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DP—01—2022

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2022

MEDICINAL CHEMISTRY-II

Paper BP501T

(Monday, 26-12-2022)

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

Time—Three 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) Write chemical class of etidocaine and benzocaine.

(b) Write any *two* examples of androgens.

(c) Draw structure and give IUPAC name of progesterone.

(d) Write synthesis of benzocaine.

(e) Define Δ^1 steroids with example.

(f) Match the following pairs :

Basic Steroidal Nucleus	No. of C Atoms
(i) Estrane	(a) 17
(ii) Pregnane	(b) 18
(iii) Androstane	(c) 21
(iv) Gonane	(d) 19

P.T.O.

- (g) Write any *two* examples of anticoagulant agents.
- (h) Write biosynthesis of histamine.
- (i) Define diabetes mellitus.
- (j) Draw structure and write IUPAC name of diphenhydramine.
2. Solve any *two* of the following : 2×10=20
- (a) Discuss SAR of corticosteroids.
- (b) Discuss SAR of estrogens and write its metabolism.
- (c) Classify H₁ antagonists with at least *one* structure from each class.
Write synthesis of cimetidine.
3. Solve any *seven* of the following : 7×5=35
- (a) Write synthesis of tolbutamide and procaine.
- (b) Classify antidiabetic agents with at least *one* structure from each class.
- (c) Differentiate cardenolides and bufadienolides.
- (d) Write synthesis of mercaptopurine and acetazolamide.
- (e) Draw structures of the following :
- (i) Furosemide
- (ii) ISDN
- (iii) Chlorambucil
- (iv) Promethazine
- (v) Levonorgestrel.

- (f) Classify diuretics with structure of at least *one* compound from each class.
- (g) Write a note on oral contraceptives.
- (h) Define and classify anti-algorithmic agents.
- (i) Identify the chemical class of the following drugs :
- (i) Bleomycin
 - (ii) Fluorouracil
 - (iii) Chlorambucil
 - (iv) Vinblastin
 - (v) Timolol.

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DP—05—2022

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B. Pharm (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2022

INDUSTRIAL PHARMACY-I

Paper BP502T

(Wednesday, 28-12-2022)

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

Time—Three Hours

Maximum Marks—75

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

(ii) Draw neat labelled diagram wherever necessary.

(iii) Answer to the point only.

1. Answer the following :

10×2=20

(a) What is partition coefficient ? Write its significance.

(b) Enlist various excipients used in tablet formulation with suitable example.

(c) Stokes law is applicable to dilute suspension. Justify.

(d) Define bloom strength of gelatin.

(e) Mention basic criteria for parenteral preparations.

(f) Write various uses of cosmetics.

(g) What are Aerosols ?

(h) What are ideal requirement of pharmaceutical packaging material ?

(i) Define granulation. Mention its reasons.

(j) Define Pellets.

P.T.O.

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(2)

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2. Answer any *two* of the following :

2×10=20

- (a) Describe various quality control/evaluation tests of tablets.
- (b) Define Preformulation. Describe various physical properties of drug substance study in preformulation.
- (c) Describe various quality control or evaluation tests of parenterals.

3. Answer any *seven* of the following :

7×5=35

- (a) Explain 'Glass-Packaging Material'.
- (b) Describe Rotary Die process of soft capsule manufacturing.
- (c) Write about sugar coating process.
- (d) Comment on environmental control followed in parenteral processing.
- (e) Describe ophthalmic inserts (occuserts).
- (f) Write evaluation tests of capsules.
- (g) Explain lipstick.
- (h) What are propellants ? Write its functions and classification.
- (i) Mention Drug-Plastic interactions.

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DP—09—2022

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (V Semester) EXAMINATION

NOVEMBER/DECEMBER, 2022

PHARMACOLOGY-II

(Friday, 30-12-2022)

(BP 503T)

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

Time—Three Hours

Maximum Marks—75

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

(ii) Draw appropriate diagram/charts wherever necessary.

(iii) Answer to the point only.

1. Answer the following :

10×2=20

- (a) Define bioassay.
- (b) Enlist anterior pituitary hormones.
- (c) What are coagulants ? Give *two* examples.
- (d) What is effective refractory period ?
- (e) Define diuretics. Give *two* examples.
- (f) Write therapeutic use of methotrexate.
- (g) Define Angina. Enlist its symptoms.
- (h) What are autocoids ? Give any *two* examples.
- (i) Write role of Vitamin D.
- (j) What are anabolic steroids ?

P.T.O.

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(2)

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2. Answer the following (any *two*) :

2×10=20

- (a) Explain Renin-angiotensin system. Write pharmacology of Captopril.
- (b) What are antihistaminics ? Classify with example. Write pharmacology of promethazine.
- (c) Discuss principles and applications of bioassay. Write bioassay of digitalis.

3. Answer the following (any *seven*) :

7×5=35

- (a) Discuss oral contraceptives.
- (b) Write pharmacology of sulfonyl ureas.
- (c) Classify antigout drugs. Write mechanism of action of colchicine.
- (d) Explain drugs used in therapy of shock.
- (e) Classify anti-hypertensive drugs. Write mechanism of action of clonidine.
- (f) Write pharmacology of Atorvastation.
- (g) Explain plasma volume expanders.
- (h) Write pharmacology of vasopressin.
- (i) Explain actions of glucocorticoids.

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DP—13—2022

FACULTY OF SCIENCE & TECHNOLOGY

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

JANUARY, 2023

PHARMACOGNOSY & PHYTOCHEMISTRY

Paper-II

(Wednesday, 04-01-2023) (BP504T) Time : 10.00 a.m. to 01.00 p.m.

Time—Three Hours

Maximum Marks—75

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

(ii) Answer to the point only.

(iii) Draw neat labelled diagrams wherever necessary.

(iv) Figures to the right indicate full marks.

___1. Solve the following :

10×2=20

(a) Define extraction. Enlist any *four* types of extraction technique.

(b) Write biological source and uses of colophony.

(c) Define metabolic pathway with an example.

(d) Write chemical constituents of Mentha and Pterocarpus.

(e) Write any *four* applications of chromatography.

(f) Write general identification test for volatile oils.

(g) Define radioactive isotope with *two* examples.

P.T.O.

- (h) Write morphology of Coriander.
- (i) Define flavonoids and terpenoids.
- (j) Draw the chemical structure of Rutin.
2. Solve any *two* of the following : 2×10=20
- (a) Give isolation, purification and identification and citral.
- (b) Discuss amino acid pathway.
- (c) Discuss industrial production, estimation and utilization of vincristine.
3. Solve any *seven* of the following : 5×7=35
- (a) Write biological source, chemical class and uses of Clove and Aloe.
- (b) Explain Maceration and Percolation technique with suitable example.
- (c) Describe utilization of radioactive isotope in cardiovascular diseases.
- (d) Write the morphology and microscopy of fennel.
- (e) Write composition, therapeutic uses and commercial applications of Rauwolfia.
- (f) Discuss isolation of artemisin.
- (g) Write the industrial production of caffeine.
- (h) Justify HPLC technique for analysis of crude drug with a suitable example.
- (i) Discuss cultivation and collection of opium.

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DP—17—2022

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (Fifth Semester) EXAMINATION

JANUARY, 2023

PHARMACEUTICAL JURISPRUDENCE

(Friday, 06-01-2023) (BP505T) Time : 10.00 a.m. to 1.00 p.m.

Time—Three 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 : 2×10=20

- (a) What is Schedule J and M ?
- (b) Write the labelling requirement for ophthalmic preparations.
- (c) Give the objective of Pharmacy Act.
- (d) Define cannabis.
- (e) What do you mean by misbranded drug ?
- (f) What are the objectives of Patent Act ?
- (g) Define Registered pharmacist and Medical practioner.
- (h) What is schedule M ?
- (i) Write the objectives of Medicinal and Toilet Preparation Act.
- (j) Write the functions of Drug Inspector.

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

- (a) Explain the conditions to grant license for manufacture of drug specified under Schedule C₁, C₂ and X.

P.T.O.

- (b) Write the constitution and function of central council.
- (c) Give the offence and penalties under Narcotic Drug and Psychotropic Substance Act.
3. Solve any *seven* of the following : 7×5=35
- (a) Discuss in brief about medical termination of Pregnancy Act.
- (b) Give the specimen label, with suitable example for Schedule H and X drugs.
- (c) Describe Schedule 'P' and 'X' under Drug and Cosmetics Act 1940.
- (d) Define opium and opium derivatives.
- (e) Explain in brief the Education Regulation.
- (f) Describe the procedure for obtaining patent.
- (g) Discuss the GMP Guidelines mentioned under Schedule 'M'.
- (h) Define the term advertisement. Mention the objectives of Drug and Magic Remedies Act.
- (i) Write a short note on code of pharmaceutical ethics.