

P. Pages : 2

Time : Three Hours



AW - 3001

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
 2. Diagrams and chemical equations should be given wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.
 4. Discuss the reaction, mechanism wherever necessary.
 5. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. a) What are heterocyclic compounds ? Write the classification of heterocyclic compounds with suitable example ? 3
- b). Explain the basic character of pyrrole ? 3
- c) Explain the following reactions of pyrrole ? 8
- i) Nitration ii) Acylation
- iii) Bromination iv) Di-azocoupling

OR

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|----|------|--|-------------------------|
| 2. | a) | Explain the following reactions of naphthalene ? | 8 |
| | i) | Reduction | ii) Sulphonation |
| | iii) | Gattermann's reaction | iv) Halogenation |
| | b) | Why pyridine resembles benzene in many of its properties & exhibits aromatic character ? | 3 |
| | c) | Give the applications of quinoline. | 3 |
| 3. | a) | What are alcohols ? Explain the classification of alcohols with suitable example. | 4 |
| | b) | Discuss the applications of Lauryl alcohol ? | 3 |
| | c) | How will you obtain the followings ? | 6 |
| | i) | Phenol from Benzene | ii) Aniline from phenol |
| | iii) | Benzoquinone from phenol. | |

OR

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|----|------|---|---|
| 4. | a) | How will you prepare the following ? | 4 |
| | i) | Catechol | |
| | ii) | Cetyl alcohol | |
| | b) | Discuss the applications of resorcinol ? | 3 |
| | c) | Explain the following reactions of benzene ? | 6 |
| | i) | Thallation | |
| | ii) | Nitrosation | |
| | iii) | Diazocoupling | |
| 5. | a) | How is ethyl malonate prepared ? Discuss its acidic character ? | 4 |
| | b) | Give the applications of Aceto acetic acid ? | 3 |

- c) Explain the following reactions of Benzene diazonium chloride ? www.FirstRanker.com 6
 i) Coupling with diazonium salt ii) Carbylamine reaⁿ
 iii) Oxidation

OR

6. a) What are amines ? Explain the classification of amines with suitable example ? 4
 b) How will you obtain the following from malonic acid ? 4
 i) Chloroacetic acid ii) Malicacid
 c) Discuss the chemical properties of 5
 i) Aniline ii) Benzene diazonium chloride

SECTION - B

7. a) What is Nitration ? Explain the mechanism of aromatic nitration ? 4
 b) Discuss the technical preparation of nitro benzene ? 7
 c) Write the name of various nitrating agents with chemical formula. 3

OR

8. a) What is sulphonation ? Explain its mechanism ? 4
 b) Explain the construction and working of Batch sulphonation kettle ? 5
 c) Describe the technical preparation of sulphonation of benzene ? 5
 9. a) What is halogenation ? Explain its kinetics ? 3
 b) Discuss the technical preparation of DDT ? 5
 c) Explain the technical preparation of vinyl chloride ? 5

OR

10. a) What is halogenation ? List the various halogenating agents with chemical formula ? 3
 b) Discuss the technical preparation of Bakelite ? 6
 c) What are polymers ? Give the classification of polymers on the basis of structure ? 4
 11. a) What are preservatives ? Explain the applications of preservatives ? 4
 b) Give the classification of carbohydrates with suitable example. 4
 c) Write the industrial applications of - 5
 i) Starch ii) Glucose

OR

12. a) What are antioxidants ? Explain the applications of anti-oxidants. 4
 b) Give the classification of terpenes with suitable examples. 4
 c) Discuss the chemistry of following ? 5
 i) Sucrose ii) Sweetening agents
