



HM-003-010305

Seat No. _____

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

May / June - 2017

C-OP-303 : Organo-Pharmaceutical Chemistry

(Heterocyclic Chemistry : ELE - II)

(Old Course)

Faculty Code : 003

Subject Code : 010305

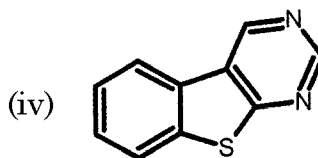
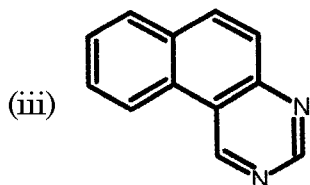
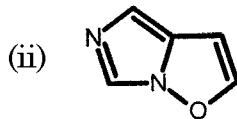
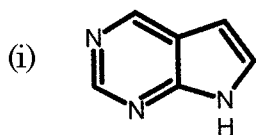
Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.
(2) All questions carry equal marks.

1 Answer the followings : (any seven) 14

- (a) Explain : Pyridine is soluble in water but not in benzene.
(b) Explain any one method for the synthesis of isothiazole.
(c) Give the name of followings :

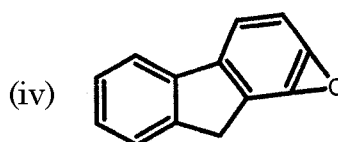
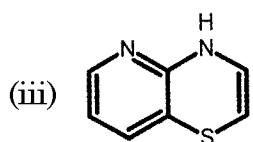
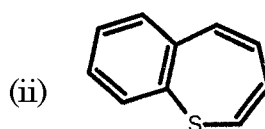
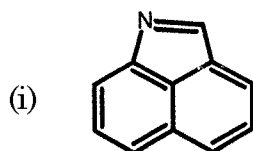


- (d) Discuss the synthesis of Diaziridine (any one).
(e) Write the synthesis of Oxocine.
(f) Give the synthesis of 2-pyrones.
(g) Write the structure of followings :
(i) 1H,5H,Pyrazolo[1,2,a]pyrazole
(ii) 2,Aza spiro[4,4] nonane
(iii) 8-Azabicyclo[3,2,1]octane
(iv) Seleno[3,4,b] furan

- (h) Explain : Pyrrole is weak base as compare to aniline.
- (i) Discuss the cyclo addition reaction of Benzo[c]furan.
- (j) Oxirane has a highest dipole moment than thirane, Justify the answer.

2 Answer the following : (any two)

- (a) (i) Write the name of



- (ii) Write the structure of

(i) Thio[2,3-h] Thiophene

(ii) Imidazo[2,1 a] Phthalazine

(iii) Pyrano [3,2-b] indole

(iv) 1,2,3 Triazole [4,3-b] pyridazine

- (b) Draw the resonating structure and discuss the chemical properties of quinaxoline.
- (c) Discuss the synthesis of Indolizine and draw their resonating structure.

3 Answer the following : (any two)

14

- (a) Discuss at least three methods for the synthesis of Imidazole.
- (b) Draw the resonating structure of Indole and discuss their electrophilic substitution reactions.
- (c) Explain the synthesis of 1,2,4-Triazole (any three).

- 4 Give at least two synthesis methods for the followings : 14
(any **three**)
- (i) Quinoline
 - (ii) Thiazine
 - (iii) Oxepine
 - (iv) Pyridazine
- 5 Discuss the chemical properties of followings : 14
- (i) Tetrazole
 - (ii) Thiazole
 - (iii) Thiocine.
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