

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Suppl.) Examination, November 2017

Subject : Forensic Pharmacy (Pharmaceutical Jurisprudence)

Time : 3 hours

Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

- 1 a) Define Narcotic drugs as per the Narcotic psychotropic substances act 1985. Write about the official procedures for cultivation production of opium and sale and distribution of opium products.

OR

- b) Discuss the constitution and functions of pharmacy council of India.

- 2 a) i) Write the qualifications and eligibility for the appointment Drugs Inspector and Government Analyst.
ii) Discuss the functions, duties and procedure of inspection of a retail pharmacy and manufacturing company by Drug Inspector.

OR

- b) Write about the conditions and procedure of obtaining a manufacturing license for schedule F, F(1) drugs.

- 3 a) i) What are schedules C&C(1), D, G, M, N, U?
ii) Discuss the labeling and packing requirement of various categories of dosage forms along with specimen labels for schedule G, schedule X drug and shampoo.

OR

- b) What is the objective of Medicinal and Toilet preparation (Excise Duties) Act 1955? Write the procedure of manufacture of drugs and toilet preparations containing alcohol in a bonded laboratory and a non-bonded laboratory.

- 4 a) Write about the salient features of industries (Development and Regulation) Act 1951.

OR

- b) Define Factory as per Factories Act. Write about various welfare measures to be taken in a Factory under the provision of the Act.

- 5 a) What is NPPA and its functions? Discuss the formula for calculation of retail price of scheduled formulation as per DPCO 1995. Discuss the salient features of DPCO 2013.

OR

- b) What is a Patent? What are inventions according to patent Act. Write in brief the procedure of obtaining patent.

FACULTY OF PHARMACY**B. Pharmacy 3/4 II – Semester (Suppl.) Examination, November 2017****Subject : Pharmacology – II****Time : 3 hours****Max. Marks : 70****Note : Answer all questions. All questions carry equal marks.**

- 1 a) Classify anti-viral agents. Explain the pharmacology of any one agent. 7
b) Classify anti-bacterial agents. Write the pharmacology of azithromycin. 7
OR
c) Classify anti-cancer agents. Write a note on Cyclophosphamide and Cisplatin. 14
- 2 a) Describe the pharmacology of histamine and serotonin. 14
OR
b) Classify anti-coagulants. Write the pharmacology of heparin and warfarin. 14
- 3 a) Classify anti-thyroid drugs. Write the pharmacology of any one drug. 7
b) Classify oral hypoglycemic agent. Write the pharmacology of metformin. 7
OR
c) Describe the pharmacology of insulin and thyroxine. 14
- 4 a) Explain the bio-assay of insulin and oxytocin. 14
OR
b) Write the bioassay of diphtheria anti-toxin and vasopressin. 14
- 5 a) Describe the general principles of treatment of poison. 7
b) Write the symptoms and treatment for barbiturate poisoning. 7
OR
c) Describe the phases of clinical trials. 14

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Suppl.) Examination, November 2017

Subject : Pharmaceutical Chemistry (Chemistry of Natural Prod.)

Time : 3 hours

Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

- 1 a) Define, classify and give color reactions of carbohydrates. 8+3+3
 b) Explain the mutarotation.
 c) Conversion of fructose to glucose. 8+3+3
OR
 d) Define oils and fats. Write about iodine and saponification value.
 e) Write about the structure elucidation of glucose. 6+8
- 2 a) Define, classify and write the color reactions of proteins.
 b) Write the structure, chemistry and therapeutic profile of Oxytocin. 6+8
OR
 c) Write the color reactions and three methods of synthesis for amino acids.
 d) Write the constitution of Thyroxin. 7+7
- 3 a) Write sources and constitution of Camphor. 14
OR
 b) Define, classify and write the color reactions of Flavanoids.
 c) Write the sources, chemistry and therapeutic uses of Quercetin. 7+7
- 4 a) Explain Hoffmann's exhaustive methylation.
 b) Elucidate the structure of Caffeine. 9+5
OR
 c) Write the chemical structure and chemical test of Quinine, Caffeine and atropine.
 d) Write the Oxidative products of Papaverine.
 e) Write the method of determining the number of methoxy and N-methyl groups in alkaloids. 6+3+5
- 5 a) Give an informative note on cardiac glycosides.
 b) Define, classify and give the color reactions of steroids.
 c) Write a note on bile acids. 5+5+4
OR
 d) Establish the structure and position of side chain in cholesterol.
 e) Write about oral contraceptives. 8+6

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Suppl.) Examination, November 2017

Subject : Physical Pharmacy - II

Time : 3 hours

Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

- 1 a) i) Explain how partition coefficients influence drug action. 3
 ii) Explain various factors influencing solubility of gases in liquids. 11
OR
- b) i) Explain distribution of solutes between immiscible solvents and write its application in extraction. 4
 ii) Explain the physicochemical principles involved in solubility of solutes in liquids. 10
- 2 a) i) Derive the equation to compute rate and half life of first, order reactions. 7
 ii) Explain the influence of solvents and catalysts on reaction velocity. 7
OR
- b) i) Explain the general acid-base catalysis. 6
 ii) Discuss the principles and methods of Accelerated stability testing. 8
- 3 a) i) Explain capillary rise method to measure viscosity. 4
 ii) Explain electric properties of interfaces. 10
OR
- b) i) Define surface free energy and spreading coefficients. 3
 ii) Explain various physical principles involved in the study of adsorption at liquid interfaces. 11
- 4 a) i) Explain lyophilic, lyophobic and association colloids. 6
 ii) What are the various aspects in electrokinetic phenomena of colloids? 8
OR
- b) i) Describe coacervation and cloud product phenomena. 6
 ii) Write the pharmaceutical application of colloids. 8
- 5 a) i) Define Micelles and CMS. 3
 ii) Write the applications of polymers in pharmacy. 11
OR
- b) i) Define Newtonian and Non Newtonian systems. 4
 ii) What is thixotropy? Explain with the help of rheograms. Write the application of thixotropy in developing stable formulations. 10

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Suppl.) Examination, November 2017

Subject : Bio-Statistics (Pharmacostatistics)

Time : 3 hours

Max. Marks : 70

Note : Answer all questions. All questions carry equal marks.

- 1 a) Explain the following : 14
 i) Mean ii) Median
 iii) Mode iv) Standard deviation

OR

- b) Explain : 6
 i) Correlation and Regression. 6
 ii) Calculate the correlation coefficient to the following data. 8

X :	25	20	30	33	42	51	48	55
Y :	30	28	32	43	40	45	45	50

- 2 a) Explain the following : 3+3+3
 i) Poisson Distribution
 ii) Addition theorem of Probability
 iii) Multiplication theorem of Probability

- b) Find the Probability of getting at least one head in tossing of three coins. 5

OR

- c) i) Explain about Normal Distribution and its properties. 8
 ii) Stem and Leaf Plots 6

- 3 a) Explain : 14
 i) Non-Sampling Errors.
 ii) Sub-Divided Bar Diagram
 iii) Pie-diagram

OR

- b) Explain : 6
 i) Chi-square test of goodness of FIT 6
 ii) Point Estimation and Interval estimation 8

- 4 a) Explain : 6
 i) Chi-square test of goodness of FIT 6
 ii) Point Estimation and Interval estimation 8

OR

- b) i) Parametric and Non-parametric tests 8
 ii) t-test for difference of means 6

- 5 a) Explain : 7
 i) ANOVA one-way classification 7
 ii) Basic Principles of Design of Experiments 7

OR

- b) i) Explain about Randomised block design with ANOVA table 8
 ii) F-test 6

FACULTY OF PHARMACY**B. Pharmacy 3/4 II-Semester (Main) Examination, April 2017****Subject : Pharmaceutical Chemistry (Chemistry of Natural Prod.)****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 (a) Define the ester value, Iodine value and acetyl value and give their importance. (6)
(b) Elucidate the structure of Fructose. (8)
- OR**
- (c) Discuss the chemistry of Oils and fats. (4)
(d) Explain the mutarotation. (5)
(e) Describe the reaction of carbohydrates with Phenyl Hydrazine. (5)
- 2 (a) Write an informative note on Insulin. (6)
(b) Classify amino acids and explain four methods of synthesis. (8)
- OR**
- (c) Discuss about protein synthesis. (9)
(d) Write color reactions of amino acids and proteins. (5)
- 3 (a) Write the definition and color reactions of Flavanoids. (14)
(b) Write the sources, chemistry and therapeutic uses of Quercetin and Citral.
- OR**
- 4 (a) Write the sources and chemistry of Atropine. (7)
(b) Write the source, structure and color reactions of Caffeine, Quinine. (7)
- OR**
- (c) Elucidate the structure of Ephedrine. (8)
(d) Write about the Hoffmann's exhaustive methylation. (6)
- 5 (a) Define and classify the steroids. (6)
(b) Write the structure, structural features, therapeutic uses of corticosteroids. (8)
- OR**
- (c) Write the color reactions of steroids and Digitalis. (4)
(d) Establish the ring size and position of angular methyl groups in cholesterol. (10)

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Main) Examination, April 2017

Subject: Physical Pharmacy – II

Time: 3 Hours

Max.Marks: 70

Note: Answer all questions. All questions carry equal marks.

- 1 a) i) Explain various factors influencing solubility of drugs. 9
 ii) Write a note on effect of ionic dissociation on partition. 5
OR
- b) i) Explain solubility of solids in liquids. 9
 ii) Explain the relationship between solubility and partition coefficients. 5
- 2 a) Explain in detail the use of accelerated stability and stress testing in predicting shelf life of drugs. 14
OR
- b) What is the order of a reaction and how it can be determined. 5
 c) Mention and explain the methods to prevent decomposition of medicinal agents. 9
- 3 a) Write about HLB classification and its importance. 7
 b) Write about the application of amphiphiles. 7
OR
- c) i) Explain surface and interfacial tension. 6
 ii) Classify interfaces. Discuss the adsorption at solid interfaces. 8
- 4 a) i) Explain optical properties of colloids. 6
 ii) Compare the properties of colloidal solutions. 8
OR
- b) i) Discuss about the stability of colloid systems. 6
 ii) Discuss about the particle size and size distribution and their applications in formulation. 8
- 5 a) Discuss about Newtonian and non-Newtonian systems with the help of diagrams. 14
OR
- b) i) Write a note on thixotropy and its role in pharmaceutical formulation. 9
 ii) Describe any one method of determining viscosity. 5

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Main) Examination, April 2017

Subject: Forensic Pharmacy (Pharmaceutical Jurisprudence)

Time: 3 Hours

Max.Marks: 70

Note: Answer all questions. All questions carry equal marks.

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|---|---|------------|
| 1 | a) What are ethics to be followed by pharmacists. | 7 |
| | b) Write a note on drug legislation in India. | 7 |
| | OR | |
| | c) Write about the salient features of Pharmacy Act 1948. | 14 |
| 2 | a) What are the conditions required for the sale of schedule C and X drugs as per the drugs and Cosmetics Act 1940. | 8 |
| | b) Explain functions of Central Drug Control Authorities. | 6 |
| | OR | |
| | c) What are the conditions required for the manufacture of schedule F, F(1) and X drugs. | 14 |
| 3 | a) Describe the procedures for manufacture of alcohol containing products in bond and outside bond laboratories. | 8 |
| | b) What are the conditions for import of drugs. | 6 |
| | OR | |
| | c) Discuss in detail about schedule M or Y as per Drugs and Cosmetics Act 1940. | 14 |
| 4 | a) Describe the objectives of Drugs and Magic Remedies Act. | 4 |
| | b) Define the terms: | 2.5x4 = 10 |
| | i) Adulterated food | |
| | ii) Misbranded food | |
| | iii) Advertisement | |
| | iv) Magic remedies | |
| | OR | |
| | c) Describe the objectives of food adulteration act. | 4 |
| | d) Explain the salient features of factories act. | 10 |
| 5 | a) Describe in detail the procedure of obtaining a patent. | 14 |
| | OR | |
| | b) Write about drug price control order briefly. | 4 |
| | c) What are the inventions and non-inventions according to Patents Act 1970. | 10 |

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Main) Examination, April 2017

Subject: Pharmacology – II

Time: 3 Hours

Max.Marks: 70

Note: Answer all questions. All questions carry equal marks.

- 1 a) Classify anti-fungal agents. Explain the pharmacology of any one agent. 7
b) Describe the basic principles of chemotherapy. 7
OR
c) Classify anti-cancer agents. Write a note on methotrexate and vincristine. 14
- 2 a) Write a note on prostaglandins and nitric oxide. 14
OR
b) Write a note on haematinics and thrombolytic agents. 14
- 3 a) Describe in brief about sex hormones. 7
b) Classify oral hypoglycemic agent. Write a note on acarbose. 7
OR
c) Write a note on oral contraceptives and oxytocin. 14
- 4 a) Explain the bio-assay of heparin and adrenaline. 14
OR
b) Write the bioassay of tetanus anti-toxin and anti-rabies vaccine. 14
- 5 a) Describe the general principles of treatment of poison. 7
b) Write the symptoms and treatment for paracetamol poisoning. 7
OR
c) Describe the phases of clinical trials. 14

FACULTY OF PHARMACY

B. Pharmacy 3/4 II – Semester (Main) Examination, May 2017

Subject: Bio-statistics (Pharmacostatistics)

Time: 3 Hours

Max.Marks: 70

Note: Answer all questions. All questions carry equal marks.

- 1 a) Explain the following: 14
 i) Graphical representation
 ii) Correlation and regression

OR

- b) Calculate Mean, Median and Mode for the following distribution

Class Interval	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	7	39	46	53	40	36	8

- 2 a) Define normal distribution and explain its properties. 14
 b) Explain about binomial and Poisson distributions. 8
 c) In family of three children, find the probability of having at least two girls. 6

OR

- 3 a) Explain about sampling and non-sampling errors. 8
 b) Random sampling methods. 6

OR

- c) Explain:
 i) Cluster sampling 6
 ii) Bar diagrams 8

- 4 a) Explain about: 14
 i) Type I and Type II errors
 ii) Standard error
 iii) Level of significance
 iv) Power of the test

OR

- b) Explain: 14
 i) Bayesian estimation
 ii) Point and Interval estimation
 iii) Paired t-test

- 5 a) Describe the analysis of variance one-way classification and two-way classifications with ANOVA tables. 14

OR

- b) Explain:
 i) Basic principles of design of experiments. 7
 ii) Latin square design. 7
