

O.P.JINDAL SCHOOL,SAVITRINAGAR**PERIODIC TEST -III (2025-26)R-1 SET-A**

CLASS-XII
SUBJECT-CHEMISTRY

MAX.MARKS-20
MAX.TIME-1HOUR

General Instruction:-

- (i) All questions are compulsory .There are 12 questions in this question paper with internal choice.
- (ii) **SECTION –A:** Question numbers 1 to 6 are MCQs , carrying 1 mark each.
- (iii) **SECTION –B:** Question numbers 7 to10 are short answer questions carrying 2 marks each.
- (iv) **SECTION –C:** Question numbers 11 and 12 are long questions carrying 3marks each.
- (v) Use of calculator is not permitted. However, you may use log tables, if necessary.

SECTION-A

Q-1. A compound A with molecular formula $C_5H_{10}O$, forms a phenyl hydrazone and gives negative Toolen's and iodoform tests. The compound on reduction gives n-pentane. The compound A is

- (a) pentan-3-one (b) pentanal
 (c) pentanol (d) pentan-2-one

Q-2. $C_6H_5CHO + CH_3COCH_3 \longrightarrow C_6H_5CH = CHCOCH_3$.

This reaction is known as

- (a) aldol condensation (b) Cross-Aldol condensation
 (c) Cannizzaro's reaction (d) Friedel Crafts reaction

Q-3. Rosenmund's reduction is used for preparation of aldehydes. The catalyst used in this reaction is:

- (a) Anhydrous $AlCl_3$ (b) Iron(III)oxide
 (c) $Pd-BaSO_4$ (d) $HgSO_4$

Q-4. Which one of the following has lowest p^K_a value?

- (a) $CH_3 - COOH$ (b) $O_2N - CH_2 - COOH$
 (c) $Cl-CH_2 - COOH$ (d) $HCOOH$

Q-5. Sodalime is the mixture of

- (a) NaOH and CaO in the ratio of 3:2 (b) NaOH and CaO in the ratio of 1:3
 (c) NaOH and CaO in the ratio of 3:1 (d) NaOH and CaO in the ratio of 2:3

Q-6. Which of the following is most reactive in nucleophilic addition reactions?

- (a) HCHO (b) CH_3CHO
 (c) CH_3COCH_3 (d) $CH_3COC_2H_5$

SECTION-B

Q-7. Write the equations involved in the following reactions.

- (i) Wolff-Kishner reduction (ii) Cannizzaro's reaction

Q-8. How will you carry out the following conversions?

- (i) Acetylene to acetic acid (ii) benzoic acid to benzene

OR

How will you carry out the following conversions?

- (i) Ethyl cyanide to ethanoic acid (ii) Benzoic acid to m-Bromobenzoic acid

Q-9. Write short notes on the following:

- (i) H-V-Z reaction (ii) Haloform reaction

Q-10.(i) What happens when propanone is treated CH_3MgBr and then hydrolysed.

(ii) What is the composition of Fehling's reagent.

Q-11. Arrange the following in

- (i) Decreasing reactivity towards nucleophilic addition reaction:

Propanal, acetone, benzaldehyde

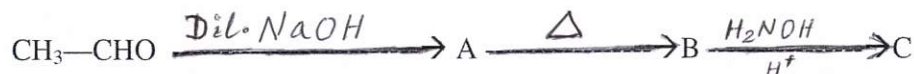
- (ii) Increasing order of boiling point:

Propanone, ethanol, dimethyl ether, propanal

- (iii) Give a chemical test to distinguish between benzoic acid and benzaldehyde

OR

Identify A, B and C in the following sequence of reactions.



Q-12. An organic compound with molecular formula $\text{C}_9\text{H}_{10}\text{O}$ forms 2,4-DNP derivative, reduces Tollen's reagent and undergoes Cannizzaro reaction. On vigorous oxidation, it gives 1,2-Benzene-dicarboxylic acid. Identify the compound.
