

FACULTY OF PHARMACY

B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Subject: Social and Preventive Pharmacy

Time: 2 Hours

Max. Marks: 75

Note: Answer Seven questions from Part -A, any one questions from Part- B and any five questions from Part- C

Part A (7x3=21 marks)

1. Write about nutritional deficiencies.
2. Define public health.
3. Write about personal hygiene and health care.
4. Write about drug addiction-drug substance abuse.
5. Write a short note on national programme for prevention and control of deafness
Objectives and outcome.
6. Write about health promotion.
7. Write about social health programme.
8. Write a note on improvement in rural sanitation.
9. Write a note on integrated disease surveillance program.
10. Write a note on national urban health mission.

Part B (1x14=14 marks)

11. a) Explain about malnutrition and its prevention.
b) Explain about balanced diet.
12. Explain general principles of prevention and control of cholera, dengue, pneumonia, hypertension and diabetes mellitus.
13. a) Explain national health program, its objectives, functioning and outcome of HIV&AIDS control programme.
b) Explain about national leprosy control programme.

Part C (5x8=40 marks)

14. Explain universal immunization programme and pulse polio programme.
15. Explain national health intervention programme for mother and child.
16. Explain national tobacco control programme.
17. Explain national malaria prevention program.
18. Write a note on functions of PHC and improvement in rural sanitation.
19. Explain general principles of prevention and control of ebola virus and dengue.
20. Explain national mental health program objectives, functioning and outcomes.
21. Explain national programme for control of blindness objectives, functioning and outcomes.
22. Explain the concept of prevention and control of disease and social causes of diseases

FACULTY OF PHARMACY

B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Subject: Cosmetic Science (Elective-II)

Time: 2 Hours

Max. marks: 75

Note: Answer seven questions from Part –A, any One question from Part- B and any Five questions from Part- C

Part A (7x3=21 marks)

1. Define and classify cosmetics
2. Write applications of humectants
3. What is Ceramide?
4. What is facewash? Enlist the ingredients used in face wash
5. Define SPF (Sun protection factor)
6. Write role of turmeric in skin care
7. What is the role of Neem & Clove in oral care products
8. Explain hair combing properties
9. Give the symptoms and treatment of dry skin
10. What is prickly heat?

Part B (1x14=14 marks)

11. Explain basic structure of skin with neat labeled diagram. Write in detail functions of skin
12. Discuss the formulation building blocks of i) Hair care product ii) Oral care Product
13. Write a note on : a) Sebumeter b) Melanine pigmentation

Part C (5x8=40 marks)

14. Explain hair growth cycle
15. Write in detail about evolution of cosmeceuticals from cosmetics
16. Discuss various advantages and disadvantages of cold cream
17. Define and classify surfactants with example. Write applications of surfactant
18. Give BIS (Bureau of Indian Standards) specification for tooth paste
19. Explain analytical methods for skin cream
20. Write a note on Syndet bars
21. Explain mechanism of action of antiperspirants and deodorants
22. Explain various elements of healthy scalp

FACULTY OF PHARMACY

B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Subject: Advanced Instrumentation Techniques (Elective-II)

Time: 2 Hours

Max. Marks: 75

Note: Answer Seven questions from Part –A, any one questions from Part- B and any five questions from Part- C

Part A (7x3=21 marks)

1. Define calibration?
2. Write the principle involved in differential thermal analysis
3. Write the importance of Radio Immunoassay?
4. Define Validation?
5. Discuss the principle involved in Liquid – liquid extraction technique?
6. Discuss the calibration procedure for electronic balance?
7. Write the principle involved in Mass spectrometry?
8. Write the principle involved in H-NMR?
9. Write about powder diffraction method?
10. Mention hyphenated Techniques and their advantages

Part B(1X14=14marks)

11. a) What do you mean by chemical shift? Explain the various factors influencing it?
b) Write about Spin-Spin Coupling and Coupling Constant?
12. a) Draw a sketch diagram and Explain the instrumentation of mass spectrometer
b) Write about different Fragmentation techniques in mass spectrometry
13. a) Discuss the following hyphenated techniques

a) $\frac{C}{IC}$ - MS/MS

b) GC-MS/MS

Part C (5x8=40 marks)

14. Explain the calibration procedure of a) UV spectrophotometer
b) IR Spectrophotometer
15. Write the instrumentation and applications TGA
16. Write about X-ray crystallography?
17. Explain MALDI & FAB ionization techniques in Mass Spectrometry
18. Explain Spin - Spin Coupling in NMR?
19. Write the calibration of fluorimeter & flame photometer?
20. Write the instrumentation and applications DSC?
21. Explain about HPTLC/MS?
22. Write about applications and limitations of Radio immunoassay?

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B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Experimental Pharmacology

Subject: (Pharmacological Screening Methods) (Elective-II)

Time: 2 Hours

Max. Marks: 75

Note: Answer Seven questions from Part –A, any One questions from Part-B and any Five questions from Part- C

Part A (7x3=21 marks)

1. List the different species of animals used in laboratory
2. What are transgenic animals and mutant animals?
3. List the common routes of drug administration in animals
4. What is study design?
5. List various agents which cause inflammation
6. What are coagulants and anticoagulants?
7. What is Euthanasia and list the techniques of euthanasia
8. What is Students t test and where is it used?
9. How is does selected in preclinical screening methods?
10. What is preclinical data analysis?

Part B (1x14=14 marks)

11. Describe the preclinical screening procedures for antidiabetic drugs
12. Define inflammation. List out the methods available to induce inflammation and describe on acute and one chronic model in the screening of anti-inflammatory agents.
13. Discuss the *in vitro* and *in vivo* techniques for screening of anticancer agents

Part C (5x8=40 marks)

14. Write a brief note on screening methods of antiinflammatory drugs.
15. Explain the screening methods for diuretics
16. What is Research? Mention the significance of selection of research topic
17. What are the OECD guidelines for maintenance and breeding of laboratory animals?
18. Explain the techniques of blood collection from animals
19. Write a note on methods involved in the screening of nootropics
20. What are antiasthamatic agents? Discuss the methods involved in their screening
21. Write the preclinical screening methods of sympathmimetics
22. Describe the preclinical screening methods of antihyperlipidemic drugs.

FACULTY OF PHARMACY

B. Pharmacy VIII Semester (PCI) (Main) Examination, July 2021

Subject: Pharma Marketing Management (Elective – I)

Time: 2 Hours

Max. Marks: 75

PART - A

Note: Answer any seven questions.

(7 x 3 = 21 Marks)

- 1 Define marketing.
- 2 List the factors influencing for the selection of physician.
- 3 What are product line and product mix?
- 4 What is product portfolio analysis?
- 5 Name the components of promotional mix.
- 6 Enlist the channel members in physical distribution management.
- 7 What is the importance of pricing?
- 8 What are functions of distribution in marketing?
- 9 Write the motivational factors influencing PSR performance.
- 10 Write the need of global marketing.

PART - B

Note: Answer any one question.

(1 x 14 = 14 Marks)

- 11 Explain the product life cycle management and its importance in product portfolio analysis.
- 12 Explain different promotional techniques for OTC products and role of regulatory aspects.
- 13 Describe the various physical channels of distribution in pharmaceutical business and explain the conflict in channels.

PART - C

Note: Answer any five questions.

(5 x 8 = 40 Marks)

- 14 Describe different components in marketing environment.
- 15 Explain the approaches to analyze consumer behavior.
- 16 Explain the role of retail pharmacist in market research.
- 17 Write in detail about the prescribing habits of physician.
- 18 Describe critical aspects of product management in pharmaceutical industry.
- 19 What are the duties of professional sales representative?
- 20 Write the factors to be considered in selection and training of PSR.
- 21 Write the salient features of drug price control order.
- 22 Differentiate between vertical and horizontal marketing.

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B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Subject: Pharmaceutical Regulatory Science (Elective-I)

Time: 2 Hours

Max. marks: 75

Note: Answer Seven questions from Part –A, any One questions from Part- B and any Five questions from Part- C

Part A (7x3=21 marks)

1. What are the responsibilities of RA department in a pharmaceutical industry?
2. Write the differences between IND, NDA and ANDA
3. Define Pharmacovigilance
4. Write the names of Drug regulatory authorities of different regions all over the world
5. What is the difference between orange book and purple book?
6. What are the different Acts involved in regulatory filing of drug products?
7. Enlist obligations of investigator in clinical trials
8. What are the different types of DMF?
9. Enlist the elements of e-CTD document
10. What are the different types of changes to approved ANDA?

Part B (1x14=14 marks)

11. Explain in detail about generic drug product development process. Add a note on advantages of generic products.
12. Discuss about the different types of ANDA para filings and write in brief about GDUFA.
13. Describe in detail about the phases of clinical trials.

Part C (5x8=40 marks)

14. Explain the concept of innovator and generic drug product
15. Discuss IND approval process
16. Explain about different routes of regulatory filing through MHA.
17. Justify the importance of documentation in pharmaceutical industries
18. Discuss about the documents required under Module – 2 of CTD
19. Describe the requirements for filing abbreviated new drug application
20. Discuss the need and role of independent ethics committee
21. What is the importance of safety monitoring in clinical trials?
22. What are the different stages involved in a pharmaceutical product life – cycle?

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B. Pharmacy VIII - Semester (PCI) (Main) Examination, July 2021

Subject : Pharmacovigilance (Elective-I)

Time: 2 Hours

Max. Marks: 75

Note: Answer Seven questions from Part –A, any One questions from Part- B and any Five questions from Part- C

Part A (7x3=21 marks)

1. Write down the WHO definition of “ADR”
2. What is De challenging and Re challenging of drugs in ADR detection
3. Describe the importance of safety monitoring of medicine
4. Write a short note on Daily Defined Dose (DDD)
5. Write the importance of vaccine safety surveillance
6. Write a short note on methods of Stimulating Reports in pharmacovigilance
7. What are the steps involved in the process of communication in pharmacovigilance
8. Describe the objectives of ICH guidelines
9. Write a short note on Schedule “Y”?
10. What are the differences in Indian and Global pharmacovigilance requirements?

Part B (1x14=14 marks)

11. a) Write a note on CIOMS working groups
b) Write about Drug safety evaluation in Geriatrics population
12. a) Write briefly about safety data generation
b) Write a note on Adverse events following immunization
13. a) Write a note on History of Pharmacovigilance
b) Write about the establishment and operation of Drug safety department in industry

Part C (5x8=40 marks)

14. Write a note on Anatomical and therapeutic and chemical classification of drugs
15. Write a detailed note on Pharmacovigilance programme of INDIA (PvIP)
16. Write about comparative observational studies
17. Explain about the management of ADR
18. Write a detailed note on MedDRA
19. Write a note on Periodic safety update reporting
20. Write about the specialization resources for ADR's
21. Write a note on Geriatric related ADR with example focusing on Pharmacokinetic parameters
22. Write a note on Schedule Y of D & C act

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B. Pharmacy VIII - Semester (PCI) (Main.) Examination, July 2021

Subject : Quality Control and Standardization of Herbals (Elective-I)

Time: 2 Hours

Max. marks: 75

Note: Answer Seven questions from Part -A, any one questions from Part- B and any Five questions from Part- C

Part A (7x3=21 marks)

1. Define the terms herbal drug and crude drug.
2. What does GACP means and what are its objectives.
3. What is traditional medicine and herbal medicine
4. Write basic tests used for identification of any one herbal dosage forms.
5. Write the advantages and disadvantages of organic farming.
6. Explain the terms GLP, GMP, GAP.
7. What is chromatography? Mention various chromatographic techniques used in the standardization of herbal drugs.
8. Write the concepts of quality assurance in herbal drug industry.
9. What are chemical and biological markers? Give examples.
10. What is importance of research guidelines?

Part B (1x14=14 marks)

11. Explain ICH guidelines for the quality control of herbal drugs.
12. Describe WHO guidelines on GACP for medicinal plants.
13. Explain the methods and WHO guidelines for stability testing of herbal drugs.

Part C (5x8=40 marks)

14. What is GAP? Explain the various parameters of GAP.
15. Explain any two methods of evaluation of crude drugs.
16. Briefly explain Various aspects of GLP in Herbal Drug Industry.
17. Explain the importance of HPTLC method in the standardization of herbal drugs.
18. Explain different measures in monitoring of safety of herbal products
19. Write a note on regulatory requirement of herbal drugs
20. Explain the documents required for new drug application.
21. Give a protocol of standardization of herbal drugs.
22. Write a note on Efficacy of herbal medicines.

FACULTY OF PHARMACY**B. Pharmacy - VIII - Semester (PCI) (Main.) Examination, July 2021****Subject: Biostatistics and Research Methodology****Time: 2 Hours****Max. Marks: 75****Note: Answer Seven questions from Part -A, any One questions from Part- B and any Five questions from Part- C****Part - A (7x3=21 marks)**

1. What do you mean by biostatistics? Give its importance in pharmacy
2. Describe the types of dispersion
3. Calculate range for individual series – X : 120 170 240 100 105 205 300 160 150 180
4. What is the significance of probability?
5. Describe the properties of normal distribution
6. What is factorial design?
7. Name the open source graphical user interfaces supported by R.
8. What is observational study? Give an example.
9. What are the various statistical methods used in excel?
10. A random sample of size 100 is taken from the population with standard difference
5.1 Calculate the standard error of mean

Part - B (1x14=14 marks)

- 11.a) Explain the applications, merits and demerits of correlation
- b) Calculate the Karl person's coefficient of correlation for the following data:

X	7	6	5	4	3	2	1	
Y	18	16	14	12	10	6	8	the important SPSS models

12.a) What is SPSS? Explain

b) Explain 'Two Tailed test of hypotheses?

13. Two independent samples of 7 and 8 items respectively had the following readings. State, if the two estimates of population variance differ significantly?
(Given the tabulated value = 4.21)

Sample A	10	8	9	13	11	12	9	
Sample B	15	13	14	11	12	10	8	6

Part - C (5x8=40 marks)

14. Discuss the procedure for wilcoxon – signal rank test for one sample
15. What is experimental design? Explain its principles
16. Write short notes on different types of ANOVA
17. What is population? Explain the difference between small sample test and large sample test.

18. Obtain a line of regression of Y on X for the following data

Age in Yrs (X)	66	38	56	42	72	36	63	47	55	45
Blood pressure (Y)	145	124	147	125	160	118	149	128	150	124

19. The average number of phone calls per minute coming between 2pm-4pm is 2.5. Determine the probability that during one particular minute there will be i) 4 or less
ii) more than 6 calls.

20. The Height of 10 males of a given locality found to be 70, 67, 62, 68, 61, 68, 70, 69, 64, 66 inches. Is it reasonable to believe that the average height is 64 inches? Test at 5% significance level for 9 degree of freedom. (Give $t_{0.05} = 1.83$ for 9 d.f)

21. The following figures shows disease count from a region over a span of 1 year. Represent the data by a pie diagram.

DISEASE	COUNT
Jaundice	22
Tuberculosis	18
Typhoid	32
Malaria	15
Dengue	26

22. An average of 5 cars arrives per hour at a restaurant. Assume that the number of cars arriving per hour follows Poisson distribution.
i) What is the probability that exactly 5 cars will arrive in a given hour?
ii) What is the probability that at least 3 cars arrive in a given hour?
