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CZ—3—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

MARCH/APRIL, 2018

PHARMACEUTICAL TECHNOLOGY–I

(Dosage Form Design–I)

(Friday, 20-4-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—Two Hours *Maximum Marks*—50

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

(*ii*) Answer to the point.

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

   (*a*) Enlist different methods of recording melting point of drug.

   (*b*) Give examples of penetration enhancers for topical preparations.

   (*c*) Why manitol is added in chewable tablet as a diluent.

   (*d*) Why is surfactants added in capsule fill ?

   (*e*) Give examples of enteric coating film former.

   (*f*) Enlist various sizes and filling capacity of EHG capsules.

   (*g*) Why there is need to coat the tablet ?

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

   (*a*) Explain various defects in film coating.

   (*b*) Why are both citric acid and tartaric acid used in effervescent tablet ?

   (*c*) Why only demineralised water is used in preparation of gelatin capsule ?

   (*d*) Enlist different types of ointment bases and write about absorption bases.

   (*e*) Write about plasticizers used in soft gelatin capsule.

   (*f*) Give examples of drugs degradation by the following pathways :

   (*i*) Racemisation

   (*ii*) Polymerisation

   (*iii*) Epimerisation.

P.T.O.

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

(*a*) Explain unofficial tests for tablet evaluation.

(*b*) Give fundamental and derived properties of drug. Explain any *one* properties in detail.

(*c*) Design formula for paracetamol tablet. Give methods of prepration. Give reasons for using some.

(*d*) Explain weight variation test for capsule as per IP and BP.

(*e*) Explain advantages and disadvantages of topical dosage forms.

(*f*) Explain manufacturing process involved in soft gelatin capsule.

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CZ—11—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

MARCH/APRIL, 2018

PHARMACEUTICAL TECHNOLOGY—II

(Monday, 23-4-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—50

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

(*ii*) Illustrate your answers with neat sketches wherever necessary.

(*iii*) Answer to the point only.

(*iv*) Figures to the right indicate full marks.

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

(*a*) Define Bloom strength of gelation.

(*b*) Draw labelled diagram of fludized bed granulator.

(*c*) Give the importance of diewall lubrication in the compression of tablet.

(*d*) Define the following terms :

(*i*) Saft gelatin capsule

(*ii*) Poisson ratio.

(*e*) Enlist IPQC test for capsules.

(*f*) Give the advantages of tablet coating.

(*g*) Write the importance of packaging in pharmaceutical industry.

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

(*a*) Explain the rationale of granulation in tablet manufacturing.

(*b*) Give USP weight variation test for capsule.

P.T.O.

(*c*) Explain in short drug plastic considerations in packaging of pharmaceutical products.

(*d*) How to determine friability of tablets ?

(*e*) Give the construction and working of standard coating pan.

(*f*) Differentiate between Hard gelatin capsule and soft gelatin capsule.

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

(*a*) Explain in detail about the tablet compression mechanism with schematic representation.

(*b*) Describe in detail about rheological considerations of semisolid topical preparations.

(*c*) Explain manufacturing procedure of gelatin.

(*d*) How to correct the following tablet manufacturing defects ?

(*i*) Copping and lamination

(*ii*) Double impression.

(*e*) Explain in detail USP-I and USP-II dissolution test apparatus.

(*f*) Explain in detail about strip packaging and blister packaging.

This question paper contains **2** printed pages]

CZ—19—2018

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharm. (Fifth Semester) EXAMINATION

MARCH/APRIL, 2018

MEDICINAL CHEMISTRY—I

(Wednesday, 25-4-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—50

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

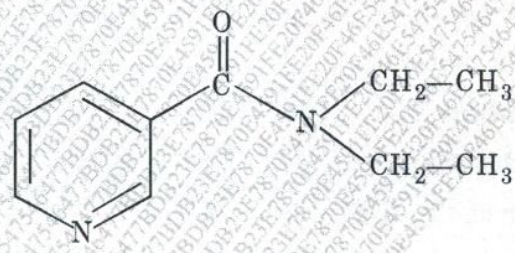
(*ii*) Figures to the right indicate full marks.

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

(*a*) Write classification of antipsychotic agents with example.

(*b*) Draw structure and give IUPAC name of *Diazepam*.

(*c*) Write chemical class and category of :



(*d*) Write True/False :

(*i*) Agents used to induce vomiting forcefully are known as antitussives.

(*ii*) Sedatives are the drugs that produce sleep similar to that of natural sleep.

(*e*) Match the following pairs :

	Name of Drug		Duration of Action
(1)	Phenobarbital	(*a*)	Intermediate acting
(2)	Hexobarbital	(*b*)	Short acting
(3)	Pentobarbital	(*c*)	Untrashort acting
(4)	Thiopental	(*d*)	Long acting

P.T.O.

(*f*) Write example of inhalation anaesthetics :

(*i*) Liquid and

(*ii*) Gas.

(*g*) Write chemical synthesis of Lignocaine.

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

(*a*) Draw structure and give IUPAC name of :

(*i*) Chlordiazepoxide

(*ii*) Imipramine.

(*b*) Write chemical synthesis of Ketamine.

(*c*) Define hallucinogens and anxiolytic agents.

(*d*) Write MOA of local anaesthetics.

(*e*) Write biosynthesis of Ach with structures.

(*f*) Draw the structure of medical compound containing the following Heterocyclic nucleus :

(*i*) Xanthine

(*ii*) Barbituric acid.

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

(*a*) Discuss SAR of phenothiazines.

(*b*) Write chemical synthesis of :

(*i*) Carbamazepine and

(*ii*) Haloperidol.

(*c*) Write classification of anticonvulsants with structure of at least one drug from each class.

(*d*) Discuss SAR of 4, 5-epoxymorphinans.

(*e*) Discuss physicochemical properties which affects the drug action.

(*f*) Write about biosynthesis, release and metabolism of NA.

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CZ—27—2018

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2018

NEUROPHARMACOLOGY

(Friday, 27-4-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—3 *Hours* *Maximum Marks*—50

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Draw appropriate diagrams or charts wherever necessary.

(*iv*) Answer to the point only.

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

   (*a*) Define anxiolytics. Give any *two* examples.

   (*b*) What is Neurotransmitter ? Give any *two* examples.

   (*c*) Write therapeutic uses of caffeine.

   (*d*) Enlist various centrally acting muscle relaxants.

   (*e*) Write therapeutic uses of pethidine.

   (*f*) What are antigout drugs ?

   (*g*) Write therapeutic uses of diazepam.

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

   (*a*) Write therapeutic uses of ethyl alcohol. Write alcohol withdrawal syndrome.

   (*b*) Write mechanism of action of Tiagabin.

   (*c*) Discuss requirements of ideal hypnotics.

   (*d*) Classify drugs used in the treatment of parkinsonism.

   (*e*) Classify barbiturates on the basis of their duration of action with appropriate example.

   (*f*) Classifyt drugs action as central nervous stimulants with appropriate example.

P.T.O.

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

(*a*) What is antiepileptic drug ? write pharmacology of sodium valproate.

(*b*) What are anti-depressants ? Write pharmacology of tricyclic anti-depressant giving any *one* example.

(*c*) Define analgesic. Classify analgesics and antipyretics. Write mechanism of action of salicylates.

(*d*) Define general anaesthetic. Discuss pharmacology of diethyl ether.

(*e*) Discuss neurohumoral transmission in CNS.

(*f*) What is pain ? Write pharmacology of morphine.

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CZ—35—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

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

MAY/JUNE, 2018

PHYSICO-ELECTRO ANALYTICAL TECHNIQUE

(Wednesday, 2-5-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—50

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

(*ii*) Your answers should be specific to the questions asked.

(*iii*) Draw neat labelled diagrams wherever necessary.

1. Solve any *five* of the following : 10

(*a*) State Archimedes principle.

(*b*) Give the formula for the calculation of :

(*i*) Molar refraction

(*ii*) Specific refraction.

(*c*) Give applications of phase solubility analysis.

(*d*) What do you mean by Antibody affinity ?

(*e*) What is the effect of temperature on conductance ?

(*f*) State Ilkovic equation.

(*g*) Give function of reference electrode in potentiometer.

2. Solve any *four* of the following : 12

(*a*) Give principle of Differential Scanning Calorimetery.

(*b*) Give advantages and disadvantages of dropping mercury electrode.

(*c*) Describe double antibody technique used in RIA.

(*d*) Why is a platinisation of electrodes done ?

(*e*) Describe the types of pychometer.

(*f*) Symmetry compounds are optically inactive. Justify.

P.T.O.

3. Solve any *four* of the following : 28

(*a*) Write Snell's law. Explain the instrumentation of Abbe refractometer.

(*b*) Sketch and explain phase solubility diagram for O_2 component mixture.

(*c*) Explain different types of conductometric titration.

(*d*) Give principle and instrumentation of amperometry.

(*e*) Write construction, working and applications of standard hydrogen electrode.

(*f*) Give the applications of polarimetry.

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This question paper contains 2 printed pages]

CZ—43—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

MAY/JUNE, 2018

PHYTOCHEMICAL APPROACHES OF NATURAL PRODUCTS

(Friday, 4-5-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—50

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

(*ii*) Draw neat labelled diagrams wherever necessary.

(*iii*) Figures to the right indicate full marks.

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

(*a*) Define extraction and give the types.

(*b*) Give the biological source and uses of musk.

(*c*) Give the chemical constituents and uses of Aloe.

(*d*) Give the biological source and chemical constituents of Ginseng.

(*e*) Give the uses of squill and Rhubarb

(*f*) Give the chemical constituents of Dioscorea and cascara.

(*g*) Give the morphological characteristics of Eucalyptus.

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

(*a*) Give the biological source, chemical constituents and uses of liquorice.

(*b*) Write chemical constituents, uses and adulterants of Digitalis.

(*c*) Give the biological source and uses of sandalwood oil and Ammi majus.

(*d*) Write a note on preparation of herbarium.

(*e*) Explain infusion and decoction.

(*f*) Explain the histological characteristics of Dill.

P.T.O.

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

(*a*) Give the biological source, chemical constituents, microscopy and uses of cardamom and cinnamon.

(*b*) Give the biological source, chemical constituents, microscopy and uses of coriander and caraway.

(*c*) Discuss the adulterants with specific chemical tests and uses of clove and senna.

(*d*) Give the chemical constituents, adulterants and macroscopic characteristics of fennel and Nutmeg.

(*e*) Describe in detail maceration and percolation.

(*f*) Write a note on authentication of plant material.

This question paper contains 2 printed pages]

CZ—49—2018

FACULTY OF PHARMACEUTICAL SCIENCES

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

MAY/JUNE, 2018

IMMUNOLOGY

Paper (BPH-57)

(Tuesday, 8-5-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—50

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

(*ii*) Draw diagrams wherever necessary.

(*iii*) Answer to the point only.

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

(*a*) Draw structure and function of IgM.

(*b*) What is innate immunity ?

(*c*) Draw structure of antibody.

(*d*) What is primary immunodeficiency ?

(*e*) Contrast sign, symptoms and syndrome.

(*f*) Define epidemiology.

(*g*) What is Atopy ?

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

(*a*) Explain stages of infectious diseases.

(*b*) Define inflammation. Write the process of acute inflammation.

(*c*) Give the general properties of Immune responses.

P.T.O.

(*d*) Describe localised and generalized Anaphylaxis.

(*e*) How and why transplant rejection occurs ?

(*f*) Describe Immune complex hypersensitivity.

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

(*a*) How does hemolytic diseases of the newborn arise ? How can it prevented ?

(*b*) What is hypersensitivity ? Explain Type-I hypersensitivity.

(*c*) Describe modes of disease transmission.

(*d*) What is Interferon ? Give role of interferon in molecular defences mechanism.

(*e*) (*i*) Explain Koch's postulates with its limitations.

(*ii*) Explain primary and secondary immune responses.

(*f*) (*i*) Distinguish between Biological and mechanical vectors.

(*ii*) How do active and passive immunity differ ?

This question paper contains 2 printed pages]

CZ—56—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

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

MAY/JUNE, 2018

PHARMACOLOGY OF HORMONES

(BPH-58)

(Saturday, 12-5-2018) **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. Answer the following (any *five*) : 10

(*a*) Define anti-platelet agents and write its examples.

(*b*) Write therapeutic uses of Vassopressin.

(*c*) Define arterial flutters and arterial fibrillation.

(*d*) What are carditonics ? Give its examples.

(*e*) Write examples of thiazide diuretics.

(*f*) Write the physiological role of androgen.

(*g*) Write the physiological significance of parathyroid hormone.

2. Answer the following (any *four*) : 12

(*a*) Write a note on oral contraceptives.

(*b*) Define and classify anti-anginal agents with examples.

(*c*) Write on physiological role of insulin on controlling diabetes mellitus.

(*d*) Write on drug therapy for erectite dysfunction.

(*e*) Write therapeutic uses and adverse effects of amlodipine.

(*f*) Explain the pharmacology of Furosemide.

P.T.O.

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3. Answer the following (any *four*) : 28

(*a*) Write on pharmacology of cortisol.

(*b*) What are oral hypoglycemic agents ? Classify them with examples and give pharmacology of glebendamide.

(*c*) Explain Renin-Angiotensin-Aldosterone system.

(*d*) Give an account on synthesis, storage and release of thyroxin and tri-iodothyronine hormone.

(*d*) Write the pharmacology of amyl nitrate

(*f*) Write on management of female infertility.