PURUS-V (SEMESTER PATTERN): APRIL / MAY- 2012
SUBJECT: PHARMACOGNOSY-II

Day : Saturday
Date : 12-05-2012

Time: 10:00 AM TO 1:00 PM.
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 the **SEPARATE** answer book.
3) Figures to the right indicate **FULL** marks.

SECTION-I

Q.1 Give a detailed account of guar gum **[10]**

Q.2 **a)** Write method of preparation of shark liver oil. **[05]**

b) Write analytical parameters for fixed oils. **[10]**

Q.3 **a)** Write the chemistry of followings: **[10]**
i) Senna **iii)** Pale catechu
ii) Strophanthus **iv)** Lecithin

b) Write the uses of: **[05]**
i) Visnaga **ii)** Gingko

Q.4 Prepare notes on: **[15]**
a) Cardiac glycosides
b) Honey
c) Condensed tannins

SECTION-II

Q.5 Write in details chemisty of *Digitalis purpurea* and *Digitalis lanata.* **[10]**

Q.6 Explain the pharmacognosy of citrus fruits. **[15]**

Q.7 Write medicinal uses of: **[15]**
a) Chaulmoogra oil **d)** Kalmegh
b) *Momordica* **e)** Arjuna
c) Silymarin

Q.8 Prepare notes on: **[15]**
a) Mineral drugs
b) Cyanogenetic glycosides
c) Dextrins

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PURUS VI : APRIL/MAY- 2012 (Sem. Pattern)
SUBJECT: PHARMACOLOGY-III

Day: Saturday
Date: 05-05-2012

Time: 10:00 AM TO 1:00 PM
Max. Marks: 80

N.B.: 1) Question 1 and 5 are **COMPULSORY.**
2) Out of remaining answer any **TWO** questions form each section.
3) Answer to the sections should be written in **SEPARATE** answer book.
4) Draw well labeled diagrams **WHEREVER** required.

SECTION-I

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

a) Name two cognition enhancers.
b) What happens when barbiturates are given to patients with pain?
c) What is MAC value?
d) Name CNS stimulants.
e) Enumerate uses of morphine.
f) Name atypical neuroleptics.

Q.2 **a)** Discuss the different stages of general anesthesia. **(08)**

b) What are the pharmacological effects of Benzodiazepines? **(07)**

Q.3 **a)** Describe the general treatment of acute poisoning. **(08)**

b) Discuss the symptoms and treatment of arsenic poisoning. **(07)**

Q.4 Write short notes on any **THREE** of the following: **(15)**

a) Tricyclic antidepressants.
b) Lithium.
c) Adverse effects of NSAID's.
d) Selective Serotonin Reuptake Inhibitors.

SECTION-II

Q.5 Comment on any **FIVE** of the following: **(10)**

a) MAO inhibitors are contraindicated with cheese.
b) Use of thiopental as anesthetic agent.
c) Newer drugs used for treatment of Epilepsy.
d) Use of peripheral Dopa Decarboxylase inhibitors with L- Dopa.
e) Specific antagonist of Benzodiazepines.
f) Inhalation anesthetics.

Q.6 **a)** Describe the mechanism of action and toxicity of Phenytoin. **(08)**
b) Explain the relation between NSAIDS and Prostaglandin (PG) synthesis inhibition. **(07)**

Q.7 **a)** Classify antipsychotic drugs. Describe the actions and side effects of Chlorpromazine. **(08)**

b) Classify drugs used for the treatment of Gout. Describe the mechanism of action, adverse effects and uses of Allopurinol. **(07)**

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

PURUS-VI (SEMESTER PATTERN) : APRIL/ MAY 2012
SUBJECT : MEDICINAL CHEMISTRY-II

Day : Tuesday
Date : 24-04-2012

Time : 10:00 AM TO 1:00 P.M.
Max. Marks : 80.

N.B.

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

SECTION-I

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

a) List out four important modifications on butyrophenones for optimum antipsychotic activity.
b) Give synthesis and explain mode of action of ethacrynic acid.
c) Give structures of any two dibenzazepine class of antidepressants.
d) Explain biogenic theory of depression and antidepressant action.
e) How benzodiazepins give their anxiolytic action?
f) Outline synthesis of doxepin.
g) Explain how dimercaprol reverses diuretic action of mercurials.

Q.2 **a)** Classify antipsychotics with examples and explain their mode of action. **(04)**

b) Discuss SAR of phenothiazines. **(05)**

c) Draw all the tricyclic systems showing antidepressant action and discuss their SAR. **(06)**

Q.3 **a)** Justify the statement 'To possess good hypnotic activity a barbituric acid must be weakly acidic.' **(05)**

b) Classify anticonvulsants and discuss chemistry of hydantoins and oxazolidinediones. **(05)**

c) Give a brief account of nonbarbiturate sedatives. **(05)**

Q.4 Write short notes on any **THREE** of the following: **(15)**

a) Carbonic anhydrase inhibitors
b) SAR of thiazides
c) Potassium sparing diuretics
d) Anxiolytics
e) MAO inhibitors.

P.T.O.

SECTION-II

Q.5 Attempt any **FIVE** questions of the following: **(10)**

a) Give any one example of metabolic pathway by oxidation with reaction.
b) Define conjugation reactions with example.
c) Define analeptics. Give the structure of any one analeptic agent.
d) Give therapeutic applications of CNS stimulants.
e) Outline synthesis of Nikethamide.
f) Define local anesthetic agent. What are sites of action of local anesthetics?
g) Define hallucinogens. Give any one structure of Lysergic acid derivative.

Q.6 **a)** What do you mean by drug metabolism. Comment on Phase-I reactions in details. **(10)**

b) Describe the factors influencing metabolic pathways of the drug. **(05)**

Q.7 **a)** Give classification of general anaesthetic agents with structure. Describe SAR, mode of action and their therapeutic uses. **(10)**

b) Comment on preanaesthetic medications. **(05)**

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

a) Adverse effects of CNS stimulants
b) Anorexiants
c) MOA of Local anesthetics
d) Respiratory stimulants.
e) SAR of local anesthetics

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PURUS-VIII : APRIL/ MAY- 2012 (Sem. Pattern)
SUBJECT : DOSAGE FORM DESIGN-III

Day : Monday
Date : 30-04-2012

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

N.B.:

1) Q. No. 1 and Q. No. 5 are **COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
2) Both the sections should be written in **SEPARATE** answer books.
3) Figures to the **RIGHT** indicate full marks.

SECTION-I

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

a) What are self regulating DDS?
b) State the differences between sustained and controlled release DDS.
c) Draw a neat diagram of magnetically activated DDS.
d) Enumerate various factors influencing release of drug from matrix formulation.
e) What are Gel diffusion controlled DDS?
f) Show diagrammatically a nitrodisc.
g) What are ocusert systems?

Q.2 **a)** Discuss how cross-linking influences the release of drug from matrix systems. **(08)**
b) Discuss giving suitable example osmotically activated DDS. **(07)**

Q.3 **a)** Comment on Ionexchange controlled DDS. **(08)**
b) Discuss the mechanistic approach of release of drug from matrix DDS. **(07)**

Q.4 Write notes on any **THREE** of the following: **(15)**

a) Gel diffusion controlled DDS.
b) Micro-reservoir controlled DDS.
c) Feedback regulated DDS.
d) Floating DDS.
e) Merits and demerits of controlled DDS.

SECTION-II

Q.5 Solve any **FIVE** questions of the following: **(10)**

a) Classify transdermal DDS.
b) Give the physiology of nasal secretion.
c) Draw a neat diagram of Anderson cascade impactor.
d) Enumerate advantages of liposomes in DDS.
e) Give two applications of monoclonal antibodies in DDS.
f) Enumerate components of niosomes.
g) Explain the principle of inertial sampling of aerosols.

Q.6 **a)** Write in detailed the formulation of nasal DDS. **(08)**
b) Discuss the coupling methods for antibody drug conjugates in antibody DDS. **(07)**

Q.7 **a)** Discuss the various formulations for rectal DDS. **(08)**
b) Discuss the formulative principles of liposomes. **(07)**

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

a) Applications of nisosomes
b) Types and applications of liposomes
c) QC. of aerosols
d) Manufacturing of aerosols
e) Transdermal DDS.

PURUS – VII (SEMESTER PATTERN) : APRIL/MAY-2012
SUBJECT : PHARMACEUTICAL ANALYSIS – IV

Day: Saturday
Date : 28-04-2012

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

N.B.

1) Question No. **1** and Question No. **5** is **Compulsory,** out of the remaining attempt any **TWO** questions from each section.
2) Answers to the two sections should be written in **Separate** answer books.
3) Figures to the right indicate **Full** marks.

SECTION - I

Q.1 Answer in short (**Any Five**) **(10)**

a) Why glass is not used in UV spectroscopy?
b) Different types of wavelength selectors.
c) Color comparison techniques.
d) Different read out devices.
e) Different types of radiations in EMR spectrum.
f) Three regions of UV and their wavelengths.
g) Different noises in instruments.

Q.2 a) State Beer Lambert Law, its deviations and limitations. **(10)**
b) Write a note on spectrophotometric titrations. **(05)**

Q.3 a) Explain the different wavelength selectors. **(09)**
b) Write about the different readout devices. **(06)**

Q.4 Write notes on **(Any Three)** **(15)**

a) PMT
b) Explain energy diagram in UV.
c) Applications of UV and VISIBLE spectroscopy.
d) Sources of errors in quantitative UV spectroscopy.

SECTION – II

Q.5 Answer in short (**Any Five**) **(10)**

a) Why should sample be dried before obtaining its IR spectrum?
b) Name components of FTIR spectrometer.
c) What is meant by 'Inter system crossing'?
d) Explain the difference between Nephelometry and Turbidimetry.
e) What is Triplet state?
f) State in brief the Principle of turbidimetric titrations.
g) What is Rayleigh scattering?

Q.6 a) Compare dispersive IR and FTIR. **(06)**
b) Discuss applications of Turbidimetry and Nephelometry. **(09)**

Q.7 a) Discuss the factors affecting intensity of fluorescence. **(08)**
b) Explain the principle of Nephelometry and Turbidimetry. **(07)**

Q.8 Write notes on **(Any Three)** **(15)**

a) Nujol mull techniques in IR.
b) Golay cell.
c) Applications of fluorimetry.
d) Phosphorescence