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PP—01—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2023

MEDICINAL CHEMISTRY

Paper-II

(Tuesday, 26-12-2023)

(BP501T)

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. Solve the following questions :

10×2=20

(a) Draw any one structure of purine containing antimetabolite agent.

(b) What are vasodilators ? Draw the structure of any one drug from this class.

(c) Draw the structure of diphenhydramine and give its IUPAC name.

(d) Outline the synthesis of ISDN.

(e) Define local anesthetics. Give the therapeutic uses of lignocaine.

(f) Explain the chemistry of sulfonylureas.

P.T.O.

- (g) Draw the structure of any *one* drug containing estrane and pregnane nuclei.
- (h) Define anti-thyroid drugs. Classify with a suitable example.
- (i) Write a brief note on Diethylstilbestrol (DES).
- (j) Give the difference between cardenolides and butadienolides.

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

- (a) Explain the nomenclature and stereochemistry of steroids.
- (b) What are antihypertensive agents ? Classify with at least *one* structure from each class.
- (c) Explain antihistaminic agents in detail. Give the SAR of H₁ & H₂ receptor antagonist.

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

- (a) Discuss the chemistry and SAR of Cardiac Glycosides.
- (b) Outline the schematic synthetic route of :
- (i) Tolbutamide
- (ii) Dibucaine.
- (c) What are antineoplastic agents ? Classify with at least *one* structure from each class.
- (d) Explain the SAR of Diuretics.

- (e) Write a brief note on oral contraceptives. Draw the structure of Norgestrel.
- (f) Outline the synthetic route of :
- (i) Warfarine
 - (ii) Furosemide.
- (g) Explain the chemistry and SAR of proton pump inhibitors.
- (h) What are arrhythmic drugs ? Explain MOA of each class.
- (i) Draw the structure of the following drugs with its IUPAC name :
- (i) Procaine
 - (ii) Metformin
 - (iii) Testosterone
 - (iv) Chlorothiazide
 - (v) Nifedipine.

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PP—05—2023

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2023

INDUSTRIAL PHARMACY-I

Paper BP502 T

(Thursday, 28-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Answer to the point only.

(ii) Draw neat labelled diagram wherever necessary.

1. Answer the following :

10×2=20

- (a) Define preformulation.
- (b) Write objectives of tablet coating.
- (c) What is phase inversion temperature ?
- (d) Write advantages of aerosol dosage form.
- (e) Define ophthalmic preparation.
- (f) Differentiate between flocculated and deflocculated suspension.
- (g) Enlist various pelletization processes.
- (h) Mention essential requirements of parenterals.
- (i) What are cosmetics ?
- (j) Mention types of compute scaling.

P.T.O.

2. Answer any *two* of the following :

2×10=20

- (a) Describe defects of compressed tablets along with remedies.
- (b) Write various quality control tests of capsules.
- (c) Define parenterals. Describe production facilities, controls and aseptic processing.

3. Answer any *seven* of the following :

7×5=35

- (a) Write evaluation test of aerosols.
- (b) Mention about functions and importance of container-closures.
- (c) Describe process of soft capsule manufacturing.
- (d) Describe various quality control tests of parenterals.
- (e) Write importance of zeta potential in stability of suspension.
- (f) Describe BCS classification of drugs.
- (g) Describe stability problems of emulsion.
- (h) Write a note on 'Film-Coating' of tablets.
- (i) Describe various formulation considerations of ophthalmic preparations.



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PP—09—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

PHARMACOLOGY

Paper-II

(Saturday, 30-12-2023) (BP503T) 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) Draw a neat labelled diagram wherever necessary.

1. Answer the following :

10×2=20

- (a) Define Fibrinolytics and antiplatelet drugs.
- (b) Write the mechanism of actions of Acetazolamide.
- (c) Define autocoids and mention its two examples.
- (d) Write the MOA of Ondansetron.
- (e) Classify the drugs used in the treatment of Gout.
- (f) Write the therapeutic uses and MOA of Vasopressin.
- (g) Mention the hormones secreted by pituitary glands.
- (h) Write the role of Vitamin D and calcitonin.
- (i) Write the therapeutic uses of captopril.
- (j) Write the mechanism of action of Simvastatin.

P.T.O.

2. Answer the following questions (any *two*) : 2×10=20
- (a) Define and classify antihypertensive agents. Write pharmacology of calcium channel blockers.
 - (b) Write the principles and applications of Bioassay. Explain the bioassay of Insulin.
 - (c) Classify oral hypoglycemic agents and write pharmacology of Insulin.
3. Answer the following : 7×5=35
- (a) Write the pharmacology of estrogen.
 - (b) Classify NSAID and write therapeutic uses of Aspirin.
 - (c) Write the pharmacological account of Nitroglycerine.
 - (d) Define and classify diuretics and write the MOA and therapeutic uses of loop diuretics.
 - (e) Write pharmacology of Histamine.
 - (f) Write pharmacological account of Digitalis.
 - (g) Write a short note on ACE inhibitors.
 - (h) Explain the MOA and pharmacological effects of glucocorticoids.
 - (i) Classify antirheumatic drugs and write pharmacology of Methotrexate.

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PP—13—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

JANUARY, 2024

PHARMACOGNOSY AND PHYTOCHEMISTRY

Paper-II

(Tuesday, 02-01-2024)

(BP504T)

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) Draw a neat labelled diagrams wherever necessary.

(iv) Figures to the right indicate full marks.

1. Answer all the questions :

10×2=20

(a) Define Tannins and Carotenoids.

(b) Give the significance of shikmic acid pathway.

(c) Define radioactive isotope with two examples.

(d) Define extraction. Enlist any four types of extraction techniques.

(e) Write chemical constituents of mentha and pterocarpus.

(f) Write application of TLC.

(g) Write chemical structure of caffeine and reserpine.

(h) Give the biological source and chemical constituents of fennel.

(i) Draw neat labelled diagram of T.S. of coriander.

(j) Write general identification tests for Tannins.

P.T.O.

2. Solve any *two* of the following :

2×10=20

- (a) Explain industrial method of production and estimation of sennoside and vincristine.
- (b) Discuss amino acid pathway in detail.
- (c) Write the pharmacognostical study of Senna.

3. Solve any *seven* of the following :

7×5=35

- (a) Give the botanical source and chemical constituents of aloe and tea.
- (b) Write the method of isolation and estimation of curcumin.
- (c) Write the applications of GC and HPLC in detail.
- (d) Write the morphology and microscopy of Digitalis.
- (e) Describe utilization of radioactive isotope in cardiovascular diseases.
- (f) Write the isolation and estimation of Glycyrrhetic acid.
- (g) Give the biological source, chemical constituents, uses and adulterants of clove.
- (h) Explain the method of isolation and estimation of quinine.
- (i) Explain maceration and percolation technique with suitable example.

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PP—17—2023

FACULTY OF PHARMACEUTICAL SCIENCE

B. Pharm. (Fifth Semester) EXAMINATION

JANUARY, 2024

PHARMACEUTICAL JURISPRUDENCE

(Thursday, 04-01-2024) (BP505T) 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) Figures to the right indicate full marks.

1. Solve the following :

10×2=20

- (a) Define Drug as per D & C Act, 1940.
- (b) Define manufacture as per D & C Act, 1940.
- (c) Give objective of Pharmacy Act, 1948.
- (d) Enlist four narcotic drug and psychotropic substances.
- (e) Define patent.
- (f) Give types of patent.
- (g) Differentiate between law and ethics.
- (h) Name the places for termination of pregnancies.
- (i) Define Copyright.
- (j) What is Public Information officer ?

P.T.O.

2. Solve any *two* of the following :

2×10=20

- (a) Give offences and penalties under Narcotic drugs and psychotropic substances Act.
- (b) Give the constitution and function of Pharmacy Council of India.
- (c) Explain in brief about schedule M.

3. Solve any *seven* of the following :

7×5=35

- (a) Explain in brief about duties of Drug Inspector.
- (b) Write a note on pharmacist register.
- (c) Give the requirement of non-bonded laboratory.
- (d) Explain in brief about ethics of Pharmacist in relation to his Job.
- (e) Explain opium and coca derivative.
- (f) Give the duty and functions of Govt. analyst.
- (g) Give the pre-independence picture of Pharmacy in India.
- (h) Give the functions of animal welfare board of India.
- (i) Explain in detail about schedule N.