



ANJUMAN-I-ISLAM'S

AIKTC KALSEKAR TECHNICAL CAMPUS

INNOVATIVE TEACHING · EXUBERANT LEARNING

School of Architecture

School of Engineering & Technology

School of Pharmacy

Knowledge Resource & Relay Centre (KRRC)

AIKTC/KRRC/SoP/ACKN/QUES/2017-18/

Date: 31/12/18

School: SoP-CBSGS

Branch: SoP

SEM: V

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following [✓]Semester/Periodic ^{ATKT} question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format		No. of Copies
			SC	HC	
1	Organic Chemistry – III			✓	02
2	Cosmeticology			✓	02
3	Pharmaceutical Biotechnology				
4	Pharmacology-II			✓	02
5	Pharmaceutical Management				

Note: SC – Softcopy, HC - Hardcopy

(Shaheen Ansari)
Librarian, AIKTC

Sem-V CBS & S

Q. P. Code: 20759

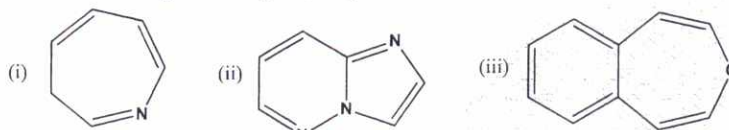
N.B.: 1. All Questions are compulsory

Time: 3 Hours

Total Marks: 70

2. Figures to right indicate full marks

Q. 1 A) Nomenclature the following heterocycles as per IUPAC rules (03)

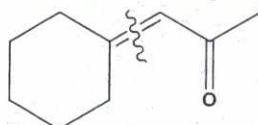


B) Explain Conrotatory motion with a molecular orbital diagram. (02)

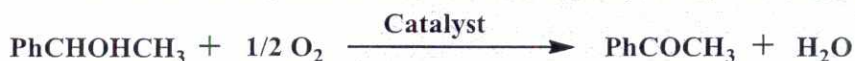
C) Justify the statement, Imidazole is more basic than pyridine (02)

D) Draw the structure of 5 α -progesterone. Depict its ring numbering and chiral centers. (02)

E) Illustrate two strategies for disconnection of the following target molecule. (02)



F) Define Atom economy and calculate the Atom economy for the following reaction. (02)

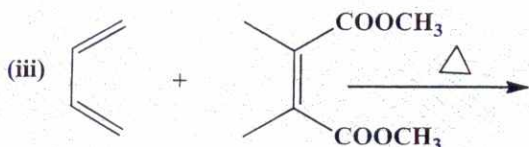
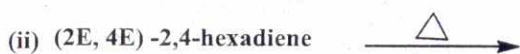
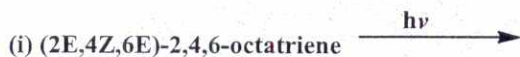


G) Write any one reaction catalyzed by solid acids like zeolite (01)

H) Write bromination reaction of 5 β -cholestane-3-one (01)

Q2. A. Explain the mechanism for (Any 2) (i) Radziszewski imidazole synthesis (ii) Bischler-Napieralski Reaction (iii) Fischer Indole Synthesis (04)

B. Complete the following reactions and predict the products formed stereochemically (Any 2) (04)



C. Discuss the advantages of green catalytic hydrogenation reactions using two examples. (03)

Q3. A. Attempt the following chemical conversions. (04)

(i) Furan to furfural (ii) Pyridine to 2-aminopyridine

(iii) 2,4,6-trichloropyrimidine to pyrimidine (iv) Pyrrole to pyrrolidine

B. Design the scheme for retrosynthesis and synthesis of ibuprofen or sulfadiazine. (04)

C. Discuss advantages of "Biocatalysis" in green chemistry and give suitable examples (03)

Q4. A. Complete the following reactions (08)



B. What is the difference between suprafacial and antarafacial cycloaddition in orbital symmetry. Support your answer by giving (4+2) and (2+2) thermal cycloaddition reactions. (03)

Q5.A. Answer the following (Any 3): (06)

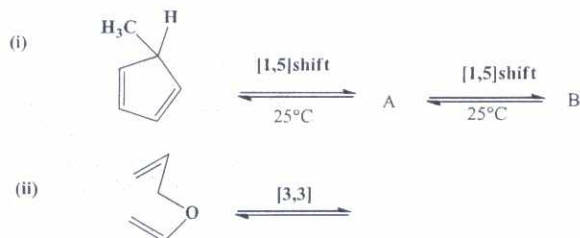
- Write the oxidation products of isoquinoline
- Why thiophene is more aromatic than pyrrole and furan?
- Compare and justify rate of oxidation of 5 α -cholestane-3 α -ol and 5 α -cholestane-2 β -ol.
- Explain why 5 α -cholestane-3 β -ol gets rapidly hydrolyzed than 5 α -cholestane-3 α -ol

B. Write complete mechanism for (Any 2): (i) Hantzsch synthesis (ii) Knorr pyrrole synthesis (iii) Paal Knorr Synthesis for thiophene (04)

C. Write the oxidation product of pyridine (01)

Q.6.A. Draw suitable resonating structures for (i) Imidazole (ii) Pyridine (iii) Thiophene (iv) Pyrrole (04)

B. Complete the following reactions with mechanisms (04)



D. Predict the economical retrosynthetic and synthetic pathway for the following target molecule (03)



SEM-V CBSGS

Q.P. Code :01474

[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-indicate full marks.

- Q.1 a) What are the manufacturing requirements for lipsticks as per D & C Act? 2
b) Write a note on bleach products. 3
c) Give a brief account of cuticle softeners. 2
d) Elaborate on the mechanism of action of Hair straightening products. 2
e) Enlist various dry shave preparation and elaborate on after shave lotion. 3
f) Discuss the formulation of shower gels. 3
- Q.2 a) State various sensitization and irritation reactions due to cosmetics and elaborate on sensitivity testing of hair dyes 4
b) Give an account of hand and body products. 3
OR
Discuss the formulation of face pack
c) Discuss the various QC tests done on shampoos 4
- Q.3 a) Elaborate on wet shaving products. 4
b) Classify various eye make-up products and suggest a formula for any one 3
c) Write a short note on. (Any one) 4
i) Water in cosmetics
ii) Preservatives used in cosmetics.
- Q.4 a) Give an account of manufacturing of foundation cream. 3
OR
Enumerate various tests done on face powders.
b) Write a note on permanent hair color 4
c) Enlist the ingredients used in toothpaste and explain the large scale manufacture of toothpastes. 4
- Q.5 a) What is depilation? Give examples of depilatory agents. 3
b) Discuss the QC tests done on nail lacquers. 4
OR
Discuss the formulation of nail lacquers.
c) What are the sources of contamination in cosmetics products and suggest remedies for the same. 4
- Q.6 a) Enlist various baby toiletries and write a note on any one 3
OR
Elaborate on insect repellants
b) Explain the large scale manufacturing of lipstick along with their packaging 4
c) Define SPF. Give an account of anti-sunburn preparations. 4

SEM-V CBSGS
18/11/2018

Q.P. Code :05325

[Time: 3 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

1. (a) Answer the following :- 12
- (i) Give mechanism of action of co-trimoxazole.
 - (ii) Enlist the adverse effects of Aminoglycosides.
 - (iii) Explain relation between CD4+ cells and HIV.
 - (iv) Discuss the effect of thyroid hormones on growth and development.
 - (v) Classify anti-diabetic agents with suitable examples.
 - (vi) Give clinical uses of folic acid.
- (b) Match the following : 3
- | Drugs | Mechanism of action |
|--------------------|--|
| 1. Chloramphenicol | a. Interfere with nucleic acid synthesis |
| 2. Sitagliptin | b. Phosphodiesterase Inhibitors |
| 3. Dipyridamole | c. DPP IV inhibitors |
| | d. Interfere bacterial protein synthesis |
2. (a) Answer any two of the following:- 8
- (i) Explain the life cycle of malarial parasite. Add a note on site of action of anti-malarial drugs.
 - (ii) Discuss antimicrobial agents that interfere with the synthesis and action of folate.
 - (iii) Enlist first line drugs used for the treatment of tuberculosis. Add note on mechanism of action and unwanted effects of Rifampicin.
- (b) Attempt any one of the following :- 3
- (i) Discuss pharmacology of Dapsone.
 - (ii) Elaborate on pharmacokinetic aspects and clinical uses of tetracyclines.
3. (a) Answer any two of the following:- 8
- (i) Enlist the drugs used in the treatment of bone disorders. Add a note on Vitamin D preparations.
 - (ii) Discuss the role of combined pill as oral contraceptives. Give its common adverse effects.
 - (iii) Explain pharmacology of carbimazole.
- (b) Write a short note on any one of the following:- 3
- (i) Biguanides
 - (ii) Pharmacotherapy of hypothyroidism.
4. (a) Answer any two of the following :- 8
- (i) Classify anti-platelets. Add note on Aspirin.
 - (ii) Write a short note on vitamin K.
 - (iii) Enlist fibrinolytic drugs. Add a note on its contraindications and clinical uses.

(P.T.O)

- (b) Attempt any one of the following :- 3
- (i) Discuss the role of iron preparations in the treatment of anaemia.
 - (ii) Explain mechanism of action and pharmacokinetic aspects of heparin.
5. (a) Answer any two of the following :- 8
- (i) Discuss the pharmacotherapy of amoebiasis.
 - (ii) Write a short note on anthelmintic drugs.
 - (iii) Discuss in detail mechanism of resistance to antimicrobial drug therapy.
- (b) Write a short note on any one of the following :- 3
- (i) Macrolide antibiotics.
 - (ii) Alkylating agents
6. (a) Answer any two of the following :- 8
- (i) Write a short note on Immunomodulators used in the treatment of HIV.
 - (ii) Describe the Pharmacology of oxytocin.
 - (iii) Discuss the action of insulin on Carbohydrate and fat metabolism.
- (b) Write a short note on any one of the following :- 3
- (i) Beta lactamase resistant penicillins.
 - (ii) Hormonal therapy of cancer.
-