



DBL-003-1103007

Seat No. _____

M. Sc. (Sem. III) (CBCS) Examination

June - 2022

Heterocyclic Chemistry : C(OP)-303

Faculty Code : 003

Subject Code : 1103007

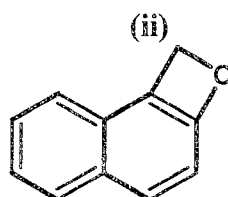
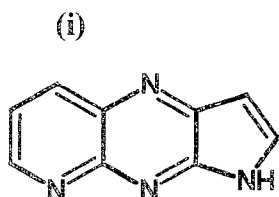
Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions** : (1) All questions carry equal marks.
(2) Attempt any five questions.

1 Answer the following : 14

- (a) Write any two methods for the preparation of Isoxazole.
(b) Discuss at least two methods for the synthesis of 1,2,3-triazole.
(c) Write the synthesis of 4H-Pyran (any two)
(d) Discuss at least two methods for the preparation of azetidine.
(e) Write the structure of followings :
1H-Thieno[2,3-d]imidazole (ii) Pyrolo [1,2, α] quinoxaline.
(f) Write the name of following :

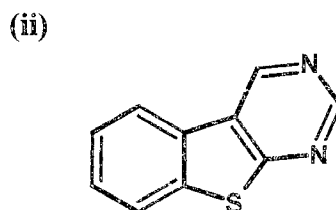
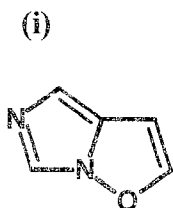


- (g) Discuss the synthesis of Thirane.

2 Answer the following : 14

- (a) Discuss the synthesis of Diaziridine (any one)
(b) Discuss the cyclo-addition reaction of Benzo[c]furan.

- (c) Explain any one method for the synthesis of isothiazole.
- (d) Write the structure of following :
- (i) 2,Aza spiro [4,4] nonane
- (ii) Seleno [3,2b] furan
- (e) Write the name of following :



- (f) Write the synthesis of Oxaziridine.

- 3** Answer the following : **14**
- (a) Give at least three methods for the synthesis of Pyridazine.
- (b) Write any three methods for the preparation of 1,4-Diazocine.
- 4** Answer the following : **14**
- (a) Discuss the chemical properties of pyridine.
- (b) Draw the resonating structure of Thiazole and discuss its chemical properties.
- 5** Answer the following : **14**
- (a) Write any three methods for the synthesis of Indole.
- (b) Explain any three methods for the synthesis of tetrazole.
- 6** Answer the following : **14**
- (a) Discuss the chemical properties of Acridine.
- (b) Discuss any three methods for the synthesis of Quinoxaline.

- 7 Answer the following : 14
- (a) Write at least three methods for the synthesis of isobenzofuran.
 - (b) Discuss the chemical properties of Pyrimidine.
- 8 Answer the following : 14
- (a) Discuss atleast three methods for the synthesis of imidazole.
 - (b) Discuss the chemical properties of Quinoline.
- 9 Answer the following : 14
- (a) Discuss the synthesis of Azocine (any two)
 - (b) Discuss the synthesis of Azepine (any two)
- 10 Answer the following : 14
- (a) Discuss the chemical properties of Benzimidazole.
 - (b) Discuss the chemical properties of Quinazoline.
-