



**BBP-M-201913**

Seat No. \_\_\_\_\_

**First Year D. Pharm. Examination**

**July - 2021**

**1.4 : Pharmaceutical Organic Chemistry**

Time : 3 Hours]

[Total Marks : 70

**1 Answer the following questions. 20**

- (1) Define and classify organic compounds.
- (2) What is structural isomer? Explain with example.
- (3) What is difference between inter and intra molecular forces.
- (4) Define resonance and draw resonance structure of Butadiene.
- (5) What is diazotiazation reaction? Explain with one example.
- (6) Conjugated diene is more stable than isolated diene. Why?
- (7) Define lewis acid and base with example.
- (8) The basicity of aniline is more than ammonia. True or false. Why?
- (9) What is free radical. Classify it.
- (10) Draw structure of ethyl benzoate and benzyl benzoate.

**2 Answer the following questions. (ANY TWO) 20**

- (1) What is nucleophilic aliphatic substitution reaction? Explain reaction, mechanism, stereochemistry involved SN1 and SN2.
- (2) Write mechanism of following reactions
  - Perkin condensation
  - Aldol condensation.
  - Cannizzaro reaction
  - Hoffman rearrangement reaction

(3) Write method of preparation, assay and use of following compounds.

- Lactic acid
- Vanillin
- Salicylic acid
- Ethyl benzoate
- Mephensin

**3** Answer the following questions. (ANY **SIX**) **30**

- (1) Explain any three Electrophilic substitution reaction of benzene with mechanism of action.
  - (2) Explain in detail Electrophilic and free radicals addition reaction at C=C.
  - (3) Give general reactions of carboxylic acid derivatives with example.
  - (4) Explain free radical chain reactions of alkanes.
  - (5) Write an informative note on oxidation-reduction reactions of organic compound.
  - (6) Explain Bayer strain theory of cycloalkane.
  - (7) Write reaction, mechanism and application of Williamson synthesis.
  - (8) Write a comparison note on alkyl nucleophilic substitution with acyl nucleophilic substitution reaction.
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