

PURUS – VIII (OLD COURSE) : SUMMER - 2016
SUBJECT : MEDICINAL CHEMISTRY – IV

Day : Saturday
Date : 23-04-2016

Time : 2:00 PM TO 5:00 PM
Max. Marks : 80

N.B.

- 1) Q.1 and Q.5 are **COMPULSORY**. Out of the remaining attempt **TWO** questions from Section – I and any **TWO** questions from Section – II.
- 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** Answer any **FIVE** of the following: (10)
- a) Give two examples of aryl propionic acid derivatives with their structures.
 - b) Give structure of Morphine.
 - c) Enlist various QSAR parameters.
 - d) Enlist various Radio-Opaque diagnostic agents.
 - e) Sketch out the synthesis of any one drug belonging to sulfonylurea class of oral hypoglycemic agent.
 - f) Write applications of CADD.
- Q.2** Explain the chemistry of Insulin and discuss in detail Oral hypoglycemic agents. (15)
- Q.3** Classify NSAIDS and discuss in detail aryl alkonic acid class of NSAIDS. (15)
- Q.4** Write short notes on: (Any Three) (15)
- a) Antithyroid agents
 - b) Radio opaque diagnostic agents
 - c) Methods of QSAR
 - d) Nuclear modifications of morphine

SECTION – II

- Q.5** Answer any **FIVE** of the following: (10)
- a) Write down the structure and IUPAC name of Prednisone and Progesterone.
 - b) Give applications of anti histaminics.
 - c) Write down the structure of Metiamide.
 - d) Sketch out the synthesis of Tripelenamine.
 - e) Give any two examples of synthetic oestrogens.
 - f) Write down the structure of any one drug belonging to coumarin class of anticoagulant.
- Q.6** What are glucocorticoids? Give their chemistry, SAR, MOA and functions of glucocorticoids. (15)
- Q.7** Classify antihistaminics. Give an account of agents from Amino alkyl ether class. (15)
- Q.8** Write short notes on: (Any Three) (15)
- a) Nomenclature of prostaglandins
 - b) Androgens
 - c) Applications of combinatorial chemistry
 - d) Oral contraceptives

PURUS – VIII (2011 COURSE) : SUMMER – 2016
SUBJECT : PHARMACEUTICAL ANALYSIS - VI

Day : Friday
Date : 29-04-2016

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 solve **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** Solve **ANY FIVE** of the following: (10)
- a) Define chemical shift.
 - b) Give reasons for using TMS as internal standard in NMR.
 - c) Explain (n + 1) rule in NMR.
 - d) Write the principle of AAS.
 - e) Structure of Flame.
 - f) Define coupling constant.
- Q. 2** a) Explain the types of burners and discuss any two in detail (08)
b) Write the interferences involved in flame emission spectroscopy. (07)
- Q. 3** a) Deduce the structure of a compound having the following spectral data: (10)
- M. F. : C_3H_6O
IR : 1718 (strong)
NMR : δ : 2.1 ppm(s)
MS : 58; 43
- b) Write a note on Instrumentation of NMR (05)
- Q. 4** Write short notes on **ANY THREE** of the following: (15)
- a) Shielding and deshielding
 - b) Sources in AAS
 - c) Comparison of AAS and FES
 - d) Applications of FES

SECTION - II

- Q. 5** Solve **ANY FIVE** of the following: (10)
- a) Write the principle of RIA.
 - b) Define Validation.
 - c) Enlist mass analyzers.
 - d) Define Immunoassay and classify.
 - e) What are the types of DSC?
 - f) What is metastable peak in MS?
- Q. 6** a) Explain the fragmentation pattern of alkanes and ethers. (08)
b) Explain various ions produced in MS (07)
- Q. 7** a) Discuss different types of ELISA in detail. (08)
b) Explain analytical method validation parameters. (07)
- Q. 8** Write short notes on **ANY THREE** of the following: (15)

PURUS – VIII (2011 COURSE): SUMMER-2016
SUBJECT – PHARMACOLOGY-IV

Day: Monday
Date: 02-05-2016

Time: 2:00 PM TO 5:00 PM
Max. Marks: 80

N.B.:

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

SECTION-I

- Q.1 Answer **ANY FIVE** of the following: [10]
- a) Mention the first line Antitubercular Drugs.
 - b) Differentiate Bacteriostatic and Bactericidal Drugs.
 - c) Mention the antimicrobial drugs acting via 'Cell Wall Synthesis Inhibition'
 - d) Write the mechanism of action of 'Tetracyclines'.
 - e) Classify Antifungals with suitable examples.
 - f) Mention the side effect associated with Rifampin.
 - g) Define Anabolics.
- Q.2 a) Classify Sulphonamide. Discuss their mechanism of action, pharmacokinetics and clinical uses. [08]
- b) Describe the drug use in Pregnancy. [07]
- Q.3 a) Write mechanism of action of different categories of Anti-Cancer drugs with examples. [08]
- b) Discuss the factors responsible for failure of Antimicrobial therapy. [07]
- Q.4 Write short notes on **ANY THREE**: [15]
- a) Antifungal Drugs
 - b) Adverse effects of Tetracyclines
 - c) Chloroquine
 - d) Semisynthetic penicillins.

SECTION-II

- Q.5 Answer **ANY FIVE** of the following: [10]
- a) Write the hormones of anterior pituitary gland.
 - b) Give the examples of natural androgens.
 - c) Classify oral hypoglycemic drugs.
 - d) Give the physiological role of Somatostatin.
 - e) Give the examples of Antiestrogens.
 - f) Define tocolytics.
 - g) Write the use of Glucagon.
- Q.6 a) Define and classify diabetes. Elaborate pharmacology of Insulin. [08]
- b) Discuss oral contraceptives. [07]
- Q.7 a) Discuss the pharmacology of thyroid hormones with emphasis on their clinical uses. [08]
- b) Write a note on Immunosuppressants. [07]
- Q.8 Write short notes on **ANY THREE**: [15]
- a) Interferone

PURUS-VIII (2011 COURSE) : SUMMER 2016
SUBJECT : PHARMACOGNOSY-IV

Day : Wednesday
Date : 04-05-2016

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**.
- 2) Out of the remaining solve any **TWO** questions from each section.
- 3) Figures to the **RIGHT** indicate full marks.
- 4) Answers to the two sections should be written in **SEPARATE** answer books.
- 5) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

- Q.1** Answer any **FIVE** of the following: (10)
- a) Give the uses of Shatavari.
 - b) What is Bhasma?
 - c) What is Varaha Putta?
 - d) Give the uses of Pancharista
 - e) Differentiate between Asava and Arishta
 - f) Give the uses of Gokharu?
- Q.2** a) Explain the method of preparation Dashmularishta and give its evaluation parameters. (08)
b) Explain the method of preparation of Loha bhasma and give its evaluation parameters. (07)
- Q.3** a) Give the uses of Bramhi and enlist the marketed preparation of Bramhi. (08)
b) Define Avaleha. Give method of preparation of Chavanprash. (07)
- Q.4** Write short notes on any **THREE** of the following: (15)
- a) Tulsi Kwath
 - b) Sitopaladi Churna
 - c) Carrot Kwath
 - d) Kumari Asava

SECTION-II

- Q.5** Answer any **FIVE** of the following: (10)
- a) Draw the structure of Taxol
 - b) Give the uses of Artemisin
 - c) Give the uses of Vinblastin
 - d) Draw the structure of Digoxin
 - e) Define phyto pharmaceuticals
 - f) Give the importance of Omega 3 fatty acid
- Q.6** a) Give the chemistry and therapeutic profile of Resveretral. (08)
b) Explain the method of isolation of Hypercin. (07)
- Q.7** a) Give the chemistry and therapeutic profile of Streptokinase. (08)
b) Explain the method of isolation of Silymarin. (07)
- Q.8** Write short notes on any **THREE** of the following: (15)
- a) Therapeutic uses of Alpha hydroxy citric acid
 - b) Isolation of Boswellic acid
 - c) Method of isolation of Guggulipids
 - d) Camptothecin

PURUS - VIII (2011 COURSE): SUMMER 2016
SUBJECT : DRUG REGULATORY AFFAIRS

Day : Friday
Date : 06-05-2016

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

N.B.

- 1) Question No. 1 and 5 are **COMPULSORY**. Out of remaining solve **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.

SECTION - I

- Q.1** Answer **ANY FIVE** of the following: **(10)**
- a) What is the role of DCC?
 - b) Write in brief importance of education regulation.
 - c) What is loan license?
 - d) What are the condition for license to manufacture drug under schedule X.
 - e) What is the composition of joint state pharmacy council?
 - f) Write the functions of central drug laboratory?
- Q.2** a) Write the qualification and duties of government analyst. **(08)**
b) Write in detail about DTAB. **(07)**
- Q.3** a) What are the different administrative bodies under drug and cosmetic act? **(08)**
b) What are the power and duties of drug inspector? **(07)**
- Q.4** Write note **ANY THREE** of the following: **(15)**
- a) RMP
 - b) Schedule M
 - c) Packaging of drug specified in schedule X
 - d) Schedule Y

SECTION - II

- Q.5** Answer **ANY FIVE** of the following: **(10)**
- a) What is ASU?
 - b) What is patent? Explain its significance.
 - c) What is TGA?
 - d) Enlist the criteria for opposition to grant of patent.
 - e) Explain document required for patent filling.
 - f) What is EMR?
- Q.6** a) Write in detail objectionable advertisements Act 1954. **(08)**
b) Write in detail medicinal and toilet preparation act 1955? **(07)**
- Q.7** a) Explain drug price control act with calculation of MRP.
b) Write a note on compulsory license with suitable examples.
- Q.8** Write note **ANY THREE** of the following: **(15)**
- a) ASTM and ISO.
 - b) Penalties under narcotic drug and psychotropic substances act.

PURUS-VIII (2011 COURSE): SUMMER-2016
SUBJECT: PHARMACEUTICAL MANAGEMENT

Day: *Thursday*
Date: *12-05-2016*

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

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- N.B: 1) **Q.No.1 and Q. No.5 are COMPULSORY.**
2) Attempt **ANY TWO** questions from each section.
3) Use separate answer sheets for both the sections.
4) Figures to the right indicate **FULL** marks.
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SECTION-I

- Q.1** Solve **ANY FOUR** of the following: (10)
- a) Give a schematic presentation of system approach to management.
 - b) Define strategy.
 - c) Give merits of GATT.
 - d) Give five principles of Fayols theory of management.
 - e) Show schematically organization by territory
- Q.2** a) Discuss history of pharmacy profession in India. (08)
- b) Give a detailed account of planning in an enterprise. (07)
- Q.3** a) Discuss various theories of motivation. (08)
- b) Comment on departmentation in an industry. (07)
- Q.4** Write notes on **ANY TWO** of the following: (15)
- a) Theories of leadership
 - b) Management by objectives
 - c) Direction in an enterprise

SECTION-II

- Q.5** Solve **ANY FOUR** of the following: (10)
- a) Give the charting of sales department.
 - b) What is retrospective validation?
 - c) Write an SOP of an autoclave.
 - d) How will you standardize a volumetric flask?

- Q.6** Explain PERT and CPM. Solve the following numerical- Find **(15)**
 i) Normal critical path with time and money involved.
 ii) Crashed critical path with time and money involved.

Activity	Time in hours		Money	
	Normal	Crashed	Normal	Crashed
1→2	6	4	4000	6000
1→3	4	2	6000	8000
2→3	4	3	5000	8000
3→4	6	4	8000	10,000
4→5	2	1	4000	6000

- Q.7** A pharmaceutical manufacturer manufactures chloramphenicol capsules of **(15)**
 batch size 1, 00,000 capsules with a selling price per Rs.1.0 /unit. A total
 variable cost is 20,000 rupees. The fixed cost is 30,000 rupees. Calculate
 i) P/V ratio,
 ii) BEP,
 iii) BEP if selling price is increased by 20%,
 iv) Operating sales at profit 20,000,
 v) Profit at operating sales of 80,000 rupees
 vi) Margin of safety.

- Q.8** Write notes on **ANY TWO** of the following: **(15)**
 a) Inventory control techniques
 b) Methods to increase productivity
 c) cGMP in relation to building and equipment

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