

CHEMISTRY QUESTION PAPER

Time : 2 Hrs.

Max. Marks : 40

Q. 1 Select and write the most appropriate answer from the given alternatives for each sub-question. [8]

- (i) Which of the following is first oxidation product of secondary alcohol ? (1)
(a) Aldehyde (b) Ketone
(c) Carboxylic acid (d) Alkene
- (ii) Ibuprofen is used as a (1)
(a) Antibiotic (b) Antiseptic
(c) Analgesic (d) Antacid
- (iii) Grignard's reagent is prepared by action of magnesium metal on (1)
(a) Alcohol (b) Phenol
(c) Alkyl halide (d) Benzene
- (iv) Which of the following compounds contains hydrogen bonds ? (1)
(a) Ethane (b) Ethanol
(c) Methoxymethane (d) Ethylene
- (v) Hydrolysis of esters in alkaline medium is called as (1)
(a) Etherification (b) Hydration
(c) Saponification (d) Esterification
- (vi) A test which can NOT be used to detect proteins is (1)
(a) Carbylamine test (b) Biuret test
(c) Xanthoproteic test (d) Millon's test
- (vii) In lanthanides the differentiating electron enters orbital. (1)
(a) ns (b) np
(c) $(n-2)f$ (d) $(n-1)d$
- (viii) The number of isomeric amines of C_3H_7N is (1)
(a) 3 (b) 4
(c) 5 (d) 6

Q. 2 (A) Attempt any One : [8]

- (i) Define Fibre. Give the structural formula and IUPAC name of iso-butyl bromide. (2)
(ii) What is the action of $Na - Hg/H_2O$ on (a) Acetaldehyde, (b) Glucose ? (2)

(B) Attempt any One :

- (i) What are lanthanones ? Give names and symbols of any 'two' rare earths. (2)
(ii) How is chloroform converted into
(a) Phosgene
(b) Chloropicrin (2)

(C) Answer the following :

- (i) Starting from Ca salts of fatty acids, write preparation of
(a) Acetaldehyde (b) Acetone (2)
(ii) Distinguish between Oils and Fats. (2)

Q. 3 (A) Attempt any One :

- (i) Explain the terms :
(a) Enantiomers, (b) Plane polarized light, (c) Asymmetric carbon atom. (3)
(ii) Write chemical test to distinguish between propan-1-ol, propan-2-ol and 2-methyl, propan-2-ol. (3)

(B) Attempt any One :

- (i) What is the action of following reagents on ethyl iodide ? (3)
(a) Aqueous KOH (b) Alcoholic KCN (c) Silver acetate
(ii) Write a note on Williamson's Synthesis. Mention 'two' uses of ethane. (3)

(C) Answer the following :

Explain, why does lanthanum form La^{3+} ion, while cerium forms Ce^{4+} ion.

(2)

Q. 4 (A) Answer the following

[8]

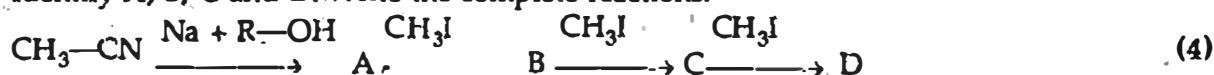
What are phenols ? How is carbolic acid prepared from aniline ?

Write a chemical test to distinguish between alcohol and phenol.

(4)

(B) Attempt any One :

(i) Identify A, B, C and D. Write the complete reactions.



(ii) Convert the following :

(a) Dry ice into acetic acid

(b) Ethyl acetate into acetone

(4)

Q. 5 (A) Attempt any One :

[8]

(i) Write a note on aldol condensation.

(4)

(ii) Explain the mechanism of alkaline hydrolysis of t-butyl bromide with energy profile diagram.

(4)

(B) Attempt any Two :

(i) Write 'two properties' and 'two uses' of nylon-6.

(2)

(ii) How is glucose prepared from sucrose ?

(2)

(iii) What are

(a) Antioxidants

(b) Antiseptics ?

(2)