PURUS IV APRIL/ MAY- 2012 (Sem. Pattern)

SUBJECT: PHARMACEUTICAL MICROBIOLOGY (INCLUDING IMMUNOLOGY)-II

Day: Saturday **Time:** 2:00 P.M. TO 5:00 P.M.

Date: 05-05-2012 **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- I and **ANY TWO** questions from Section- **II.**
2) Answers for the two sections should be written in the **SEPARATE** answer books.
3) Figures to the right indicate **FULL** marks.
4) Neat diagrams must be drawn **WHERVER** necessary.

SECTION-I

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

a) What is inoculums development?
b) What is *Erythroblastosis foeralis*?
c) Enlist methods for 'Storage of Vaccines'.
d) Give applications of VDRL test and Widal Test.
e) Enlist key ingredients of fermentation media.
f) Enlist tests used to detect presences of endotoxins?

Q.2 Answer the following: **(15)**

a) Write in brief Microbial Limit test.
b) Explain general method of preparation of viral vaccines.
c) Discuss different types of Precipitation reactions with examples.

Q.3 a) Enlist and explain sources and types of Microbial Contamination. **(07)**

b) Explain in detail methods are used for Microbial assay of antibiotics? **(08)**

Q.4 Write short notes on **ANY THREE**: **(15)**

a) Biological waste treatment
b) Structure of Antibody
c) Cell Mediated Hypersensitivity
d) Toxoids

SECTION-II

Q.5 Answer the following **ANY FIVE**: **(10)**

a) Define Agglutination and Precipitation.
b) What are endotoxins and exotoxins?
c) Give different strain improvement techniques.
d) Define hybersensitivity.
e) What is Immunofluorescence?
f) Define Attenuation.

Q.6 a) Discuss preservative efficacy test. **(07)**

b) Explain methods used for Microbiological assays of antibiotics. **(08)**

Q.7 a) Discuss and compare active and passive immunity. **(07)**

b) Discuss different types of immunoglobulins is detail. **(08)**

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

PURUS-III (SEMESTER PATTERN): APRIL/MAY: 2012
SUBJECT: PHYSICAL PHARMACY- II

Day: Friday
Date: 04-05-2012

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

N.B:

1) Q. No. 1 and 5 are **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.
4) Draw neat labeled diagram wherever necessary.

SECTION-I

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

a) Dilatant systems are known as shear thickening systems. Why?
b) Define along with units Kinematic viscosity and surface tension.
c) What is Plug Flow? Give its significance.
d) One point determination is virtually useless in characterizing flow properties of non Newtonian systems. Explain.
e) Define and differentiate between Nernst potential and Zeta potential.
f) Define and differentiate between Lyophillic and Lyophobic colloids.

Q.2 a) What are adsorption isotherms? Explain Langmuir adsorption isotherm in detail. **(08)**

b) Explain the concept of thixotropy along with its applications and discuss the methods to determine thixotropic coefficient. **(07)**

Q.3 a) What are kinetic properties of colloids? How will you determine molecular weight of colloids? **(08)**

b) State different types of viscometers. Explain Cup and Bob viscometers in detail. **(07)**

Q.4 Write short notes on **ANY TWO** of the following: **(15)**

a) Spreading Coefficient and its significance
b) Electrical properties of colloids
c) Insoluble monolayer film balance

SECTION-II

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

a) Explain Oswald ripening in suspensions.
b) What is Harkins Wedge oriented theory?
c) What are the factors affecting Creaming and Cracking in emulsions?
d) Enlist the applications of micromeritics in Pharmacy.
e) Define and differentiate between Ferret's diameter and Martin's diameter.
f) Porosity is function of packing arrangements of particles in a powder. Explain.

Q.6 a) Explain the theory of sedimentation. What are sedimentation parameters? Differentiate between flocculated and deflocculated suspensions. **(08)**

b) What are fundamental and derived properties of powders? Add note on approaches to improve flow properties of powders and its significance. **(07)**

Q.7 a) Write down various factors affecting crystallization. Explain the significance of studies of polymorphism in pharmacy. **(08)**

b) Explain the role of electrolytes in controlled flocculation for the formulation of a stable suspension. **(07)**

PURUS – V: APRIL/MAY – 2012 (Sem. Pattern)

SUBJECT: PHARMACEUTICAL ANALYSIS - II

Day : Saturday
Date : 28-04-2012

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 the remaining attempt any **TWO** questions from each Section.
2) Answer to the two Sections should be written in **SEPARATE** answer books.
3) Draw neat diagrams wherever required.

SECTION – I

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

a) Compare polarography and polorimetry
b) Classify ion selective membrane electrodes with examples.
c) Describe metallic indicator electrodes of second kind.
d) Draw a well labelled diagram of DME.
e) What precautions you will take while using potentiometeric reference electrodes?
f) Classify instrumental methods of analysis.
g) What do you mean by supporting electrolytes?

Q.2 a) Describe construction, working and applications of potentiometer with combination glass electrodes. **(10)**

b) Describe various potentrometric titrations. **(05)**

Q.3 What is principle of polarography? What is ilkovic equation? Describe applications of quantative polarographic methods and what are the recent advances in polarography? **(15)**

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

a) Advantages and disadvantages of instrumental methods of analysis.
b) Methods of potentionmetric end point determination
c) NHE
d) Factors affecting limiting current in polarography
e) Calibration of pH meter

SECTION – II

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

a) Define optical isomerism
b) Classify error and suggest methods to reduce determinate errors.
c) Label on bottle in analysis laboratory indicates as – M. F.- C_3H_6O and molar refraction as 16.97, what the compound should be acetone or alkyl alcohol? Support your answer by using concept of refractometry.
d) Draw a well labelled diagram of Amperometric Apparatus.
e) What is saccharimetry?
f) List out factors affecting angle of rotation of plane polarised light.
g) Compare polargraphy and amperometry.

Q.6 a) Describe, construction, working, principle and applications of abbe's refractometer. **(10)**

b) Write note on types of titrations, and advantages of Amperometry. **(05)**

Q.7 a) Explain the different components of polarimeter and their functions in detail. **(09)**

b) Explain the priciple, instrumentation and working of amperometry **(6)**

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

a) Specific and molar refraction
b) Image displacement refractometer

PURUS – V (SEMESTER PATTERN) : APRIL/MAY 2011
SUBJECT : DOSAGE FORM DESIGN-I

Day : Wednesday
Date : 27.04.2011

Time : 10.00A.M.To1.00P.M.
Max. Marks : 80

N.B.

1) Question **ONE** and question **FIVE** are compulsory. Out of remaining answer any **TWO** questions from each sections.
2) Both the section should be written in **SEPARATE** answer book.
3) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 Answer any **FIVE:** **(10)**

a) Differentiate between suspension and emulsions.
b) Write application of powder X-ray diffractometry in performulation.
c) Write selection criteria for colouring agents for suspensions.
d) Differentiate between flocculating and deflocculating suspension.
e) Enlist various chemical stabilizers in oral liquid formulations. Write examples.
f) Write method to determine re-dispersibility of suspension.
g) Write method to determine clarity of linctus.

Q.2 a) Discuss IPQC parameter for syrups. **(07)**
b) Discuss formulation of suspension bared on the concept of DLVO theory. **(08)**

Q.3 a) Discuss manufacturing of suspensions. **(10)**
b) Discuss biopharmaceutical concept of formulation design. **(05)**

Q.4 Write note: **(ANY THREE)** **(15)**

a) Equipments for manu faceting of oral drops.
b) A approaches to minimize crystal growth in suspension.
c) Cosmetic criteria of lotions
d) Flavoring agents.

SECTION – II

Q.5 Answer any **FIVE:** **(10)**

a) Explain various types of creams
b) Differentiate between ointments and creams.
c) Write with example transdermal penetration enhancers.
d) Enlist various quality control parameters for dry syrups.
e) How spreadability of topical ointments is evaluated?
f) Write about microemulsions.
g) Give reasons to formulate dry syrups.

Q.6 a) Discuss various ointment bases. **(07)**
b) Discuss manufacturing of dry syrups. **(08)**

Q.7 a) Discuss the formulation of emulsion. . **(10)**
b) Write about aesthetic properties of dermatological formulations. **(05)**

Q.8 Write note: **(ANY THREE)** **(15)**