AM—01—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

MEDICINAL CHEMISTRY-II

BP–501T

(Monday, 16-12-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks—75*

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

(ii)   Figures to the right indicate full marks.

(iii)   Draw structures wherever necessary.

1.   Attempt the following questions :   10×2-20

(a)   Outline the synthesis of procaine

(b)   Write the MOA of thiazolidine diones as oral hypoglycemic agents.

(c)   Draw structures of L-thyroxine and L-thyronine.

(d)   Write the role of progesterone in oral contraceptives.

(e)   Write a short note on cardiotonics.

(f)   Define anticoagulants with examples and structure of any *one* drug.

(g)   Give MOA of bile acid sequesterants.

P.T.O.

(h) Draw structure and write uses of procainamide.

(i) Write the role of potassium channel against as antihypertensive agent.

(j) Write examples of antineoplastic agents derived from plants.

2. Attempt any *two* of the following :   2×10=20

(a) Write the biological effects and therapeutic uses of female sex hormones.

(b) Classify antihypertensive with examples and structures. Write the role of renin-angiotensin system in managing hypertension.

(c) What are local anaesthetics ? Write MOA and SAR of local anaesthetics.

3. Answer any *seven* of the following :   7×5=35

(a) Classify antineoplastic agents with examples and structures.

(b) Write the distribution of histamine receptors in human body with its action.

(c) Classify adrenocorticoids. Differentiate between glucocorticoid and minerelocorticoid.

(d) Draw the structure of human insulin and write a brief note on it.

(e) Write the role of calcium channel blockers as anti-anginal agents.

(f) Write the MOA, SAR and therapeutic uses of thiazide diuretics.

(g) Classify anti-arrhythmic drugs. Outline the synthesis of disopyramide phosphate.

(*h*)   Discuss the chemistry of cardiac glycosides.

(*i*)   Match the following :

'A'	'B'
(1) Omeprazole	(1) Carcinoma
(2) Methotrexate	(2) Anginal attacks
(3) Verapamil	(3) Cretinism
(4) Mannitol	(4) 2-E syndrome
(5) L-thyroxine	(5) Edema

AM—05—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

INDUSTRIAL PHARMACY-I

BP–502-T

(Wednesday, 18-12-2024)   Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours   Maximum Marks—75

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

(ii) Draw appropriate diagram wherever necessary.

(iii) Answer to the point only.

1. Answer the following :   10×2=20

(a) What are hydrates and solvates ? Give examples.

(b) Write role of viscosity modifiers in ophthalmics.

(c) Mention objectives of preformulation study.

(d) Define bloom strength.

(e) Write functions of closures in packaging system.

(f) Write advantages of amorphous solid dosage form.

(g) Enlist organoleptic additives of liquid oral preparations.

(h) What are *two* phases in aerosols ?

(i) Write formula of sunscreen lotion.

(j) Write ideal properties of nail cosmetics.

P.T.O.

2. Answer any *two* of the following : 2×10=20

   (a) Define pharmaceutical aerosols. Write their merits and demerits and explain foam type of aerosols.

   (b) Write remedies and reasons for capping and laminations.

   (c) Describe evaluation test for capsules.

3. Solve any *seven* of the following : 7×5=35

   (a) Write quality control test for tablet dosage form.

   (b) Explain DLVO theory of suspension.

   (c) Explain stability problems in emulsion.

   (d) Write about plastic as packaging material.

   (e) Describe pelletization methods.

   (f) Explain filling procedure for hard gelatin capsule.

   (g) Write significance of pH-solubility profile of drug in preformulation study.

   (h) Define creams. Explain formulation of vanishing cream.

   (i) Explain sterility testing of parenterals.

AM—09—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

PHARMACOLOGY

Paper-II

BP–503T

(Friday, 20-12-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks—75*

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

       (ii)   Answer to the point only.

       (iii)   Illustrate your answer with neat sketch wherever necessary.

1.   Answer the following questions :   10×2=20

     (a)   Define diabetes mellitus and diabetes insipidus.

     (b)   What are fibrinolytics ? Give its examples.

     (c)   Write the role of parathormone.

     (d)   Enlist drugs used in the treatment of Rheumatoid arthritis.

     (e)   Classify autocoids with suitable examples.

     (f)   Write mechanism of action of Rosuvastatin.

     (g)   Give therapeutic uses of Losartan.

     (h)   Write the role of oxytocin.

     (i)   Give pharmacological actions of serotonin.

     (j)   What are plasma volume expanders ? Give its examples.

P.T.O.

2. Answer any *two* of the following : 2×10=20

   (a) What are oral hypoglycemic agents ?

   (b) What are antihypertensive agents ? Classify it and write pharmacology of Angiotensin Receptor Blockers (ARBs).

   (c) What are diuretics ? Classify it and write pharmacology of loop diuretics.

3. Answer any *seven* of the following : 5×7=35

   (a) Discuss in brief the bioassay of histamine.

   (b) Explain in detail Renin-Angiotensin-Aldosterone system.

   (c) What are antigout drugs ? Write mechanism of action and therapeutic uses of Allopurinol.

   (d) What are anti-anginal agents ? Write pharmacology of propranolol.

   (e) Discuss in brief pharmacotherapy of shock.

   (f) Explain in detail pharmacology of progesterone.

   (g) Classify antihistamine agents ? Write pharmacology of chlorpheniramine.

   (h) Explain in detail pharmacology of glucocorticoids.

   (i) Write mechanism of action, adverse effects and therapeutic uses of heparin.

AM—13—2024

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

PHARMACOGNOSY AND PHYTOCHEMISTRY

Paper-II

BP-504T

(Monday, 23-12-2024)   Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours   *Maximum Marks—75*

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 questions :   10×2=20

   (a)   Define secondary plant metabolite with suitable examples.

   (b)   Write a note on autoradiography.

   (c)   Write botanical source and chemical constituents of tea.

   (d)   Name *two* unorganised drugs with their botanical source and uses.

   (e)   Give the adulterants of clove.

   (f)   Write a note on taxol.

   (g)   Give the chemical test for cinnamon.

   (h)   Give the utilization of vinca alkaloids.

   (i)   Write the applications of HPTIC.

   (j)   Define chromatography and classify it.

P.T.O.

2. Answer the following (any *two*) : 2×10=20

   (a) Enumerate the various modern methods of extraction and explain in detail about supercritical fluid extraction.

   (b) Explain industrial production and estimation of sennosides and vinblastine.

   (c) Give the pharmacognostic account of Digitalis.

3. Answer the following questions (any *seven*) : 7×5=35

   (a) Write a note on Shikimic acid pathway.

   (b) Explain the steps involved in acetate pathway.

   (c) Give the biological source, chemical constituents and uses of fennel and coriander.

   (d) Give the pharmacognosy of vinca.

   (e) Explain microscopy of clove with neat labelled diagram.

   (f) Give the biological source and active constituents of Opium and Belladona.

   (g) Describe the method of isolation and identification of Atropine.

   (h) Explain the industrial production and uses of Artemisinin.

   (i) Explain extraction by soxhlation in detail.

AM—17—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

PHARMACEUTICAL JURISPRUDENCE

(Thursday, 26-12-2024) (BP505T)   Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours   *Maximum Marks—75*

N.B. :— (1) *All* questions are compulsory.

      (2) Answer to the point only.

      (3) Figures to the right indicate full marks.

1. Answer all of the following :   10×2=20

    (a) Give the objective of Pharmacy Act.

    (b) Define Register Pharmacist.

    (c) Write the objective of Medicines and Toilet Preparation Act.

    (d) What is schedule H & X ?

    (e) Write the labelling requirement of an ophthalmic preparations.

    (f) Give the objective of Drugs and Magic Remedies Act.

    (g) State the recommendations of Drug Enquiry Committee.

    (h) Define Minor and Lunatic as per Medical Termination of Pregnancy Act.

    (i) Give the objective of Drug Price Control Order.

    (j) Differentiate between Law and Ethics.

P.T.O.

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

(a) State in brief qualification and powers of Drug Inspector under Drugs and Cosmetic Act, 1940.

(b) Explain the functions of central drug laboratories as per D & C Act, 1940.

(c) Give constitution and functions of Pharmacy Council of India as per Pharmacy Act, 1948.

3. Solve any *seven* of the following : 7×5=35

(a) Describe schedule M & J.

(b) Give the difference between Bonded and Non-Bonded Laboratory.

(c) Explain in detail formula for retail price calculation as per DPCO.

(d) Explain the circumstances under which the pregnancies may terminated as per MTP Act, 1971.

(e) Define Drug and Adulterated Drug as per Drugs & Cosmetic Act, 1940.

(f) Which different licences are required for wholesale and retail sale of drugs as per Drugs & Cosmetic Act ?

(g) Discuss ethics of pharmacist in relation to medical profession.

(h) Give the offences and penalties for Pharmacy Act, 1948.

(i) Describe the procedure for obtaing patent.