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CJ—3—2019

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharmacy (Fifth Semester) EXAMINATION

MARCH/APRIL, 2019

DOSAGE FORM DESIGN—I

(Pharmaceutical Technology—I)

(Monday, 22-4-2019) (BPH-51) Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

1. Solve any five of the following : 5×2=10

- (a) What is angle of repose ?**
- (b) Enlist different derived properties of drug.**
- (c) Give advantages of compressed tablets.**
- (d) Why is surfactant included in capsule fill ?**
- (e) Why only gelatin is used in preparation of capsule shell ?**
- (f) Write about role of glycerin in calamine lotion.**
- (g) Enlist sizes and their volume for HGC.**

2. Solve any four of the following : 4×3=12

- (a) Why is only demineralised water used in preparation of gelatin solution for capsule formulation ?**
- (b) Explain the need of granulation.**
- (c) Explain Carr's compressibility index and its importance.**
- (d) Write about principle of tablet coating.**
- (e) Write about plasticizers used in soft gelatin capsule.**
- (f) Give advantages and disadvantages of topical route of drug administration.**

P.T.O.

3. Solve any *four* of the following :

4×7=28

- (a) Explain tablet coating defects in detail.
- (b) Explain in detail process and principle of diffusion of drug through membrane from topical preparation.
- (c) Explain manufacturing process involved in soft gelatin capsule.
- (d) Explain effect of stabilisers, suspending and dispersing agent on quality of finished product.
- (e) Explain tableting methods in detail.
- (f) Write about bioavailability aspects of hard gelatin capsule.

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CJ—11—2019

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharm. (Third Year) (Fifth Semester) EXAMINATION

MARCH/APRIL, 2019

PHARMACEUTICAL TECHNOLOGY—II (DFM-I)

Paper BPH-52

(Wednesday, 24-4-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Answer to the point only.

1. Solve any five of the following : 5×2=10

(a) What is Consolidation and Deformation ?

(b) Give the importance of Packaging Technology.

(c) What do you mean by Tamper resistant packaging ?

(d) Give the principle of Tablet coating.

(e) Give the importance of granulation.

(f) Give the storage conditions for Hard Gelatin Capsules and Soft Gelatin Capsules.

(g) What do you mean by low energy emulsification ?

2. Solve any four of the following : 4×3=12

(a) Discuss Rheological consideration for Topical preparation.

(b) Explain in short Drug-plastic consideration in Packaging Technology.

(c) Give construction and working of Roller-compactor.

(d) Explain various unit operations involved in manufacturing of Hard Gelatin Shells.

P.T.O.

- (e) Explain weight variation test USP for tablets.
- (f) Discuss in short the rationale for the selection of soft gelatin capsule as a dosage form.

3. Solve any *four* of the following :

4×7=28

- (a) Explain in detail mechanism of granulation.
- (b) Give the method of gelatin production.
- (c) Discuss in detail mechanism of drug penetration across the skin.
- (d) Explain in detail glass and types of glass as a packaging materials.
- (e) Explain the effect of applied forces in tablet compression and give importance of die wall lubrication.
- (f) Discuss the construction and working of IP Dissolution test apparatus.

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CJ—19—2019

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharmacy (Fifth Semester) EXAMINATION

MARCH/APRIL, 2019

MEDICINAL CHEMISTRY—I

Paper BPH-53

(Friday, 26-4-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. :— (i) All questions are compulsory.

(ii) Draw structure and write reaction wherever necessary.

(iii) Your answers should be specific to the question asked.

1. Solve any *five* of the following :

5×2=10

(a) Define with example :

(i) Pharmacophore

(ii) Target identification.

(b) Write a note on receptor involved in Local anesthetics.

(c) Sketch/denote the location on morphine to show morphine antagonist activity.

(d) Enlist the forces involved in drug receptor interaction.

(e) Draw the structure and IUPAC name of Amphetamine.

(f) Outline the synthesis of carbamazepine.

(g) Why is barbiturate acidic in nature ?

2. Solve any *four* of the following :

4×3=12

(a) Discuss the SAR of morphine.

(b) Write reaction for synthesis of haloperidol.

P.T.O.

- (c) Write the name of receptor or enzymatic target involved in action of the following drugs :
- (i) Nitrazepam
 - (ii) Phenobarbitone
 - (iii) Phenytoin.
- (d) Classify the CNS stimulants and draw one structure from each class.
- (e) Write chemical classification of Hallucinogens.
- (f) Draw structure and name of heterocyclic ring present in the following drugs :
- (i) Ethionamide
 - (ii) Chlorpromazine
 - (iii) Dibucaine.
3. Solve any *four* of the following : 4×7=28
- (a) Write the reaction for biosynthesis of acetylcholine with its structure.
 - (b) Discuss SAR of phenothiazine with its therapeutic uses.
 - (c) Give SAR of diazepam with suitable examples.
 - (d) Draw structure, write IUPAC name and SAR of sodium valproate.
 - (e) Discuss SAR of lignocaine and synthesis of it.
 - (f) Explain the bioisosterism with suitable examples.

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CJ—27—2019

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm (Third Year) (Fifth Semester) EXAMINATION

MARCH/APRIL, 2019

NEUROPHARMACOLOGY

(Monday, 29-4-2019)

CBPH-54

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

1. Solve any five from the following : 5×2=10

- (a) Define neurotransmitter. Give its examples.**
- (b) Give the therapeutic uses of Disulfiram.**
- (c) What are antigout agent ?**
- (d) Enlists various Narcotic receptors.**
- (e) What are anxiolytic agent ?**
- (f) Enlist various drug used in Alzheimer's disease.**
- (g) What are antidepressant agent ?**

2. Solve any four from the following : 4×3=12

- (a) Classify general anaesthetics. Write the ideal properties of general anaesthetics.**
- (b) Write the pharmacological actions of alcohol.**
- (c) Classify barbiturate according to duration of action.**
- (d) Write the pharmacological account of phenytoin.**
- (e) Classify Antiparkinson's agent.**
- (f) Classify CNS stimulant with example.**

P.T.O.

3. Solve any *four* from the following :

4×7=28

- (a) Classify NSAIDs. Write pharmacological account of Aspirin.
- (b) Classify Narcotic analgesics. Write the pharmacological account on Morphine.
- (c) Explain the various stages of Anaesthesia.
- (d) Classify antiepileptics. Write the pharmacology of Gabapentin.
- (e) Write the pharmacological account on phenothiazine derivative.
- (f) Explain in detail Preanesthetic and Postanesthetic Medication.

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CJ—35—2019

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B. Pharm. (Third Year) (Fifth Semester) EXAMINATION

APRIL/MAY, 2019

PHYSICO-ELECTRO ANALYTICAL TECHNIQUES

(Thursday, 2-5-2019) (BPH-55) Time : 10.00 a.m. to 12.00 noon

Time— Two Hours

Maximum Marks—50

- N.B. :—*
- (i) All questions are compulsory.
 - (ii) Your answer should be specific to the question asked.
 - (iii) Draw neat labelled diagram wherever necessary.

1. Solve any *five* of the following : 5×2=10

- (a) Give significance of density in pharmaceutical analysis.
- (b) Racemic mixture is an optically inactive. Justify.
- (c) What do you mean by phase solubility analysis ?
- (d) Define :
 - (i) Maxima suppressor
 - (ii) Diffusion current
- (e) What is meant by grazing incidence ?
- (f) Write principle of thermogravimetry.
- (g) How will you prepare conductivity water ?

2. Solve any *four* of the following : 4×3=12

- (a) Describe the procedure of determination of density of liquid using pycnometer.
- (b) Comment on the following terms :
 - (i) Diastereomers
 - (ii) Asymmetric carbon.

P.T.O.

- (c) Sketch a neat labelled diagram of instrument of DTA and enlist factors affecting on its performance.
- (d) Describe principle of RIA along with schematic presentation.
- (e) Write the function of 'compensator' and 'water jacket' in Abbes refractometer.
- (f) Draw phase solubility diagram of pure compound and give its interpretation.

3 Solve any *four* of the following : 4×7=28

- (a) Discuss instrumentations of Polarimeter.
- (b) Write principle, advantages, disadvantages and applications of amperometry.
- (c) Write the construction and working of polarographic apparatus.
- (d) Describe principle of conductometric titration and explain titration of strong acid against strong base and strong acid against weak base.
- (e) Write principle of refractometry and describe its applications in pharmaceutical analysis.
- (f) Write construction and working of Glass electrode.

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CJ—43—2019

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharmacy (Fifth Semester) EXAMINATION

MAY/JUNE, 2019

PHOTOCHEMICAL APPROACHES OF NATURAL PRODUCTS

(Saturday, 4-5-2019) CBPH-56) Time : 10.00 a.m. to 12.00 noon

Time—Two Hours

Maximum Marks—50

N.B. :— (i) All questions are compulsory.

(ii) Draw a neat labelled diagram wherever necessary.

(iii) Figures to the right indicate full marks.

1. Solve any *five* of the following : 5×2=10

(a) Give the biological source and uses of spearmint.

(b) Define extraction and give the types.

(c) Give the morphological characteristics for Dioscorea.

(d) Draw a neat labelled diagram of T.S. of Fennel.

(e) Give the chemical constituents and uses of Nutmeg.

(f) Write the general chemical test for identification of volatile oils.

(g) Give the uses of sandal wood oil and lemon grass oil.

2. Solve any *four* of the following : 4×3=12

(a) Write a note on percolation.

(b) Explain the histological characteristics of Digitalis.

(c) Give the biological source chemical constituents and uses of senna.

(d) Define glycosides and give the borntragers test for detection of anthraquinone glycosides.

(e) Give the morphology and uses of Rhubarb.

(f) Write chemical constituents and adulterants of clove.

P.T.O.

3. Solve any *four* of the following :

4×7=28

- (a) Give the biological source, chemical constituents, microscopy and uses of caraway and liquorice.
- (b) Describe in detail soxhlet extraction and decoction.
- (c) Write a procedure for preparation of herbarium with example.
- (d) Give the chemical constituents, adulterants and macroscopic characteristics of cardamom and cinnamon.
- (e) Write the biological source, chemical constituents and uses of coriander and musk.
- (f) Write the biological source and uses of :
 - (i) Ammi Majus
 - (ii) Squill
 - (iii) Gentian.

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CJ—49—2019

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharmacy (Fifth Semester) EXAMINATION

MAY/JUNE, 2019

IMMUNOLOGY

(BPH 57)

(Tuesday, 7-5-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

- N.B. :—**
- (i) All questions are compulsory.
 - (ii) Figures to the right indicate full marks.
 - (iii) Your answers should be specific to the question asked.

1. Solve any *five* of the following : 5×2=10

- (a) Define Immunology and write the types of Immunity.
- (b) Define Pathogenicity and Virulence.
- (c) What is herd immunity ?
- (d) Define epidemiology.
- (e) What is meant by Hypersensitivity reaction ? Give its types.
- (f) Define sign, symptoms and syndrome with example.
- (g) What are Koch's postulates ?

2. Solve any *four* of the following : 4×3=12

- (a) What is dual nature of Immune system ? Give general properties of Immune responses.
- (b) Explain Cytotoxic (Type II) Hypersensitivity Reaction.
- (c) Write about portal of entry and portal of exists of pathogen.

P.T.O.

- (d) How inflammation act as a Host Defense ?
- (e) Explain in detail the classification of diseases.
- (f) Write about Primary Immunodeficiency diseases.

3. Solve any *four* of the following :

4×7=28

- (a) What are primary and secondary responses ? Write about different kinds of antigen-antibody reactions.
- (b) Explain cell mediated hypersensitivity (Type-IV) reaction with example.
- (c) Explain the stages of infectious diseases.
- (d) What is phagocyte ? Explain the process of phagocytosis.
- (e) Write the Reservoirs of Infection and Modes of disease transmission.
- (f) Explain Immune Complex hypersensitivity (Type-III) Reaction with example.

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CF—56—2018

FACULTY OF PHARMACEUTICAL SCIENCES & TECHNOLOGY

B. Pharm. (Third Year) (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2018

PHARMACOLOGY OF HORMONES

(Thursday, 20-12-2018) (BPH-58) Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. — (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Figures to the right indicate full marks

1. Answer the following (any five) 10

(a) What are anticoagulants ? Write its examples.

(b) Write therapeutic uses of antidiuretic hormone (ADH).

(c) Define arterial fibrillation and arterial flutters.

(d) What are cardiotonics ? Write its examples.

(e) What are diuretics ? Write its examples.

(f) Write the physiological role of progesterone.

(g) Write the physiological significance of Vitamin D.

2. Answer the following (any four) : 12

(a) Write a note on oral contraceptives.

(b) What are anti-anginal drugs ? Classify them with examples.

(c) Explain the physiological role of insulin.

P.T.O.