

**MANIKGAD -III : SUMMER- 2017**  
**SUBJECT : PHARMACOLOGY-II**

Day : Thursday  
Date : 06/04/2017

Time : 02.00 P.M. TO 05.00 P.M.  
Max. Marks : 70

**N.B.**

- 1) Q.1 and Q.5 are **COMPULSORY**. Solve any **TWO** out of the remaining from each Section.
- 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)** Answer any **FOUR** of the following: (08)
- 1) Write the mechanism of action of sulphonamides.
  - 2) Classify cephalosporins.
  - 3) Write the mechanism of action of etoposide.
  - 4) Classify diuretic drugs.
  - 5) Enlist the clinical uses of anti-platelet drugs.
- b)** Give a short note on  $\beta$ -lactamase inhibitors. (03)
- Q.2** Classify diuretics. Explain in detail mechanism of action, pharmacological actions, adverse effects and drug interactions of high ceiling diuretics. (12)
- Q.3 a)** Describe in detail the treatment for leprosy. (07)
- b)** Write a note on thrombolytics. (05)
- Q.4** Write short notes on any **THREE**: (12)
- a) Heparin
  - b) Toxicity amelioration in anticancer drugs
  - c) Subacute toxicity studies
  - d) Mannitol

**SECTION - II**

- Q.5 a)** Answer any **FOUR** of the following: (08)
- 1) What is a reverse transcriptase?
  - 2) Enlist the subcellular organelles.
  - 3) Write a brief note on chromatin structure.
  - 4) Give structures of mRNA and tRNA.
  - 5) Enlist the signal transduction pathways.
- b)** Elaborate the transcription initiation complex. (03)
- Q.6** Explain in detail the principles, processes and applications of Recombinant DNA technology. (12)
- Q.7 a)** Explain with example signal transduction mediated by MAP kinase pathway with suitable diagram. (07)
- b)** What are DNA binding protein families? Describe how they regulate the gene expression. (05)
- Q.8** Write short notes on any **THREE**: (12)
- a) Histone tail modification
  - b) Mutations
  - c) Cell cycle
  - d) Central dogma of molecular biology

**MANIKGAD -III : SUMMER- 2017**  
**SUBJECT : PHARMACEUTICAL ANALYSIS**

Day : Saturday  
Date : 08/04/2017

Time : 02.00 P.M. TO 05.00 P.M.  
Max. Marks : 70

**N. B. :**

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

**SECTION - I**

- Q.1** a) Solve **Any FOUR** of the following : (08)
- i) Write on 'Eddy Diffusion'.
  - ii) State and explain terms in Ilkovic equation.
  - iii) Write applications of Polarimetry.
  - iv) Write classification of electrodes in pH metry.
  - v) Write about conductivity cells used in conductometer.
- b) Write about ISO 9000. (03)
- Q.2** Explain theories of chromatography. Write instrumentation of HPLC with special emphasis on columns used in HPLC. (12)
- Q.3** a) Discuss instrumentation of GC with an exhaustive note on detectors used in GC. (07)
- b) Classify chromatographic methods. (05)
- Q.4** Write short notes on **Any THREE** of the following : (12)
- a) Applications of HPTLC
  - b) Potentiometric instrumentation
  - c) Developmental techniques in paper chromatography
  - d) Ion exchange resins

**P.T.O.**

## SECTION - II

- Q.5** a) Solve **Any FOUR** of the following : (08)
- i) Define – Bathochromic and Hypsochromic shift.
  - ii) Enlist factors affecting fluorescence intensity.
  - iii) Write about Fermi resonance.
  - iv) Write events involved in nebulization of sample.
  - v) Write types of balances used in thermal analysis.
- b) Explain Magic 'T' circulator used in ESR. (03)
- Q.6** Discuss instrumentation of IR spectrophotometer. Explain detectors used in IR. (12)
- Q.7** a) Write a note on transitions involved in UV spectroscopy. (07)
- b) State and derive Beer Lambert's Law. (05)
- Q.8** Write short notes on **Any THREE** of the following : (12)
- a) Radiation sources in AAS.
  - b) Applications of DSC.
  - c) Detectors used in UV.
  - d) Theory involved in Fluorescence.

\* \* \* \* \*

**MANIKGAD – III: SUMMER- 2017**  
**SUBJECT : PHARMACOTHERAPEUTICS - II**

Day : Tuesday  
Date : 11/04/2017

Time : 02.00 P.M. TO 05.00 P.M.  
Max. Marks : 70

**N. B. :**

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

**SECTION - I**

- Q. 1 A)** Answer **ANY FOUR** of the following: (08)
- i) Give classification of upper and lower respiratory tract infections.
  - ii) What is Psoriasis?
  - iii) Mention signs and symptoms of HIV.
  - iv) What are the monitoring parameters with antibiotic therapy?
  - v) Define MIC and MBC.
  - vi) Give clinical presentations of Scabies.
- B)** Outline the general principles involved in rational use of antibiotics for surgical prophylaxis. (03)
- Q. 2** Discuss etiology, pathophysiology and management of Bacterial Meningitis. (12)
- Q. 3 a)** Discuss management of Bacterial Gastroenteritis. (07)
- b)** Discuss specific antibiotic management for Infectious Endocarditis. (05)
- Q. 4** Write short notes on **ANY THREE** of the following: (12)
- a) DOTS Therapy
  - b) Management of Malaria
  - c) Eczema
  - d) Pyelonephritis

**P. T. O.**

## SECTION - II

- Q. 5 A)** Answer **ANY FOUR** of the following: (08)
- i) Enlist signs and symptoms of Rheumatoid arthritis.
  - ii) Discuss clinical presentation of Gout.
  - iii) Explain role of Alkylating agents in cancer.
  - iv) Enlist types of renal dialysis.
  - v) Enlist drug induced renal disorders.
  - vi) Discuss treatment of Acute renal failure.
- B)** Discuss in brief role of NSAIDs in Rheumatoid arthritis. (03)
- Q. 6** Discuss in detail pathophysiology and pharmacotherapy of breast cancer. (12)
- Q. 7 a)** Explain clinical presentation and management of Osteoarthritis. (07)
- b)** Classify anticancer drugs with suitable examples. Discuss the pharmacotherapy of any one class. (05)
- Q. 8** Write short notes on **ANY THREE** of the following: (12)
- a) Management of chemotherapy induced nausea
  - b) Systemic lupus erythomatosus
  - c) Basic principles of cancer therapy
  - d) Management of Spondylitis

\* \* \* \* \*

**MANIKGAD – III : SUMMER- 2017**  
**SUBJECT: PHARMACEUTICAL JURISPRUDENCE**

Day : Thursday  
Date : 13/04/2017

Time : 02.00 P.M. TO 05.00 P.M.  
Max. Marks : 70

**N.B.**

- 1) Q.1 and Q. 5. are **COMPULSORY**. Attempt 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 books.

**SECTION – I**

- Q.1** a) Answer any **FOUR** of the following: (08)  
i) Define Displaced person  
ii) Define Misbranded drugs  
iii) Define Medical practitioner  
iv) Define New drug  
v) Define Spurious drugs
- b) Write the functions of Pharmacy Council of India. (03)
- Q.2** a) Discuss the constitution of Drugs Technical Advisory Board of India (DTAB) along with its working. (07)  
b) Give scope and objectives of Pharmaceutical Legislation in India. (05)
- Q.3** a) Discuss in detail Schedule M. (07)  
b) Explain in detail Pharmaceutical code of ethics and professional conduct. (05)
- Q.4** Write short note on any **THREE**: (12)  
a) Drug inspector  
b) State Pharmacy Council  
c) Education Regulation (ER)  
d) Schedule 'Y'

**SECTION – II**

- Q.5** a) Answer any **FOUR** of the following: (08)  
i) Define Bulk drug  
ii) What is Bonded manufactory?  
iii) Define Cannabis (Hemp)  
iv) Explain Wholesaler  
v) Define Opium poppy
- b) Describe classes of exempted advertisements in Drug and Magic Remedies Act, 1954. (03)
- Q.6** a) Explain the objectives and power of Central Government as per Narcotic Drugs and Psychotropic Substances Act, 1985. (07)  
b) Explain patentable inventions in Indian Patent Act, 1970. (05)
- Q.7** a) Explain the objectives and salient features of New Drug Policy. (07)  
b) Discuss different requirements of the bonded laboratory in Medicinal and Toilet Preparations Act, 1955. (05)
- Q.8** Write short note on any **THREE**: (12)  
a) Retail Price of Formulation  
b) Functions of Animal Welfare Board of India  
c) Compulsory License  
d) Advantages and types of patent

\* \* \*

**MANIKGAD – III: SUMMER- 2017**  
**SUBJECT : MEDICINAL CHEMISTRY**

Day : Monday  
Date : 17/04/2017

Time : 02.00 P.M. TO 05.00 P.M.  
Max. Marks : 70

**N.B.:**

- 1) Q.No. 1 and Q.No.5 are **COMPULSORY**. Out of the 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 a)** Attempt **ANY FOUR** of the following: [08]  
i) Classify antifungal agents.  
ii) Write two structures of antitubercular agents.  
iii) Classify antiviral agents.  
iv) Write application of prodrugs.  
v) Classify urinary tract anti-infectives.
- b)** Write note on co-trimoxazole. [03]
- Q.2 a)** Write note on SAR and tetracyclines. [07]  
**b)** Write note on Anthelmintics. [05]
- Q.3** Define and classify antimalarial agents. Write detail note on quinolines as a antimalarial agents. [12]
- Q.4** Write the synthesis on **ANY THREE** of the following: [12]  
a) Sulphadiazine  
b) Propranolol  
c) Thiobendazole  
d) chloroquine

**SECTION – II**

- Q.5 a)** Attempt **ANY FOUR** of the following: [08]  
i) Two structures of diuretics.  
ii) HMG-CoA reductase inhibitors.  
iii) Classify antiarrhythmic agents.  
iv) Structures of two antithyroid agents.  
v) Two structures of steroidal hormones.
- b)** Discuss diagnostic agents. [03]
- Q.6 a)** Write a detail note on thiazide diuretics. [07]  
**b)** Discuss antihypertensive agents. [05]
- Q.7** Write a detailed note on antineoplastic agents. [12]
- Q.8** Write short notes on **ANY THREE** of the following: [12]  
a) Anticoagulant  
b) Vasodilator  
c) Hypoglycemic agent  
d) Thiazide diuretic

\* \* \* \*

Pharm - D  
III  
2017

**MANIKGAD-III SUMMER- 2017**  
**SUBJECT: PHARMAECUTICAL FORMULATIONS**

Day : Wednesday  
Date : 19/04/2017

Time: 02.00 P.M. TO 05.00 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)  
a) Describe therapeutic concept of formulation design.  
b) Why there is need to formulate an elixir dosage form? Explain with example.  
c) Define syrup I.P. Why it is choice as vehicle for liquid orals?  
d) Explain various semisolid bases used in formulation of eye ointment.  
e) Explain the role of emulsifying agent in stability of emulsion.  
B) Enlist evaluation properties of syrup and add note viscosity measurement. (03)
- Q.2** Discuss formulation of dermatological preparations intended for systemic absorption. (12)
- Q.3** a) Write the approaches to improve the physical stability of emulsion. (06)  
b) Write the merits and demerits of buccal drug delivery and write the rational behind development of buccal tablets. (06)
- Q.4** Answer **ANY THREE** of following: (12)  
a) Packaging of semisolids.  
b) Formulation of topical gels  
c) Transdermal patches.  
d) Evaluation of suppositories.

**SECTION-II**

- Q.5** A Attempt **ANY FOUR** of the following: (08)  
a) Write the merits of parenteral dosage form over oral dosage form.  
b) Write the significance of disintegration test for tablets and give disintegration time for coated and uncoated tablets.  
c) Write the requirement of raw material for capsule shell and write examples of raw materials used for it.  
d) Write the principle of HEPA filter.  
e) Write a method for pyrogen testing.  
B) Write the rational of mouth dissolving, chewable and sublingual tablets. (03)
- Q.6** Discuss the formulation of small volume parenterals. (12)
- Q.7** a) Write the formulation and capsule filling process for hard gelatin capsules. (06)  
b) Write the need of granulation in tablet manufacturing. Write any one method of granulation. (06)
- Q.8** Answer **ANY THREE** of following: (12)  
a) Principle of hydrolytic resistance test for glass containers.  
b) Defects in film coated tablets.  
c) Additives to improve plasticity of tablets.  
d) Selection of sterilization process.

\* \* \* \*