday (1F) of electricity is approximately equal to : 1
- (a) 96200 C
- (b) 96500 C
- (c) 96000 C
- (d)  $1.6 \times 10^{-19}$  C.





3.  $\text{CuSO}_4$  solution can not be stored in a vessel made up of : 1

- (a) Zinc
- (b) Glass
- (c) Copper
- (d) Plastic.

4. A strong electrolyte : 1

- (a) Does not dissociate into ions.
- (b) Dissociate into ions completely.
- (c) Dissociate into ions but not completely.
- (d) None of these.

5. Aliphatic and Aromatic primary amine when heated with chloroform ( $\text{CHCl}_3$ ) and alcoholic solution of KOH, Isocyanide having unpleasant smell is formed. This reaction is known as : 1

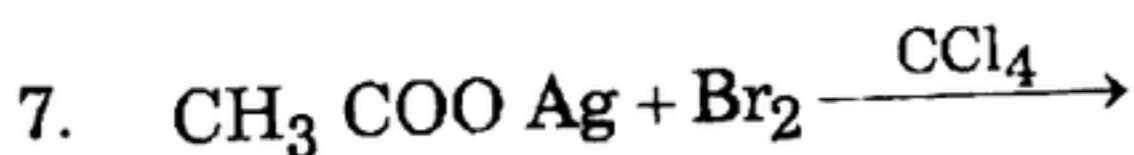
- (a) Carbylamine reaction.

- (b) Stephen reaction.
- (c) Sandmayer reaction.
- (d) Swartz reaction.

6. Heaviest transition metal is :

1

- (a) Fe
- (b) Cu
- (c) Cr
- (d) Os.



The product of this reaction is :

1

- (a)  $\text{CH}_3\text{CH}_2\text{Br} + \text{CO}_2 + \text{AgBr}$
- (b)  $\text{CH}_3\text{CH}_2\text{Cl} + \text{CO}_2 + \text{AgBr}$
- (c)  $\text{CH}_3\text{Cl} + \text{CO}_2 + \text{AgBr}$
- (d)  $\text{CH}_3\text{Br} + \text{CO}_2 + \text{AgBr}$ .



8. IUPAC name of  $\text{CH}_3 - \overset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{CH}_2\text{CH}_3$  is : 1

(a) Butane - 2 - al

(b) Butan- 2 - one

(c) Butane - 3 - one

(d) 2 - methyl propane - 1 - one.

9. The correct order of Increasing boiling point is : 1

(a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO} < \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$   
 $< \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH} < \text{C}_2\text{H}_5\text{OC}_2\text{H}_5.$

(b)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3 < \text{C}_2\text{H}_5\text{OC}_2\text{H}_5$   
 $< \text{CH}_3\text{CH}_2\text{CH}_2\text{CHO} < \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}.$

(c)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH} < \text{C}_2\text{H}_5\text{OC}_2\text{H}_5$   
 $< \text{CH}_3\text{CH}_2\text{CH}_2\text{CHO} < \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3.$

(d) None of these.



10. Units of rate constant for a zero order reaction  
is :

1

- (a)  $\text{mol L}^{-1}\text{S}^{-1}$
- (b)  $\text{S}^{-1}$
- (c)  $\text{L mol}^{-1} \text{S}^{-1}$
- (d)  $\text{L}^2 \text{mol}^{-2} \text{S}^{-1}$ .

11. Assertion (A) : Acetic acid but not formic acid  
can be halogenated in the  
presence of Red P and  $\text{Cl}_2$ .

Reason (R) : Acetic acid is a weaker acid  
than formic acid.

- (a) Both Assertion (A) and Reason (R) are true  
and Reason (R) is the correct explanation  
of Assertion (A).



- (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not correct explanation of Assertion (A).
- (c) Assertion (A) is true but Reason (R) is false.
- (d) Assertion (A) is false but Reason (R) is true. 1

12. Assertion (A) : Alcohols have high boiling point than hydrocarbons of comparable molecular mass.

Reason (R) : Alcohols form inter molecular hydrogen bond between their molecules.

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

