

Day : Saturday
Date : 23-04-2016

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** of 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) Enlist different electronic parameters in QSAR.
 - b) Write down the structure of hydrocortisone and testosterone.
 - c) Give any two examples of progestins.
 - d) Write down the synthesis of tripeleminamine.
 - e) Give any two examples of H_2 antagonists along with their structures.
 - f) Enlist clinically useful prostaglandin analogs.
- Q. 2 Give classification of antihistaminic agents. Explain in brief classical antihistaminics. (15)
- Q. 3 Classify adrenocorticoids. Discuss the chemistry, mechanism of action and biological actions of corticosteroids. (15)
- Q. 4 Write short notes on ANY THREE of the following: (15)
- a) Methods of QSAR
 - b) Anabolic steroids
 - c) SAR of H_2 antagonists
 - d) Peripheral modifications of morphine

SECTION - II

- Q. 5 Solve ANY FIVE of the following: (10)
- a) Write down any two structures of NSAID from salicylic acid class.
 - b) Write down the synthesis of diclofenac.
 - c) Classify diagnostic agents.
 - d) Sketch out the synthesis of warfarin.
 - e) Classify oral hypoglycemic agents with suitable examples.
 - f) What is combinational chemistry? Enlist the applications of the same.
- Q. 6 a) Explain pyrazolidinedione as NSAIDs. (08)
b) Write down the SAR of Insulin. (07)
- Q. 7 a) Discuss in detail the chemistry, SAR and MOA of Thyroid hormone. (10)
b) Give the chemical synthesis of Thyroxine (T_4). (05)
- Q. 8 Write short notes on ANY THREE of the following: (15)
- a) Diagnostic agents used for kidney function test
 - b) Oral hypoglycemic agents
 - c) Antiaggregants and thrombolytic agents
 - d) Coumarin derivatives as anticoagulants

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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)
- a) DTA
 - b) Applications of TGA
 - c) Time of flight mass analyzer
 - d) MALDI

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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) Interferons.
 - b) Protein and Peptide as drugs.
 - c) Corticosteroids.
 - d) Oxytocin.

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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

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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 **(08)**
a) Write the qualification and duties of government analyst. **(07)**
b) Write in detail about DTAB.

Q.3 **(08)**
a) What are the different administrative bodies under drug and cosmetic act? **(07)**
b) What are the power and duties of drug inspector?

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 **(08)**
a) Write in detail objectionable advertisements Act 1954. **(07)**
b) Write in detail medicinal and toilet preparation act 1955?

Q.7 **(15)**
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.
c) USFDA.
d) Cannabis and coca derivative.

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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?
 - e) Explain the role of a pharmacist in stores department.

P.T.O.

- Q.6** Explain PERT and CPM. Solve the following numerical- Find (15)
- Normal critical path with time and money involved.
 - 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
- P/V ratio,
 - BEP,
 - BEP if selling price is increased by 20%,
 - Operating sales at profit 20,000,
 - Profit at operating sales of 80,000 rupees
 - Margin of safety.

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

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