

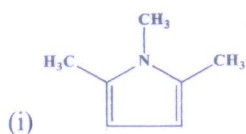
Time: 3hrs

N.B.: 1. All Questions are compulsory

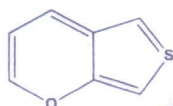
Total Marks: 80

2. Figures to right indicate full marks

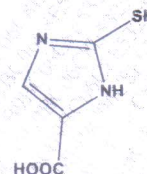
Q1. (a) Give IUPAC nomenclature of the following: (03)



(ii)



(iii)

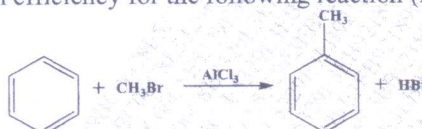


(b) Compare and comment on basicity of quinoline and pyridine. (02)

(c) Explain Conrotatory motion with example. (02)

(d) Define following terms: i) Functional Group Addition ii) Synthons (02)

(e) Calculate E-factor and atom efficiency for the following reaction (At. wt. Br=80, C=12, H=1) (02)



(f) What is the strategy used for disconnection in thiophene. (02)

(g) How many chiral centers are there in the basic steroid ring? Give their positions on the basic steroid ring. Also state the number of optically active forms possible. (02)

Q2. (a) Write the following reactions with mechanism (any two): (04)

(i) Doebner Miller synthesis

(ii) Pomeranz - Fritsch synthesis

(iii) Hantzsch synthesis for pyridine

(b) Using orbital diagram, explain whether $(2\pi + 2\pi)$ cycloaddition photochemical reaction would be suprafacial or antarafacial by giving suitable example. (04)

(c) 5-Cholestene when treated with peracetic acid gives product B, which is hydrolysed by acid and water to give product C. Give the structures of B and C with proper stereochemistry. (03)

Q3. (a) Attempt the following conversions (any four) (04)

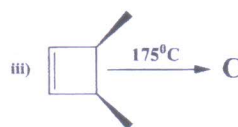
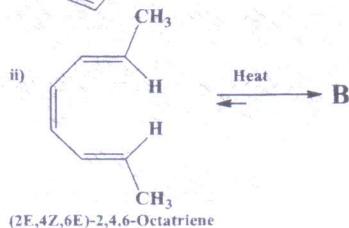
(i) Tartaric acid to imidazole-4,5-dicarboxylic acid (ii) Pyridine to 3-nitropyridine

(iii) Benzoyl styrene to 2,4,6-triphenyl pyrimidine (iv) Indole to 3-Formylindole

(b) Using synthon approach devise scheme for synthesis of sulfadiazine. (04)

(c) Discuss the role of synthetic hydrotalcite clay in catalysed condensation name reactions (03)

Q4. (a) Write structures of products formed in the following reactions: (03)



B. Pharm, sem-V (CBCS)

Sub - Cosmetology

21/05/18

Q. P. Code: 22806

Time: 3 Hours

Marks: 70

- NB: (1) All questions are compulsory.
(2) Figures to the right indicate full marks.

- | | | |
|---|---|---|
| 1 | (a) What are the Schedule MII requirements for manufacturing of cosmetics? | 2 |
| | (b) Give an account of mechanism of functioning of various skin bleach products. | 3 |
| | (c) Enlist all manicure products. | 2 |
| | (d) Write a brief note on hair conditioners. | 2 |
| | (e) What are the ideal properties of dry shaving products? Give an example of formulation of dry shaving product? | 3 |
| | (f) Give a detailed description of denture cleansers. | 3 |
| 2 | (a) Describe sensitization reactions due to cosmetics. Discuss tests to predict the same. | 4 |
| | (b) Discuss the formulation aspects of moisturizing preparations | |
| | OR | 3 |
| | Elaborate quality control tests for skin creams and lotions. Give BIS standards for the same. | |
| | (c) How are shampoos manufactured on large scale? Describe in detail. | 4 |
| 3 | (a) Discuss the ingredients used in formulation of lather shaving creams. Enlist the QC tests performed on lather shaving creams. | 4 |
| | (b) Give an account of colours used in eye makeup preparations and write a formula for eye shadow preparation. | 3 |
| | (c) Write a detailed description of any one | 4 |
| | (i) Herbal cosmetics | |
| | (ii) Oils and waxes used in cosmetics | |
| 4 | (a) Describe the large scale manufacturing of foundation lotions. | |
| | OR | 3 |
| | Describe the quality control tests for compact face powders. | |
| | (b) Classify hair colorants and explain any one class. | 4 |
| | (c) Discuss abrasives used in dentifrices and state their testing parameters | 4 |
| 5 | (a) Classify depilatories. What is their mechanism of action? | 3 |
| | (b) With the help of neat and labelled diagram discuss the packaging of lipsticks. | |
| | OR | 4 |
| | Describe colors and waxes used in lipsticks | |
| | (c) Write a note on control of microbiological quality of cosmetics | 4 |
| 6 | (a) Enlist various baby cosmetics. Discuss the formulation of baby powders. | |
| | OR | 3 |
| | Mention the ideal properties of deodorants. Give examples. | |
| | (b) Explain the quality control tests for nail laquers. What are BIS standards for the same | 4 |
| | (c) Classify sunscreens, give their mechanism of action and enlist the QC tests performed on them. | 4 |

23/5/18

Q.P. Code :03796

[Time: 3 Hours]

[Marks-70]

Please check whether you have got the right question paper.

N.B:

- Q.1
- a) Define ELISA. 01
 - b) Enlist the uses of restriction endonucleases. 01
 - c) Define fermentation and enlist the processing steps. 02
 - d) Differentiate between batch and continuous fermentation. 02
 - e) Write applications of r-DNA technology. 01
 - f) Write the uses of transgenic plant technique with example. 02
 - e) Draw neat labeled diagram of plasmid (PBR322). 02
 - f) Give pharmaceutical application of plant tissue culture. 02
 - g) Explain the PCR technique in brief. 02
- Q.2
- a) Distinguish between Active and passive immunity. 03
- OR**
- a) Write a note on Immobilization 'In support'. 04
 - b) Comment on RIA & its application. 04
 - c) Give the classification of vaccines. Explain in brief recombinant vaccines. 04
- Q.3
- a) Write note on r-DNA technology with steps involved. 04
- OR**
- a) Write a note on c-DNA library (with diagram). 04
 - b) Add a Short Note on BCG vaccine production. 03
 - c) Define Hypersensitivity & explain Type-I hypersensitivity . 03
- Q.4
- a) Draw fermentor design and enlist the factors affecting fermentation. 04
- OR**
- a) Draw neat labeled diagram of anti body & explain any two factors affecting pathogenicity. 04
 - b) Comment of monoclonal antibody production in detail (with diagram). 03
 - c) Explain production of diphtheria toxoid in brief. 03
- Q.5
- a) Write short Note on biosensors. Explain enzyme immobilization with its advantages. 04
- OR**
- a) Explain the DNA sequencing technique. With one example. 03
 - b) What is stem cell culture. Give its application. 04
 - c) What are subunit vaccines. Explain QC aspects of vaccines. 04
- Q.6
- a) Define Gel electrophoresis & enlist the contents of process. Explain Northern blotting technique. 04
- OR**
- a) What are transgenic animal. Explain one example. 04
 - b) Explain in detail clonal selection theory. 03
 - c) What is YAC. 03

Q.P. Code :19970

[Time: Three Hours]

[Marks:70]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicates full marks.

- Q.1 a) Answer the following:- 12
- i. Enlist one example of synergistic antimicrobial combination and state its advantages.
 - ii. State the adverse effects of tetracycline.
 - iii. Give the applications of immunosuppressants.
 - iv. State the mechanism of action of propylthiouracil.
 - v. Give the action of insulin on muscles.
 - vi. Explain the therapeutic applications of folic acid.
- b) Justify the following statements:- 03
- i. Chloramphenicol and Erythromycin show partial cross resistance.
 - ii. Synthetic Estrogens have replaced natural estrogens.
 - iii. Urokinase is preferred over streptokinase.
- Q.2 a) Answer any two of the following:- 08
- i. Classify antiviral drugs. Give the pharmacology of amantadine.
 - ii. Enlist polyene antibiotics. Write a note on Amphotericin B.
 - iii. Write a note on first line therapy used in tuberculosis.
- b) Attempt any one of the following:- 03
- i. Write in detail about adverse effects of aminoglycosides.
 - ii. Enlist tissue amoebicides. Compare and contrast the amoebicidal drugs metronidazole & tinidazole.
- Q.3 a) Answer any two of the following:- 08
- i. Classify antithyroid drugs. Write the adverse effects and uses of carbimazole.
 - ii. Explain in brief the pharmacological actions and adverse effects of ergot alkaloids.
 - iii. Classify anti - diabetic drugs. Write a note on thiazolidinediones.
- b) Attempt any one of the following :- 03
- i. State the pharmacological actions and adverse effects of mineralocorticosteroids.
 - ii. Enlist the types of oral contraceptives. Compare the effect of combined pill with phased regimen.

Q.P. Code :19970

- Q.4 a) Answer any two of the following:- 08
i. Discuss the biological role of vitamin B₁₂ and its clinical uses.
ii. Discuss the pharmacology of warfarin.
iii. Give biological action and clinical uses of vitamin K. 03
- b) Attempt any one of the following:-
i. Discuss the pharmacology of Clopidogrel.
ii. What are fibrinolytic agents? Give their clinical indications.
- Q.5 a) Answer any two of the following:- 08
i. Classify antimetabolites used as anticancer agents. Discuss the pharmacology of fluorouracil.
ii. Classify Cephalosporins. Discuss the pharmacokinetics and clinical indications of Cefotaxime.
iii. Classify antimalarial drugs. Discuss the pharmacology of artemisinin.
- b) Write a short note on any one of the following:- 03
i. Adverse effects of sulphonamides
ii. Ciprofloxacin
- Q.6 a) Answer any two of the following:- 08
i. Classify immunosuppressant. Discuss the pharmacology of cyclosporine.
ii. What are immunomodulators? Write a note on role of immunostimulants in treatment of AIDS.
iii. Which is the active form of vitamin D? Discuss its pharmacological action.
- b) Write a short note on any one of the following:- 03
i. Therapeutic regimen used in leprosy
ii. Triazole antifungals
