

AV – 2371

Second Semester B. Pharm. Examination
PHARMACEUTICAL ORGANIC CHEMISTRY – I

Paper – BP 202 T

(USC – 35340)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 75

- Note :** (1) Answer **All** questions.
(2) Discuss the reaction, mechanism wherever necessary.

1. (A) Attempt following multiple choice questions :—

- (1) The functional group contained in compound $\text{CH}_2 = \text{CH}_2$ is
(a) ester (b) ketone (c) alkene (d) alcohol
- (2) An alkane with seven carbon atoms contains — hydrogen
(a) 16 (b) 14 (c) 20 (d) 18
- (3) Which of following is monohalogen derivatives of alkane ?
(a) CCl_4 (b) CHCl_3 (c) CH_2Cl_2 (d) CH_3Cl
- (4) Alkyl halide undergo —
(a) Electrophilic substitution reaction
(b) Nucleophilic substitution reaction
(c) Nucleophilic addition reaction
(d) Electrophilic addition reaction.
- (5) Optical activity in compound is detected and measured by
(a) Calorimeter (b) Polarimeter (c) Spectrometer (d) Thermometer
- (6) The combustion of alkane produces CO_2 and —
(a) SO_2 (b) H_2O (c) CO (d) None of these
- (7) Which of following method is used for preparation of alkene ?
(a) Hydrogenation of alkene or alkynes

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- (b) Wurtz synthesis
(c) Decarboxylation of acids
(d) All of above.
- (8) — give slow and reversible reaction with alkene
(a) F_2 (b) Cl_2 (c) Br_2 (d) I_2
- (9) SN' reaction is — step reaction
(a) Two (b) One (c) Three (d) Four
- (10) Alkanes are also known as —
(a) Paraffins (b) Glycols (c) Glycerols (d) None of above
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(B) Answer the following :—

- (i) Define enantiomers with examples.
(ii) Give the structure of salicylic acid
(iii) Draw the structure of 2 – methyl propane – 2 – ol
(iv) Define alkane. Give their five examples.
(v) Write the uses of ethanol.
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2. Long answer questions (Answer any **Two**) :—

- (1) What is nucleophilic substitution ? Describe $SN1$ reaction with its stereochemistry.
(2) Define hybridization. Enlist types of hybridization. Describe sp^3 hybridization.
(3) What is Markonikov's and anti Markonikov's rule ?
Explain in detail E^1 reaction and its mechanism.
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3. Short answer questions (solve any **Seven**) :—

- (1) Explain halogenation of alkane.
(2) Discuss method of preparation of alcohol.

- (3) Explain reaction of conjugated dienes.
- (4) Explain about Sp^2 hybridization.
- (5) Discuss about Diel's – Alder reaction.
- (6) Explain optical isomerism.
- (7) Discuss about functional and positional isomerism.
- (8) Give details about aldol condensation.
- (9) Write different uses of alkanes.

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