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SP—01—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

APRIL/MAY, 2024

MEDICINAL CHEMISTRY-II

(BP501-T)

(Tuesday, 14-05-2024)

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. Answer the following questions : 10×2=20

(a) Give the distribution of histamine receptors in human body.

(b) Outline the synthesis of nitroglycerine.

(c) Enlist different insulin preparations.

(d) Draw structure and write uses of Benzocaine.

P.T.O.

- (e) Write in short about non-steroidal estrogen.
- (f) Differentiate between cardinolides and bufedinalides.
- (g) Write MOA of propylthiouracil.
- (h) Define coagulants with examples and structure of any *one* drug.
- (i) What is the role of sodium nitroprusside in managing hypertension.
- (j) Give MOA of osmotic diuretics.

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

- (a) Classify antineoplastic agents with examples and structures. Give mode of action of cyclophosphamide as alkylating agents.
- (b) Discuss in detail nomenclature and stereochemistry of steroids.
- (c) Draw the structure of human insulin. Write a brief note on chemistry, biosynthesis, storage and release of insulin.

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

- (a) Define autocoids. Write the SAR of H₁ antagonist.
- (b) Write the role of renin-angiotensin system in hypertension.
- (c) Classify antianginal drugs with examples and structures.
- (d) Write MOA and uses of different classes of membrane depressant drugs as anti-arrhythmic agents.

- (e) Discuss the chemistry of cardiac glycosides.
- (f) Write a short note on oral contraceptives.
- (g) Discuss in detail biological effect and therapeutic uses of male sex hormone.
- (h) Write the SAR of local anaesthetics.
- (i) Identify the basic nucleus in the following drugs and draw its structure :
- (i) Cyclizine
 - (ii) Dipyridamole
 - (iii) Chlorothiazide
 - (iv) Benazepril
 - (v) Pioglitazone.

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SP—05—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2024

INDUSTRIAL PHARMACY-I

Paper BP502T

(Thursday, 16-05-2024)

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

Time—Three Hours

Maximum Marks—75

Note :— (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 is bolting of lubricant ?
- (b) Write objectives of preformulation study.
- (c) Write functions of propellants.
- (d) What is BCS classification ?
- (e) Define parenterals.

P.T.O.

- (f) Enlist names of pelletization techniques.
- (g) How to determine sedimentation volume of suspension ?
- (h) Define ophthalmic preparations.
- (i) Write functions of closures in packaging system.
- (j) What is 'Double Impression' defect of compressed tablet ?

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

- (a) Write various evaluation tests of capsules.
- (b) Describe various environmental controls to be followed in parenteral processings.
- (c) What are reasons of tablet coating ? Describe various coating equipment with suitable diagram.

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

- (a) Explain DLVO theory of suspension.
- (b) Describe evaluation test of aerosols.
- (c) Explain processing problems and remedies over it of compressed tablets.
- (d) Write about cosmetic preparations.
- (e) Write about plastic packaging material.

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SP—09—2024

FACULTY OF PHARMACY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2024

PHARMACOLOGY-II

Paper BP 503-T

(Saturday, 18-05-2024)

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

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Draw a neat labelled diagram wherever necessary.

1. Answer all questions :

10×2=20

(a) Define atrial flutter and atrial fibrillation.

(b) Write therapeutic uses of Aspirin.

(c) What are Autocoids ?

(d) Give application of Bioassay.

(e) What are anti-rheumatic agents ? Give example.

(f) Write mechanism of action of sulfonyl urea.

(g) Enlist drugs used in the therapy of shock.

(h) Give the role of calcitonin.

P.T.O.

- (i) Write adverse effects of corticosteroids.
- (j) What are plasma volume expanders ? Give its examples.
2. Answer the following (any two) : 2×10=20
- (a) What are NSAIDS ? Classify it and write pharmacology of Aspirin.
- (b) Define Antihypertensive agents ? Classify it and write pharmacology of any one class.
- (c) What is Bioassay ? Explain in detail principles and types of bioassay.
3. Answer the following (any seven) : 7×5=35
- (c) Explain in detail pharmacology of mineralocorticoids.
- (b) Write in brief about bioassay of oxytocin.
- (c) Discuss about Renin-Angiotensin Aldosterone System (RAAS)
- (a) Explain in detail pharmacology of Thiazide diuretics.
- (e) Discuss about the pharmacology of ACTH.
- (f) Write pharmacology of oestrogen.
- (g) What are anticoagulants ? Write pharmacology of warfarin.
- (h) Discuss in brief about pharmacology of Rosuvastatin.
- (i) Write mechanism of action, pharmacological actions and therapeutic uses of biguanides.

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SP—13—2024

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2024

PHARMACOGNOSY AND PHYTOCHEMISTRY-II

Paper BP-504-T

(Tuesday, 21-05-2024)

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

Time—Three Hours

Maximum Marks—75

Note :— (i) All the questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Answer to the point only.

1. Answer the following :

10×2=20

(a) Draw biosynthetic pathway for Glutamine.

(b) Write biological source and uses of Vinca.

(c) Write a note on isolation of citral.

(d) Give applications of chromatography.

(e) Define Radioactive isotopes with an example.

P.T.O.

- (f) Give Bontrager's test and its use.
- (g) Define extraction. Mention conventional methods of extraction.
- (h) Write a note on Maceration.
- (i) Write biological sources and uses of *Taxus*.
- (j) Give chemical constituents of Aloe and Asafoetida.
2. Solve any *two* of the following : 2×10=20
- (a) Explain isolation, identification and analysis of quinine.
- (b) Draw and explain Shikimic acid pathway.
- (c) Write industrial production, estimation and utilization of caffeine.
3. Solve any *seven* of the following : 7×5=35
- (a) Isolation and identification of Reserpine.
- (b) Write biological source, chemical constituents and uses of opium and digitalis.
- (c) Give isolation and identification of Menthol.
- (d) Write industrial production and utilization of sennoside.
- (e) Explain in detail any *one* method of determination of radioactive isotopes.

- (f) Give chemical constituents, uses and commercial application of Dioscorea.
- (g) Write morphology and microscopy of Senna.
- (h) Write biological source, chemical constituents and uses of clove and Fennel.
- (i) Explain supercritical fluid extraction method.

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SP—17—2024

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2024

PHARMACEUTICAL JURISPRUDENCE

(Friday, 24-05-2024) (BP505T) Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) Draw neat labelled diagram wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer the questions : 10×2=20

(i) Give *four* examples of psychotropic substance.

(ii) Give the labelling requirements and write the specimen label :
schedule G.

(iii) Differentiate between misbranded and adulterated drug.

(iv) Define drug as per D & C Act.

(v) What is aim and objective of D & C Act ?

P.T.O.

- (vi) Write briefly about schedule Y.
- (vii) Define Medicinal Hemp and Poppy straw.
- (viii) What does schedule M contain ?
- (ix) What is loan licence ?
- (x) What is trademark ?

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

- (i) Explain the constitution and functions of The Drug Technical Advisory Board and its role in the regulation of drugs into India.
- (ii) What are CPCSEA guidelines for breeding and stocking of animals ? Write about the transport and acquisition of animals for experiment.
- (iii) Write the qualification prescribed for appointment power and duties of drug inspector.

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

- (i) Discuss DPCO in brief.
- (ii) Write a note on Intellectual Property Rights.
- (iii) Give general procedure and conditions for obtaining a license for sale of drugs and cosmetics as per D & C Act, 1940.
- (iv) What is the purpose of code of ethics ? How does it help the profession ?

- (v) What conditions are to be satisfied for obtaining loan licenses and reparation license ? Mention the class of drugs for which such license cannot be issued.
- (vi) Explain the purpose and key provisions of schedule P, U and V.
- (vii) Write in brief about offence and penalties in contravention of Medical Termination of Pregnancy Act.
- (viii) Give the constitution and functions of Institute Animal Ethics (IAE) Committee.
- (ix) Describe the role of pharmacist in relation to his profession.