

(Semester Pattern)

**PURUS-II: APRIL MAY 2011**  
**SUBJECT: HOSPITAL PHARMACY**

Day: Saturday  
Date: 30-04-2011

Time: 10.00 A.M. To 1.00 P.M.  
Max marks: 80.

**N.B:**

- 1) **Q. NO. 1 and 5 are COMPULSORY.** Solve any **TWO** questions from the remaining.
- 2) Answer to both sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.

**SECTION-I**

**Q.1** Solve any **FIVE** of the following: **(10)**

- a) Show schematically the organization of health care institutions in India.
- b) Give the constitution of ASHP
- c) Draw a schematic diagram showing of hospital.
- d) State the importance of location of hospital pharmacy.
- e) State the objectives of ASHP.
- f) Explain adverse drug reaction giving suitable example.
- g) Enlist the functions of supportive technical personnel in pharmacy.

**Q.2** a) Enlist various departments in hospital and give a detail account of responsibilities of pharmacist in pharmacy. **(10)**

b) Discuss the process of hiring of pharmacist **(05)**

**Q3** a) Discuss the role of pharmacist in infection control in hospital **(08)**

b) Give a detail account of the various policies of P& T Committee. **(07)**

**Q4** Write notes on ( **ANY THREE**) **(15)**

- a) Automatic stop orders for dangerous drugs.
- b) Role of P& T Committee in drug defect.
- c) Personnel in hospital pharmacy.
- d) ASHP guidelines to hospital pharmacist.
- e) Categorizing and indexing of drugs in hospital Formulary.

**P.T.O.**

**SECTION –II**

**Q5** Solve any **FIVE** of the following: **(10)**

- a) Define perpetual inventory
- b) Draw a neat diagram of CSSD in 50 bedded hospital
- c) What is nuclear pharmacy without radioisotopes?
- d) Explain distribution of non charged drugs in hospital
- e) Define chemo toxicity giving two examples
- f) Define patient non compliance.
- g) Define ambulatory patient.

**Q.6 a)** Discuss the role of pharmacist in investigational new drug. **(08)**

b) Discuss various techniques to overcome patient non compliance. **(07)**

**Q.7 a)** Explain giving examples the significance of unit dose packaging. **(08)**

b) Discuss the various sterilization techniques in CSSD. **(07)**

**Q.8** Write notes on ( **ANY THREE**) **(15)**

- a) Inventory control techniques
- b) Location & layout of central sterile supply department.
- c) Responsibilities of pharmacist in with or without isotope pharmacy.
- d) Distribution of drug in hospital.
- e) IV-admixture programme.

\* \* \*

**PURUS - II : APRIL/MAY 2011 [SEMESTER PATTERN]**  
**SUBJECT : PHARMACEUTICAL BIOCHEMISTRY - I**

Day : Monday  
Date : 25-04-2011

Time : 10:00 A.M. To 1:00 P.M.  
Max. Marks : 80

**N.B.**

- 1) Q.No. 1 and Q.No. 5 are **COMPULSORY**. Out of the remaining questions solve any **TWO** questions from each Section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the section should be written in the **SEPARATE** answer book.

**SECTION - I**

- Q.1** Answer any **FIVE** of the following: (10)
- a) What are essential amino acids?
  - b) What are coenzymes?
  - c) What is competitive inhibition?
  - d) Give any two pharmaceutical uses of enzymes.
  - e) What is Sanger's reagent?
  - f) What is  $K_m$ ?
- Q.2** a) Explain in detail various levels of the protein structure. (08)  
b) Explain the classification of Lipids. (07)
- Q.3** a) Derive the Michaelis - Menten equation for the rate of enzyme catalyzed reaction. (08)  
b) What is HPLC? (07)
- Q.4** Write short notes on: (15)
- a) Denaturation of Proteins
  - b) Active Transport and Passive Transport
  - c) Rancidification of Lipids
  - d) Pernicious anaemia
  - e) Electrophoresis

**SECTION - II**

- Q.5** Answer the following: (10)
- a) What is cell? Describe various parts of cell with suitable diagram.
  - b) Why Cellulose is not utilized by human body?
  - c) What is the Iodine number? What does the iodine number indicate?
  - d) What are the semi-essential amino acids?
- Q.6** a) Explain the classification of enzymes according to IUB (E.C.). (08)  
b) Write the functions of following: (04)  
i) Mitochondria ii) Ribosome  
c) How the temperature affects the rate of enzymatic reaction. (03)
- Q.7** Write short notes on the following: (15)
- a) Conjugated proteins
  - b) Primary structure of protein
  - c) Mucopolysaccharides
- Q.8** a) Why sucrose is called an invert sugar? (03)  
b) What are the functions of Cholesterol? (04)

PURUS -II (SEMESTER PATTERN): APRIL / MAY 2011  
SUBJECT: HUMAN ANATOMY & PHYSIOLOGY - II

Day : Tuesday  
Date : 03-05-2011

Time: 10:00 A.M. To 1:00 P.M.  
Max. Marks: 80.

**N.B.:**

- 1) Q.No.1 and Q.No. 5 are **COMPULSORY**. Out of remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION - I**

- Q.1** Answer **ANY FIVE** of the following: [10]
- a) What is goiter?
  - b) What are renal calculi?
  - c) What is astigmatism?
  - d) Name the hormone of pancreas.
  - e) What is the role of ADH?
  - f) What is Cushing's disease?
- Q.2** a) Discuss the physiology of Thyroid gland. [08]  
b) Describe the structure of eye. [07]
- Q.3** a) Describe the physiology of female reproductive system. [08]  
b) Discuss the physiology of muscle contraction. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]
- a) Spinal cord
  - b) Renal clearance tests
  - c) Testis
  - d) Cerebellum

**SECTION - II**

- Q.5** Answer **ANY FIVE** of the following: [10]
- a) Mention important functions of pituitary gland.
  - b) Mention various functions of skin.
  - c) What are the important functions of liver?
  - d) Draw a labeled diagram of parts of brain.
  - e) Mention disorders of male reproductive system.
  - f) Name disorders of muscular system.
- Q.6** a) Explain the reflex action. [08]  
b) Explain the process of spermatogenesis. [07]
- Q.7** a) Discuss the mechanism of water balance in human body. [08]  
b) Write a note on renin angiotensin system. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]
- a) Extra-pyramidal system
  - b) Neurotransmission
  - c) Physiology of hearing
  - d) Nephron

PURUS - III (SEMESTER PATTERN): APRIL / MAY - #2011  
SUBJECT: PHARMACEUTICAL CHEMISTRY - IV (Organic)

Day: Thursday  
Date: 21-04-2011

Time: 2:00 P.M. To 5:00 P.M.  
Max. Marks: 80

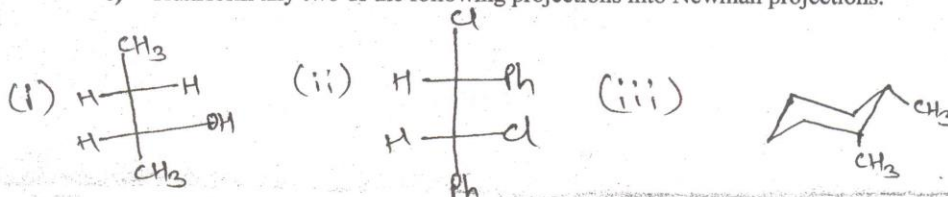
N.B.:

- 1) Q. No 1 and 5 are **COMPULSORY**.
- 2) Out of the remaining attempt any **TWO** questions from section -I and any **TWO** from Section - II.
- 3) Answers to both sections should be written in **SEPARATE** answer books.
- 4) Figures to the right indicate **FULL** marks.

SECTION-I

Q.1 Answer any **FIVE** of the following: (10)

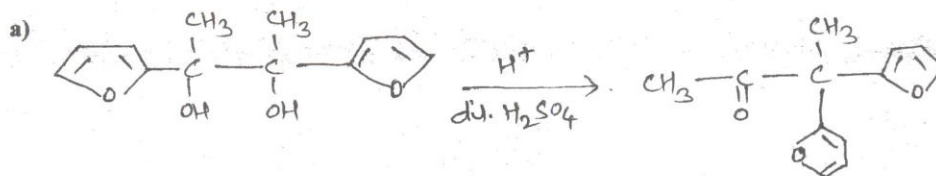
- a) Define chirality stating necessary and sufficient condition for chirality giving suitable examples.
- b) Why chemical and physical properties of geometrical isomers are different? Illustrate.
- c) Transform any two of the following projections into Newman projections.



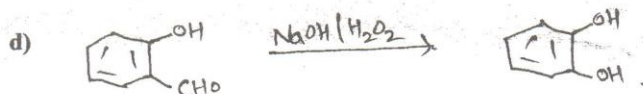
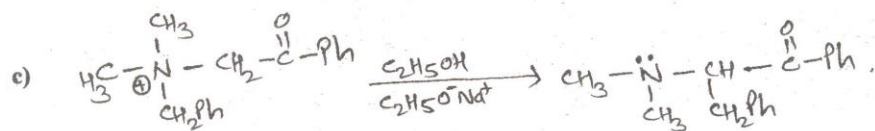
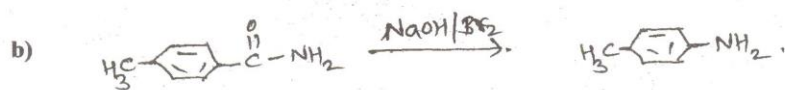
- d) What is oxy-cope rearrangement reaction?
- e) Explain how Curtius rearrangement reaction gives urea derivatives as side products.
- f) Give the postulates of molecular orbital theory.
- g) What are bonding and ant bonding orbitals?

Q.2 Discuss methods of resolution of racemic modifications. (15)

Q.3 Discuss and depict the mechanism of any **THREE** of the following reactions: (15)



P. T. O.



Q.4 What are electrocyclic reactions? Explain the following reaction using FMO (15) and co-relation diagram method.

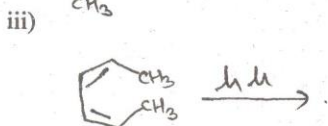
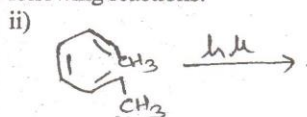
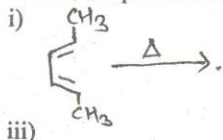


SECTION-II

Q.5 Answer any FIVE of the following: (10)

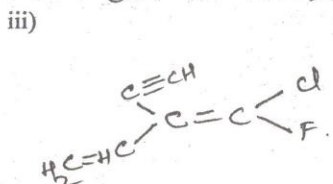
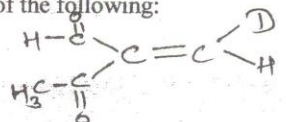
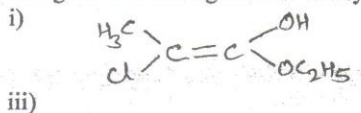
a) Write LCAO for 2, 4, 6- octatriene.

b) Predict the product of any two of the following reactions:

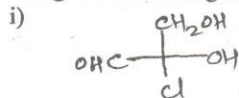


c) What are D and L notations, illustrate with suitable examples?

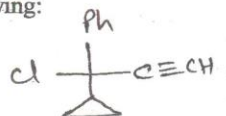
d) Assign E or Z configurations to any TWO of the following:



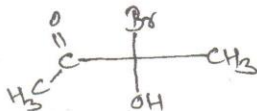
e) Assign R or S configurations to any two of the following:



ii)



iii)



f) Claisen rearrangement is intramolecular. Justify.

g) What is W. M. rearrangement reaction?

Q.6 a) Draw all possible conformations of 1, 3- dimethylcyclohexane. Also discuss their stabilities. (10)

b) Discuss stereoselective and stereospecific reactions. (05)

Q.7 Discuss any **THREE** of the following rearrangement reactions. (15)

- i) Wolf rearrangement                      ii) Favorski rearrangement  
iii) Fries rearrangement                      iv) Claisen rearrangement

Q.8 Write short notes on any **THREE** of the following: (15)

- a) Sigmatropic reactions  
b) Cycloaddition reactions  
c) Conformations of n-butane  
d) Conformations of ethane

\* \* \* \* \*

**PURUS - IV (SEMESTER PATTERN): APRIL / MAY - 2011**  
**SUBJECT: PHARMACEUTICAL ENGINEERING - II**

Day : *Thursday*  
Date : *28-04-2011*

Time: *2:00 P.M. To 5:00 P.M.*  
Max. Marks: 80.

**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of remaining attempt **ANY TWO** questions from each section.
- 2) Answers to two sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION - I**

- Q.1** Answer **ANY FIVE** of the following: [10]
- a) Give the industrial applications of heat transfer.
  - b) Differentiate between distillation and evaporation.
  - c) What are Azeotropes and how they are separated?
  - d) Enlist the modes of heat transfer.
  - e) What is H.E.T.P?
  - f) What is vapor compression in evaporation?
- Q.2** a) Define heat exchangers. Describe various types of heat exchangers. Explain in detail concentric tube type of heat exchanger. [08]  
b) Explain in detail fractional distillation. [07]
- Q.3** a) Define evaporation. Classify evaporators. Explain in detail multiple effect evaporator. [08]  
b) Give principle, construction and working of falling film evaporator. [07]
- Q.4** Write short notes on **ANY TWO** of the following: [15]
- a) Raoult's law
  - b) Shell and tube heat exchanger
  - c) Heat and material balance in distillation

**SECTION - II**

- Q.5** Answer **ANY FIVE** of the following: [10]
- a) Draw the drying rate curve and give its relevance in drying.
  - b) What is caking of crystals?
  - c) Explain principle involved in drum dryer.
  - d) What are different types of crystal form?
  - e) What are applications for particle size enlargement?
  - f) Enlist factors affecting drying.
- Q.6** a) Explain theories of crystal growth. [08]  
b) Define drying. Discuss in detail spray dryer. [07]
- Q.7** a) Explain in detail principle and working of freeze dryer. [08]  
b) Discuss in detail Swenson Walker Crystallizer. [07]
- Q.8** Write short notes on **ANY TWO** of the following: [15]
- a) Factors affecting crystallization
  - b) Strip and blister packaging
  - c) Flash dryer

\* \* \* \*



MANIKGAD -II: APRIL/MAY-2011  
SUBJECT: COMMUNITY PHARMACY

Day: Tuesday  
Date 03-05-2011

Time: 10:00 A.M. To 1:00 P.M.  
Max marks: 70

- N.B: 1) Question No 1 & 5 are **COMPULSORY**. Out of remaining question solve any **TWO** questions from each section.  
2) Both sections should be written in **SEPEARTATE** answer book.  
3) Figures to the right indicate **FULL** marks.

**SECTION-I**

- Q.1 A) Answer any **FOUR** (08)  
a) Define prescription and parts of prescription.  
b) Define lead time in inventory management.  
c) Explain terms store in cool place, store in cold place.  
d) Enlist different FDA licenses and their significance in community pharmacy.  
e) Write the content of expiry product record.  
B) Describe functions & responsibilities of Hospital pharmacist. (03)
- Q.2 Discuss concept of the pharmaceutical care. (12)
- Q.3 A) Discuss selection of site, space layout and design, stock arrangement involved in community pharmacy. (07)  
B) Discuss various stages and barriers of patient counseling. and strategies to overcome barriers for patient counseling. (05)
- Q.4 Write note on (**ANY THREE**) (12)  
a) Role of pharmacist in medication adherence  
b) Use of computer in community pharmacy  
c) Endorsement of prescription  
d) Safety stock in community pharmacy

**SECTION-II**

- Q.5 A) Define any **FOUR** (08)  
a) Health education  
b) Family Planning  
c) Balance diet  
d) Incubation period  
e) Communicable diseases  
B) Write importance of and methods use for blood sugar screening services in community pharmacy. (03)
- Q.6 Write causative agent, symptoms, mode of transmission and prevention of AIDS. (12)
- Q.7 A) Write four examples of irrational drug use. Explain- how pharmacist can promote rational drug use. (07)  
B) Discuss commonly used OTC drugs with counseling tips in treatment of fever. (05)
- Q.8 Write note on (**ANY THREE**) (12)  
a) Protein deficiency disorders  
b) Essential drug concept  
c) Prevention of malaria  
d) Common drug therapy for hypertension