

PURUS -IV (Sem Pattern) APRIL/MAY 2011  
SUBJECT: PHARMACOGNOSY-I

DAY: Thursday  
DATE: 05-05-2011

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 questions attempt ANY TWO questions from each section.
- 2) Answers to both the sections should be written in the SEPARATE answer book.
- 3) Figures to the right indicate FULL marks.

SECTION - I

- Q.1 Answer ANY FIVE questions of the following : 15
- a) Explain Kompo system of medicine.
  - b) Write different sources of crude drug.
  - c) What is mutation? Give its significance.
  - d) Enlist different methods of cultivation.
  - e) What is hybridization? Give its applications.
  - f) Explain morphological classification.
- Q.2 a) Write different factors affecting on cultivation. 07  
b) Write a note on microscopic drug evaluation. 08
- Q.3 a) Explain acetate pathway with suitable example. 07  
b) Write scope of pharmacognosy in detail. 08
- Q.4 Write a short note on :(any three) 15
- a) Unani system of medicine.
  - b) Processing of crude drug.
  - c) Role of auxin and cytokinin as plant growth regulator.
  - d) Biological evaluation of crude drug.

SECTION- II

- Q.5 Answer ANY FIVE questions of the following : 15
- a) How to detect adulteration of crude drugs?
  - b) Define vein islet number and vein termination number.
  - c) Add a note on soil and soil fertility.
  - d) Effect of temperature and altitude on medicinal plants cultivation.
  - e) Write formation of triglycerides in plants.
  - f) Criteria for tracer selection.
- Q.6 a) Write history of pharmacognosy. 07  
b) Merits and demerits of sexual and asexual methods of propagation. 08
- Q.7 a) Write a note on mevalonic acid pathway. 07  
b) What is adulteration? Give types of adulteration. 08
- Q.8 Write a short note on :(any three) 15
- a) Natural sources of crude drug.
  - b) Basic principles of Ayurveda.
  - c) Polyploidy and its application.
  - d) Different types of pest and pest control.

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PURUS -V: APRIL/MAY 2011 (SEMESTER PATTERN)  
SUBJECT: MEDICINAL CHEMISTRY-I

Day: Thursday  
Date: 21.04.2011

Time: 10.00 A.M. To 1.00 P.M.  
Max. Marks: 80

N.B:

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

**SECTION-I**

- Q.1** Outline the scheme of synthesis and uses of **ANY FIVE** compounds of the following: (10)
- i) Labetalol
  - ii) Propranolol
  - iii) Terbutaline
  - iv) Isoproterenol
  - v) Salbutamol
  - vi) Methyldopa
  - vii) Norepinephrine
- Q.2** a) Classify cardiotonics giving one representative structure from each class, (08)  
discuss mode of action of each class.
- b) Discuss in details the chemistry of calcium channel blockers and their specific uses. (07)
- Q.3** a) Discuss SAR of  $\beta$  antagonists. Add a note on  $\beta$ - 1 selective blockers. (08)
- b) Classify  $\alpha$ - antagonists in details. Discuss chemistry, uses and mode of action of ergot alkaloids. (07)
- Q.4** Write short notes on **ANY THREE**: (15)
- i) Antiarrhythmic agents
  - ii) Direct sympathomimetics
  - iii) Biosynthesis and metabolism of norepinephrine
  - iv) Classification of prodrugs
  - v) Pharmacokinetic applications of prodrugs

P.T.O.

## SECTION-II

- Q.5** Answer **ANY FIVE** questions of the following: (10)
- a) Define partition coefficient and correlate it with biological activity.
  - b) Explain how solubility affects a biological action.
  - c) Sketch synthetic route for carbachol and list out its characteristic features.
  - d) Write structures of any two natural antimuscarinic agents.
  - e) Give examples of conformational isomers that differ in activity.
  - f) Give any 4 uses of cholinergic agonists.
  - g) Define Ferguson's principle.
- Q.6** 'What are anticholinesterases? Classify and give SAR and therapeutic uses of the same. (15)
- Q.7**
- a) Give classification, MOA and uses of neuromuscular blocking agents. (08)
  - b) Explain mode of action of ganglionic blocking agents. (04)
  - c) Write down synthesis for chlorzoxazone. (03)
- Q.8** Write short notes on (**ANY THREE**): (15)
- i) Effect of optical isomerism on biological activity
  - ii) Application of bioisosterism in drug design
  - iii) SAR of cholinergic agonists
  - iv) Development of antimuscarinic agents
  - v) Classification of cholinergic antagonists

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PURUS -V (SEMESTER PATTERN): APRIL / MAY · 2011  
SUBJECT: PHARMACOLOGY – II

Day : Friday  
Date : 29.04.2011

Time: 10.00 A.M. To 1.00 P.M.,  
Max. Marks: 80.

**N.B.:**

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

**SECTION - I**

- Q.1** Answer **ANY FIVE** of the following: [10]
- a) Give examples of antiasthmatic anticholinergics.
  - b) Write names of oral preparations of iron.
  - c) Give examples of fibrinolytics (thrombolytics).
  - d) Mention therapeutic uses of digitalis.
  - e) What are cardioselective  $\beta$  adrenergic blockers?
  - f) Which drugs are used for treatment of AV block?
  - g) Define haematinics.
- Q.2** a) Classify antihypertensive drugs. Describe the actions and uses of calcium channel blockers. [08]  
b) Describe the drug therapy angina pectoris. [07]
- Q.3** a) Explain metabolic functions, deficiency and uses of folic acid. [08]  
b) Classify hypolipoproteinemic drugs. Discuss the actions and uses of statins. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]
- a) Heparin
  - b) Styptics
  - c) Erythropoietin
  - d) Antacids

**SECTION - II**

- Q.5** Answer **ANY FIVE** of the following: [10]
- a) Write formula of WHO-Oral rehydration powder.
  - b) Mention ulcer protectives.
  - c) Give examples of drugs used to induce vomiting.
  - d) Name sympathomimetics used as antiasthmatics.
  - e) Classify antitussives.
  - f) Mention contradictions of purgatives.
  - g) Write uses of diuretics.
- Q.6** a) Describe the actions, side effects and uses of  $H_2$  receptor blockers. [08]  
b) Describe the mechanism of action, adverse effects and uses of methyl xanthine. [07]
- Q.7** a) Classify purgatives. Discuss the mechanism of action and adverse effects of irritant purgatives. [08]  
b) Describe the mechanism of action and complications of thiazide diuretics. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]
- a) Antihelicobacter pylori drugs
  - b) Ondansetron
  - c) Purgatives



**PURUS - VI (SEMESTER PATTERN) : APRIL/MAY - 2011**  
**SUBJECT : COSMETICOLOGY**

Day: Thursday  
Date: 28.04.2011

Time: 10.00 A.M. To 1.00 P.M.  
Max. Marks: 80

**N.B.:**

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

**SECTION - I**

- Q.1** Answer **ANY FIVE** of the following: (10)
- a) Enlist primary functions of tooth paste.
  - b) What is the role of pilomotor agents in shaving creams?
  - c) What are depilatories? Mention the desired requirements of depilatories.
  - d) Justify the composition for cake eye mascara.
  - e) Draw schematic pathways of melanin production.
  - f) Explain SPF factor.
  - g) What is dandruff? Mention the causes of dandruff.
- Q.2**
- a) Explain in detail wet shaving preparations. (10)
  - b) Explain the Indian standard specifications for synthetic detergent based shampoos. (05)
- Q.3**
- a) Comment Cosmetics v/s Drug formulations. (08)
  - b) Explain formulation and manufacturing of lipsticks. (07)
- Q.4** Write short notes on **ANY THREE** (15)
- a) Cold cream
  - b) Tooth paste
  - c) Baby powder
  - d) Mouth wash

**SECTION - II**

- Q.5** Answer **ANY FIVE** of the following: (10)
- a) Enlist the herbal ingredients used in shampoos.
  - b) Give the requirements of plant and equipments for manufacture of nail polish and nail lacquers.
  - c) What is the role of Aloe vera and turmeric in facial cream?
  - d) Mention the general requirements of factory premises for cosmetics.
  - e) What is self-preservation?
  - f) Name the factors affecting the growth of microorganisms in cosmetics.
  - g) What is an ideal antimicrobial agent?
- Q.6**
- a) What are herbal cosmetics? Explain the use of different herbs used in cosmetic preparations. (10)
  - b) Give the prohibitions with respect to manufacture of certain cosmetics. (05)
- Q.7**
- a) Discuss in detail the procedure to obtain the license for manufacture of cosmetics. (08)
  - b) Explain the protocol and procedure for psychometric evaluation of mouth wash. (07)
- Q.8** Write short notes on **ANY THREE** (15)
- a) Liposomes in cosmetics

**PURUS – VII (SEMESTER PATTERN): APRIL/MAY 2011**  
**SUBJECT: DOSAGE FORM DESIGN-II**

Day: Wednesday  
Date: 27-04-2011

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** question from **Section – I** and any two question from **Section – II.**
- 2) Answer to the two sections should be written in the **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.

**SECTION – I**

- Q.1** Attempt **ANY FIVE** of the following **(10)**
- a) Enumerate advantages of microencapsulation.
  - b) Draw a neat diagram of D.T. machine.
  - c) Differentiate between glidant and lubricant.
  - d) Comment on various disintegrating agents in tablets.
  - e) Give the composition of chewable and mouth dissolving tablet.
  - f) What is capping and lamination of tablets?
  - g) Give a brief account of melt solidification in granulation.
- Q.2** a) Give a detail account of production of gelatin for capsules and preparation of hard and soft gelatin capsule. **(08)**
- b) Discuss various QC test of hard gelatin capsule. **(07)**
- Q.3** a) Discuss the types of granulation. **(08)**
- b) Discuss various polymers used in microencapsulation. **(07)**
- Q.4** Write short note on **ANY THREE** of the following **(15)**
- a) Microencapsulation by coacervation techniques
  - b) Direct compression of tablets.
  - c) Evaluation of granules.
  - d) Filling of hard gelatin capsules.

**SECTION – II**

- Q.5** Attempt **ANY FIVE** of the following **(10)**
- a) Comment on routes of parenteral administration.
  - b) What is dynamic storage of water?
  - c) Pilocarpine hydrochloride solution is buffered between pH 4.5 -5.5. Give reason.
  - d) State the advantages of plackett-Burman factorial design model
  - e) Solubility of drug like bupropion is improved by complexation method. Give reason.
  - f) Differentiate between spray drying and spray congealing.
  - g) Draw a diagram of single filling unit in a parenteral section.

**P.T.O.**

- Q.6** a) What are small volume parenterals? Discuss the methods used to produce sterile powders ready for reconstitution. (08)
- b) Discuss various ophthalmic formulations. (07)
- Q.7** a) Comment on water treatment in a parenteral section. (08)
- b) Give a detailed account of Q.C. of large volume parenterals (07)
- Q.8** Write short note on **ANY THREE** of the following (15)
- a) Composition of Glass containers.
  - b) HVAC systems in Parenterals section.
  - c) Validation of process in parenterals.
  - d) Form fill seal technology in parenterals.
  - e) Parenteral formulations of proteins and peptides.

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