

MANIKGAD - III : APRIL/MAY 2013
SUBJECT : PHARMACOLOGY - II

Day : Friday
Date : 12-4-2013

Time : 2.00 P.M. To 5.00 P.M.
Max. Marks : 70

N.B.

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

SECTION - I

- Q.1** a) Answer any **FOUR** of the following: (08)
- i) Define Chemotherapy.
 - ii) Give ADR of chloroquine.
 - iii) Mention the therapeutic uses of tetracyclins.
 - iv) Explain why penicillin is known as life saving as well as life threatening drug.
 - v) What are other uses of rifampin?
- b) Describe ADR and therapeutic uses of ciprofloxacin. (03)
- Q.2** Describe mechanism of action of antiretroviral drugs and give HIV treatment guidelines. (12)
- Q.3** a) Define and classify diuretics and give MOA and uses of frusemide. (07)
- b) Classify antieoagulants and compare the MOA of heparin and warfarin. (05)
- Q.4** Write note on any **THREE** of the following: (12)
- a) Applications of Gene therapy
 - b) Treatment of Tuberculosis
 - c) Antimetabolites used in cancer therapy.
 - d) Mechanism of action and uses of acyclovir

SECTION - II

- Q.5** a) Answer any **FOUR** of the following: (08)
- i) Name two anti-virus drugs for influenza virus.
 - ii) Why anthelmintics are administered with purgatives?
 - iii) Give examples of drugs for giardiasis.
 - iv) Mention uses of antiplatelet drugs.
 - v) Mention ADR of praziquantel.
- b) Why sulfamethaxazole is combined with trimethoprim? (03)
- Q.6** Define and classify antiprotozoal agents and explain pharmacology of Metronidazole. (12)
- Q.7** a) Explain in detail mechanism of cell signaling. (07)
- b) Give MOA, ADR and uses of fluconazole. (05)
- Q.8** - Write short note on: (12)
- a) Cell cycle
 - b) Protein synthesis
 - c) Application of recombinant DNA technology
 - d) Anticoagulants

MANIKGAD III: APRIL / MAY - 2013
SUBJECT: PHARMACEUTICAL ANALYSIS

Day : Monday
Date : 15-4-2013

Time: 2:00 P.M. To 5:00 P.M.
Max. Marks: 70

N. B. :

- 1) Q. No 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining solve any **TWO** questions from Section - I and II each.
- 2) Both the sections should be written in the **SEPARATE** answer books.
- 3) Draw neat and well labelled diagrams **WHEREVER** necessary.

SECTION - I

- Q. 1** A) Attempt **ANY FOUR** of the following: (08)
- i) What is the principle involved in Gel chromatography.
 - ii) Explain Quality Assurance.
 - iii) Ideal characteristics of carrier gas used in GC.
 - iv) Explain stationary phase and mobile phase.
 - v) what is isocratic and gradient elution?
- B) Write a note on sample injection system in HPLC. (03)
- Q. 2** Discuss in detail the instrumentation of GC. (12)
- Q. 3** a) Define audits, types of audits and explain the designing of internal audit system. (07)
- b) Write a brief note on electrophoresis. (05)
- Q. 4** Write note on **ANY THREE** of the following: (12)
- a) Classification of chromatography
 - b) Applications of HPTLC
 - c) Classification of gels in gel chromatography
 - d) Factors affecting column efficiency

SECTION - II

- Q. 5** A) Attempt **ANY FOUR** of the following: (08)
- i) Define Beer's - Lambert's law.
 - ii) Comment on - IR is used for qualitative analysis.
 - iii) How many possible NMR signals are possible in toluene and propane?
 - iv) Draw a well labelled diagram of DME.
 - v) Define plane polarised light and ORD.
- B) What is the principle involved in X- ray diffraction crystallography? (03)
- Q. 6** Draw a well labelled diagram of double beam UV spectrophotometer and explain its components. (12)
- Q. 7** a) What are the 'Interferences involved in AAS? (07)
- b) Define "Quenching". Explain factors affecting it. (05)
- Q. 8** Attempt **ANY THREE** of the following: (12)
- a) Total combustion burner
 - b) Sources used in X-ray diffraction crystallography
 - c) Photo multiplier tube
 - d) Differentiate prisms from monochromator

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MANIKGAD - III: APRIL/MAY 2013
SUBJECT: PHARMACOTHERAPEUTICS-II

Day: Wednesday
Date: 17-4-2013

Time: 2.00 P.M. To 5.00
Max.Marks:70

N.B.:

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

SECTION -I

- Q.1** A) Answer any **FOUR** questions: (08)
- a) What are the risk factors for otitis media
 - b) Mention the monitoring parameters for antibiotic therapy
 - c) What is Psoriasis
 - d) Define significant bacteriuria
 - e) What is the significance of ESR
 - f) Mention at least four bactericidal antibiotics
- B) Discuss management of recurrent UTI. (03)
- Q.2** Explain pathogenesis, diagnostic criteria and management of infectious endocarditis. (12)
- Q.3** a) Discuss complications associated with falciparum malaria. (07)
- b) Discuss pharmacotherapy of bacterial meningitis with emphasis on important therapeutic considerations. (05)
- Q.4** Write short notes on any **THREE** of the following: (12)
- a) Bacterial gastroenteritis
 - b) Acute pyelonephritis
 - c) Adverse effects of antitubercular drugs
 - d) Impetigo
 - e) Antimicrobial susceptibility testing

SECTION -II

- Q.5** **A)** Answer any **FOUR** questions: **(08)**
- a) What is rheumatoid arthritis?
 - b) Mention at least four drugs inducing gout
 - c) List out any four criteria's used diagnosis of SLE
 - d) Classify ARF
 - e) Name any four nephrotoxic drugs
 - f) What are the different treatments for cancer
- B)** What are the advantages of hemodialysis. **(03)**
- Q.6** Describe etiopathogenesis and pharmacotherapy of CRF. **(12)**
- Q.7** **a)** Describe pathophysiology of osteoarthritis. **(07)**
- b)** What are the types of renal replacement therapy? Explain any one. **(05)**
- Q.8** Write short notes on any **THREE** of the following: **(12)**
- a) Common toxicities of cancer chemotherapy
 - b) Pathogenesis of rheumatoid arthritis
 - c) Peritoneal dialysis
 - d) Osteodystrophy in CRF patients
 - e) Clinical manifestations of gout

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MANIKGAD - III: APRIL / MAY - 2013
SUBJECT: PHARMACEUTICAL FORMULATIONS

Day: Wednesday
Date: 24-4-2013

Time: 2:00 P.M. To 5:00 P.M.
Max. Marks: 70

N.B.:

- 1) Q. No. 1 and 5 are **COMPULSORY**. Out of remaining attempt Any **TWO** from Section -I and Section - II.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

- Q.1** A) Attempt Any **FOUR** of the following: (08)
- i) What are mouth dissolving tablets? Write its application with example of drugs.
 - ii) What are the ideal properties of gelatin as capsule shell material?
 - iii) What are applications of enteric coated tablets?
 - iv) Explain mechanism of disintegrating agent with four examples of it.
 - v) Write merits of buccal tablets.
- B) Explain weight variation test IP for tablets. (03)
- Q.2** a) Define and classify controlled release dosage forms according to drug release principle. (06)
- b) Write process of wet granulation. (06)
- Q.3** Discuss large scale manufacturing of Tablets. (12)
- Q.4** Write short notes on Any **THREE** of the following: (12)
- a) Sugar coating tablets
 - b) Application and properties of soft gelatin capsule
 - c) Nasal drug formulations
 - d) Disintegration test IP

SECTION-II

- Q.5** A) Attempt Any **FOUR** of the following: (08)
- i) How viscosity of continuous phase retards creaming in emulsions.
 - ii) Glycerogelatin suppositories are less used than fatty base suppositories. Give reason.
 - iii) Write importance of siliconization of glass containers for parenterals.
 - iv) Write difference between water for injection and sterile water for injection.
 - v) Write therapeutic applications of linctuses over syrup.
- B) Elaborate formulation of ophthalmic ointments. (03)
- Q.6** a) Classify different ointment bases and enlist their properties. (06)
- b) Explain factors affecting on rectal absorption of drug from suppository. (06)
- Q.7** Discuss quality control test for parenteral formulations. (12)
- Q.8** Write short notes on Any **THREE** of the following: (12)
- a) Transdermal penetration enhancers

MANIKGAD-III : SUPPLEMENTARY : JULY - 2013
SUBJECT : PHARMACEUTICAL ANALYSIS

Day : Tuesday
Date : 02-07-2013

Time : **10:00 A.M. TO 1:00 P.M.**
Max. Marks : 70.

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining solve 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** A) Attempt any **FOUR** of the following: (08)
- i) Theory of chromatography.
 - ii) Salient features of a polarograph.
 - iii) Classify reference electrodes in potentiometry.
 - iv) Elements of ISO 9001.
 - v) Types of adsorbents in adsorption chromatography.
- B) Discuss types of paper chromatographic techniques. (03)
- Q.2** a) Enlist the components with its functions of GC. (04)
b) Write ideal properties of detectors used in GC and explain them in detail. (08)
- Q.3** a) Explain Van-Deemter equation of chromatography. (04)
b) Write a note on various pumps used in HPLC. (05)
c) Explain currents in a polarography with its application. (03)
- Q.4** Write short notes on any **THREE** of the following: (12)
- a) Detectors in HPLC
 - b) Amperometric applications
 - c) Compare between TLC and HPTLC
 - d) Indicator electrodes in potentiometry.

SECTION-II

- Q.5** A) Attempt any **FOUR** of the following: (08)
- i) Write a note on NMR.
 - ii) Explain the term auxochrome and chromophore.
 - iii) Write on pharmaceutical application of atomic absorption spectroscopy.
 - iv) Difference between AAS and AES.
 - v) Factors affecting fermi resonance.
- B) Write a note on fragmentation in MS. (03)
- Q.6** What is the principle of UV visible spectroscopy? Write in detail instrumentation of UV visible spectrophotometer. (12)
- Q.7** a) Define luminiscence? What are the different factors affecting fluorescence. (07)
Write on instrumentation of flourimeter.
b) Write in detail detectors used in IR spectrometry. (05)
- Q.8** Write short notes on any **THREE** of the following: (12)
- a) Bragg's law
 - b) DTA
 - c) Light sources of IR
 - d) ORD and CD.

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MANIKGAD - III: SUPPLEMENTARY : JULY - 2013
SUBJECT : PHARMACEUTICAL FORMULATIONS

Day : Saturday
Date : 06-07-2013

Time : 10:00 A.M. TO 1:00 P.M.
Max. Marks : 70

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 books.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

- Q.1 A)** Attempt **ANY FOUR** of the following: [08]
- i) Define mouth dissolving tablet with example of drugs.
 - ii) Write ideal properties of Gelatin as capsule shell material.
 - iii) Differentiate between hard and soft gelatin capsules.
 - iv) Write the principle and polymers used for enteric coating.
 - v) Wet granulation v/s dry granulation.
 - vi) Write application of sublingual tablets.
- B)** Write preservatives used in oral liquids. [03]
- Q.2** Discuss formulation of tablets. [12]
- Q.3 a)** Elaborate on preformulation aspects of granules. [07]
b) Discuss about various film-coating defects. [05]
- Q.4** Write short notes on **ANY THREE** of the following: [12]
- a) Nasal drug delivery system
 - b) Dissolution test I.P
 - c) Controlled release tablets
 - d) Advantages of NDDS

SECTION - II

- Q.5 A)** Attempt **ANY FOUR** of the following: [08]
- i) Write patient counseling note for linctuses.
 - ii) Suggest alternative alcohol free liquid dosage form for paracetamol elixir.
 - iii) Write mechanism of suspending agents with examples.
 - iv) Write about advantages of topical gels.
 - v) Enlist advantages of suppositories.
 - vi) Write a note on requirements of aseptic room.
- B)** Explain briefly mechanism of skin penetration enhancers, with examples. [03]
- Q.6** Discuss semisolids bases with their merits and demerits. [12]
- Q.7 a)** Explain the principle and fabrication of transdermal patches. [07]
b) Elaborate on sterilization methods. [05]
- Q.8** Write short notes on **ANY THREE** of the following: [12]
- a) Eye ointment
 - b) Sterility test
 - c) Water for injection and sterile water for injection
 - d) Physical stability of emulsions