CC—03—2017

FACULTY OF PHARMACY

B.Pharm. (V Semester) EXAMINATION

MARCH/APRIL, 2017

DOSAGE FORM DESIGN

Paper I

(Pharmaceutical Technology)

(Tuesday, 11-4-2017)   Time : 10.00 a.m. to 12.00 noon

Time—Two Hours   *Maximum Marks—50*

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

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

   (iii)   Figures to the right indicate full marks.

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

   (i)   Enlist various fundamental properties of Drugs.

   (ii)   Why is there need to coat the tablet ?

   (iii)   Why are surfactants incorporated into capsule fill.

   (iv)   Give examples of penetration enhancers used in ointments.

   (v)   What is Angle of Repose ?

   (vi)   Enlist various tablet excipients with two examples of each.

   (vii)   How capsule fill weight of the formulation can be determined ?

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

   (a)   What is dry granulation method ? What are its advantages and disadvantages ?

   (b)   Differentiate between Hard Gelatin Capsules and Soft Gelatin Capsules.

   (c)   Write a note on derived properties of drugs and excipients.

   (d)   Write about antioxidants used in semisolid preparations.

   (e)   Explain various defects in film coated tablets.

   (f)   What are the different additives to be added in capsule fill ?

P.T.O.

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

   (a) Give the advantages and disadvantages of capsule dosage form.

   (b) Describe various factors affecting percutaneous absorption of drug.

   (c) Explain the process of sugar coating in detail.

   (d) Write in detail about formulation of soft gelatin capsules.

   (e) Write a note on various disintegrants used while designing of tablet dosage form.

   (f) What are general methods of ointment preparation ? Explain incorporation method.

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AY—7—2017

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY
B. Pharm. (Third Year) EXAMINATION
MARCH/APRIL, 2017
DOSAGE FORM MANUFACTURE

(Thursday, 13-4-2017)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours   *Maximum Marks—80*

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

      (ii)   Figures to the right indicate full marks.

      (iii)   Answer to the point only.

1.   Solve any *ten* of the following :   10×2=20

    (a)   Enlist the factors affecting stability of solutions.

    (b)   What is Zeta potential ?

    (c)   Enlist the identification test for emulsion.

    (d)   Why disintegration test is necessary in tablet formulations ?

    (e)   What is demixing in capsule ?

    (f)   Name IPQC test for parenterals.

    (g)   Write a note on Rheological Changes.

    (h)   What are the functions of closure ?

    (i)   What do you mean by primary and secondary packaging materials ?

    (j)   Mention the storage conditions for hard and soft gelatin capsules.

    (k)   What is Mottling ?

    (l)   Define suspension. Give its advantages.

2.   Solve any *two* :   2×6=12

    (a)   Explain the unit operations involved in manufacturing of solution.

    (b)   Explain factors affecting stability of suspension.

    (c)   Explain the working and principle of Homogenesis.

                                       P.T.O.

3. Solve any *two* : 2×6=12

    (a) Explain various unit operations involved in tablet manufacture by :

        (i) Wet granulation

        (ii) Dry granulation.

    (b) What are the different unit processes involved in manufacturing of soft gelatin capsules ?

    (c) Explain in detail about physical and chemical indicators used in parenteral preparations.

4. Solve any *two* : 2×6=12

    (a) Explain the rheology of cream.

    (b) Explain glass glass container as a packaging material for different dosage form.

    (c) Explain the process of sugar coating.

5. Solve any *two* : 2×6=12

    (a) Explain industrial processing of topical semisolid preparations.

    (b) Give the layout and design for manufacturing of SVP.

    (c) Differentiate between flocculated and deflocculated suspension.

6. Solve any *two* : 2×6=12

    (a) How will you overcome different problems encountered during tablet manufacturing ?

    (b) Explain plastic and metal as a packaging material for pharmaceuticals.

    (c) Give the methods of manufacturing of type A and type B gelatin.

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CC—15—2017

FACULTY OF PHARMACEUTICAL SCIENCE & TECHNOLOGY

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

MAY/JUNE, 2017

MEDICINAL CHEMISTRY–I

(Thursday, 4-5-2017)   Time : 10.00 a.m. to 12.00 noon

Time— Two Hours   *Maximum Marks—50*

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

(ii)   Work reaction (s) and draw structures wherever necessary.

(iii)   Numbers to the right indicate marks.

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

(i)   Write important advantages of CADD

(ii)   Draw structure of Amitryphyline

(iii)   Enlist important physicochemical parameters for drug discovery.

(iv)   Write reaction for the synthesis of sodium valproat.

(v)   Enlist with example factors affecting on drug-receptor interaction.

(vi)   Write importance of stereo chemistry in drug design.

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

(i)   Write classification of anesthetics as esters and amides with example.

(ii)   Draw and compare structures of xanthine derivatives.

(iii)   Write chemistry of Morphine.

(iv)   Draw structure and write IUPAC name of chlorpheosine. *chloropecmaur*

(v)   Write reaction for synthesis of amphetamine Add a note on its mde of action.

(vi)   Write metabolism of Noradrenaline.

P.T.O.

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

   (*i*) Define, classify and explain Bio-isosterism with example.

   (*ii*) Write SAR of Ach (acetylcholine).

   (*iii*) Write SAR of Benzodiazepines with suitable examples.

   (*iv*) Write chemistry of Barbiturates. Draw the structures of barbiturates which actc as sedative, haptotics and anesthetics.

   (*v*) Compare chemistry of following as antipsychotic :

       (*a*) Phenothiazines 4

       (*b*) Butyrophenones 3

   (*vi*) Write chemistry and SAR of phenylethnolamines as an adrenergic agonists.

CC—21—2017

FACULTY OF PHARMACEUTICAL SCIENCES

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

MARCH/APRIL, 2017

NEUROPHARMACOLOGY

(BPH-54)

(Thursday, 20-4-2017)   **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 only.

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

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

   (*a*)   Write the mechanism of action of disulfiram used in treatment of chronic alcoholism.

   (*b*)   Define centrally acting muscle relaxants with example.

   (*c*)   Mention types of convulsions.

   (*d*)   Give reason why L-dopa is always given in combination with carbidopa.

   (*e*)   What are anxiolytics ? Write its examples.

   (*f*)   Classify antigout drugs with examples.

   (*g*)   Name various natural endogenous analgesic substance.

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

   (*a*)   Discuss on various stages of general anesthesia.

   (*b*)   Write a short note on pharmacotherapy of Alzheimer's disease.

   (*c*)   Write a brief note on Cox-2 inhibitors.

   (*d*)   Classify antimaric drugs with exampels.

   (*e*)   Discuss on mechanism of generation of pain.

   (*f*)   Write a brief note on Neurohumoral transmission in CNS.

P.T.O.

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

    (*a*)   Describe in detail pharmacology of alcohol.

    (*b*)   Classify hypnotic sedatives with example. Write in detail pharmacology of diarepam.

    (*c*)   Classify CNS stimulants with suitable example. Write mechanism, pharmacological action, toxicity and uses of caffeine.

    (*d*)   What are analgesics and antipyretics ? Explain the pharmacology of aspirin.

    (*e*)   What is depression ? Explain in detail the pharmacology of tricyclicantidepressants.

    (*f*)   What is meant by Parkinsonism ? Discuss the pharmacotherapy of Parkinson's disease.

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CC—27—2017

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B. Pharmacy (Fifth Semester) EXAMINATION

MARCH/APRIL, 2017

PHYSICO-ELECTRO ANALYTICAL TECHNIQUE

(Saturday, 22-4-2017)   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 diagrams wherever necessary.

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

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

(*a*)   What is meant by specific gravity ?

(*b*)   Answer the following statements as True or False :

(*i*)   Refractive index of liquid is dependent on temperature.

(*ii*)   Specific refraction of liquid is an independent on temperature.

(*c*)   Define :

(*i*)   Residual current.

(*ii*)   Diffusion current.

(*d*)   State the principle of amperometry.

(*e*)   Define :

(*i*)   Epitope.

(*ii*)   Antiserum.

(*f*)   Dextro isomers rotates plane polarized light towards right hand side, justify.

(*g*)   What do you mean by cell constant ?

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

(*a*)   Write the procedure of density measurement by using pycnometer.

(*b*)   Write the principle of thermogravimetry and differential thermal analysis.

P.T.O.

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(c) Calculate specific refraction of liquid having RI value 1.378 and density 0.785 gm/ml.

(d) Describe the procedure of radio-immunoassay along with schematic representation.

(e) Give the advantages and disadvantages of dropping marcury electrode.

(f) Draw the neat labelled diagram of apparatus used in amperometry.

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

(a) Write the construction and working of normal hydrogen electrode.

(b) Explain various applications of conductometry.

(c) Explain instrumentation of Abbe's refractometer.

(d) Draw the phase solubility diagram for two component mixture and give its interpretation.

(e) Sketch a neat labelled diagram of polarimeter and state the function of its each component. Add a note on racemic mixture.

(f) Define polarography and explain the following term with respect to it :

(i) Supporting electrolyte

(ii) Polarisable electrode

(iii) Half-wave potential.

(6)

CC—33—2017
FACULTY OF PHARMACEUTICAL SCIENCES
B. Pharm. (Fifth Semester) EXAMINATION
MARCH/APRIL, 2017
PHOTOCHEMICAL APPROACHES OF NATURAL PRODUCTS
Paper BPH-56

(Tuesday, 25-4-2017)

Time : 10.00 a.m. to 12.00 noon

Time—Two 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.

(iv) Draw well labelled diagrams wherever necessary.

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

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

   (b) Give the biological source and use of ginseng.

   (c) Write the chemical constituents and adulterants of cascara.

   (d) Write the chemical constituents and adulterants of musk.

   (e) Give the chemical constrituents and uses of cinnamon.

   (f) Write the chemical test for identification of anthraquinone glycosides.

   (g) Define extraction and give the types.

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

   (a) Write a note on preparation of herbarium.

   (b) Give the adulteration of clove and explain how they differ from genuine variety.

   (c) Give the biological source, uses and morphology of squill.

   (d) Give the biological source, uses and morphology of cardamom.

   (e) Write the biological source, chemical constituents and uses of Nutmeg.

   (f) Explain the typical histological characteristics of Digitalis.

P.T.O.

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

    (a) Explain extraction by percolation and maceration in detail.

    (b) Discuss the biological source, morphology, microscopy, chemical constituents and adulterants of coriander.

    (c) Discuss the biological source, morphology, microscopy, chemical constituents and adulterants of Senna.

    (d) Discuss the biological source, morphology, microscopy, chemical constituents and adulterants of Caraway.

    (e) Mention the adulterants and emphasis on chemical constituents, uses of strophanthus and spearmint.

    (f) Mention the adulterants and emphasis on chemical constituents, uses of dill and sandalwood oil.

This question paper contains 2 printed pages]

CC—37—2017

FACULTY OF PHARMACEUTICAL SCIENCES

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

MARCH/APRIL, 2017

IMMUNOLOGY

Paper BPH-57

(Thursday, 27-4-2017)   Time : 10.00 a.m. to 12.00 noon

Time—Two Hours   Maximum Marks—50

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

(ii)   Figures to the right indicate full marks.

(iii)   Answers to the point only.

1.   Solve any *five* :   5×2=10

(a)   Enlist different physical barriers.

(b)   What is portal of exit ?

(c)   Differentiate between antigen and hepten.

(d)   Give any *two* examples of infectious diseases.

(e)   Draw the structure of Antibody.

(f)   Define :

(i)   Pathogenicity

(ii)   Virulence.

(g)   What is Anaphylaxis ?

2.   Solve any *four* :   4×3=12

(a)   Explain phagocytosis process.,

(b)   Differentiate between Active and Passive Immunity.

(c)   How epidemiological studies takes place ?

(d)   Distinguish between Biological and Mechanical Vectors.

(e)   How do Koch's postulates relate to infectious disease ?

(f)   Explain Autoimmune disorders wtih suitable example.

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3. Solve any *four* : 4×7=28

   (a) How do various kinds of reservoirs of infection contribute to human disease ?

   (b) Describe mechanism of immediate hypersensitivity reaction with examples.

   (c) What is transplantation ? How and why transplant rejection occur ?

   (d) Write properties of Antigen and Antibody.

   (e) Write different stage occurs in the cause of an infectious diseases.

   (f) Explain type III hypersensitivity with suitable examples.

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CC—42—2017

FACULTY OF PHARMACEUTICAL SCIENCES

B. Pharm. (Third Year) (Fifth Semester) EXAMINATION
MARCH/APRIL, 2017

PHARMACOLOGY OF HORMONES

Paper BPH-58

(Saturday, 29-4-2017)   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* from the following :   5×2=10

(a)   What are hematinics ? Write its example.

(b)   Write the therapeutic uses of oxytocin.

(c)   Enlist various endcrine hormones.

(d)   Define diabetes mellitus and diabetes insipidus.

(e)   Define cardiotonic. Give its example.

(f)   Give the therapeutic uses of enalepril.

(g)   Write the therapeutic uses of mineralocorticosteroids.

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

(a)   Write a note on oral contraceptive.

(b)   What is angina pectoris ? Classify antianginal agent.

(c)   Write the pharmacology of oral anticoagulant.

(d)   Write the pharmacology and therapeutic uses of sulphonyl urease.

(e)   Define hypolipidemic agent. Write mode of action of HMG-COA reductose.

(f)   Write the Pharmacotherapy of enyctite dysfunction.

P.T.O.

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3. Solve any *four* from the following :

 (a) Write a pharmacological account of glucocorticosteroid.

 (b) Define and classify Antihypertensive agent. Write pharmacology of calcium channel blocker.

 (c) What are hypoglycemic agent ? Write the pharmacology of Insulin.

 (d) What are diuretic ? Write the Pharmacology of potassium spaning diuretic.

 (e) Write the pharmacological account of Nitroglycerin.

 (f) Explain the renin-angiotensin path way.