



CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY

(TAMIL ENGLISH)

SAMPLE PAPER - 12 (UNSOLVED)

Part I

1. Consider the following statements.

(i) All ores are minerals but all minerals are not

ores.

(ii) Bauxite is an ore of aluminium while clay is not.

(iii) Extraction of aluminium from clay is profitable one.

Which of the above statement(s) is/are not correct?

A. (i) only

B. (ii) only

C. (iii) only

D. (i), (ii) and (iii)

Answer: C



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2. $B_2H_6 + 6CH_3OH \rightarrow A$. Identify A

A. B_2O_3

B. CH_3OB

C. CH_3OH

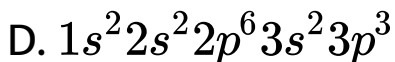
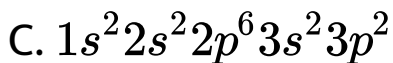
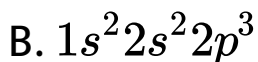
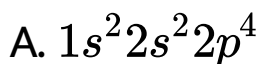
D. $B(OCH_3)_3$

Answer: D



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3. An element belongs to group 15 and 3rd period of the periodic table, its electronic configuration .

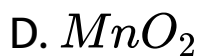
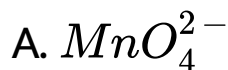


Answer: D



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4. Permanganate ion changes to _____ in acidic medium

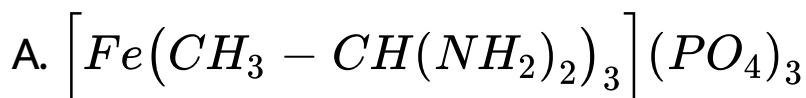


Answer: B

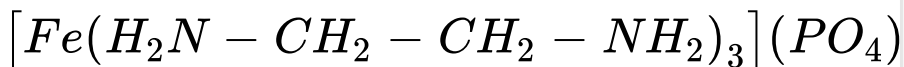


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5. Formula of tris(ethane-1,2-diamine)iron(II)phosphate



B.



C.



D.



Answer: D



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6. Which one of the following is an example for molecular crystals?

A. Diamond

B. Silica

C. Glass

D. Naphthalene

Answer: D



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7. , This reaction follows first order kinetics. The rate constant at particular temperature is $2.303 \times 10^{-2} \text{hour}^{-1}$. The initial concentration of cyclopropane is 0.25 M. What will be the concentration of cyclopropane after 1806 minutes? ($\log 2 = 0.3010$)

A. 0.125 M

B. 0.215 M

C. $0.25 \times 2.303M$

D. 0.05 M

Answer: B



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8. Conjugate base of Bronsted acids H_2O and HF are

A. OH^- and H_2FH^+ , respectively

B. H_3O^+ and F^- , respectively

C. OH^- and F^- , respectively

D. H_3O^+ and H_2F^+ , respectively

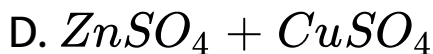
Answer: C



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9. The salt bridge used in Daniel cell contains

_____ .



Answer: B



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10. Consider the following statements:

(i) A catalyst needed in very small quantity

(ii) A catalyst can initiate a reaction

(iii) Catalyst are highly specific in nature

Which of the above statement is/are not correct?

A. *i&iii*

B. *ii&iii*

C. iii only

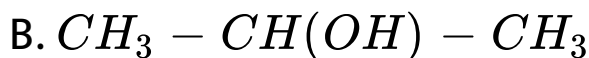
D. ii only

Answer: D

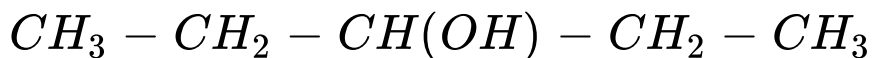


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11. An alcohol (x) gives blue color in Victor Mayer's test and 3.7g of X when treated with metallic sodium liberates 560 mL of hydrogen at 273 K and 1 atm pressure what will be the possible structure of X?



D.

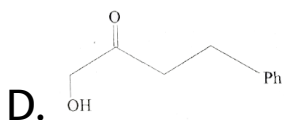
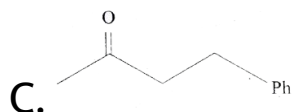
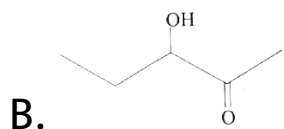
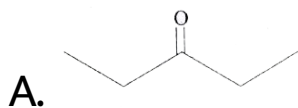


Answer: A



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12. In which case chiral carbon is not generated by reaction with HCN



Answer: A



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13. Aniline + Benzene diazonium chloride \rightarrow X.

Identify X.

A. orange dye

B. yellow dye

C. malachite green dye

D. madder dye

Answer: B



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14. Among the following the achiral amino acid is

- A. 2-ethylalanine
- B. 2-methylglycine
- C. 2-hydroxymethylserine
- D. Tryptophan

Answer: C



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15. Assertion : 2-methyl-1,3-butadiene is the monomer of natural rubber

Reason : Natural rubber is formed through anionic addition polymerisation.

A. If both assertion and reason are true and reason is the correct explanation of assertion

B. If both assertion and reason are true but reason is not the correct explanation of assertion

C. assertion is true but reason is false

D. both assertion and reason are false

Answer: C



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Part II

1. Mention the uses of Gold (Au).



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2. Why fluorine is more reactive than other halogens?



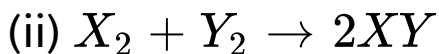
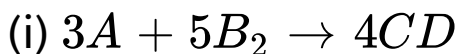
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3. What is meant by coordination polyhedron?



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4. Write the rate expression for the following reactions, assuming them as elementary reactions.



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5. The concentration of hydroxide ion in a water sample is found to be $2.5 \times 10^{-6} M$. Identify the nature of the solution.



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6. Mention Freundlich adsorption isothermal equation.



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7. Is it possible to oxidise t-butyl alcohol using acidified dichromate to form a carbonyl compound.



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8. Explain the action of Diisobutyl aluminium hydride (DIBAL-H) and H_2O with hex-4-en nitrile.



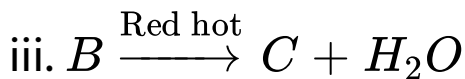
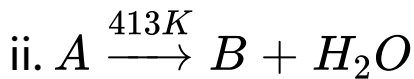
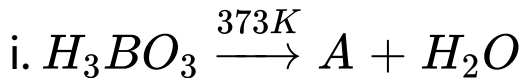
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9. Define enzymes.



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1. Complete the reaction,



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2. Calculate the number of unpaired electrons in Ti^{3+} , Mn^{2+} and calculate the spin only magnetic moment.



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3. What are characteristic parameters of a unit cell?



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4. Write the uses of ethanol .



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5. How is terylene prepared?



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Part IV

1. (i) How will you convert boric acid to boron nitride?

(ii) Mention the uses of carbon monoxide.



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2. (i) Define coordination number.

(ii) Calculate the packing efficiency in fcc unit cell?



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3. A hydrocarbon A (molecular formula C_8H_{10}) on ozonolysis gives $B(C_4H_6O_2)$ only. Compound $C(C_3H_5Br)$ on treatment with magnesium in dry ether gives (D) which on treatment with CO_2 followed by acidification gives (B). Identify A, B, C and D.



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4. (i) How do antiseptics differ from disinfectants?

(ii) Explain about (i) Analgesics (ii)

Antiinflammatory drugs (iii) Antipyretics



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