

(BP 101 T)

I/IV B.PHARMACY DEGREE EXAMINATION,
APRIL/MAY 2024

(Regular/Supplementary)

First Semester

Paper I — HUMAN ANATOMY AND PHYSIOLOGY – I

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 10 = 50 marks)

Answer any FIVE questions.

1. Describe the structure of cell with neat labeled diagram. Explain its organelles in detail.
2. Define hemostasis. Discuss the various pathways of blood coagulation.
3. Explain about the mechanism of neuromuscular junctional transmission.
4. Draw a well labeled diagram of conduction system of heart. Explain cardiac cycle in detail.

5. Classify skeletal system and discuss about the structure and functions of vertebral column.
6. Discuss the general principles of cell communication.
7. Draw the structure of ear and label. Explain the physiology of hearing.

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

8. Explain the different body process.
9. Explain the structure and function of connective tissue.
10. Describe the composition and functions of Lymph.
11. Write a short note on Synovial joints.
12. Discuss about the mechanism and physiology of hearing.
13. Write a short note on disorders related to heart.
14. Give a detailed note on cranial nerves.

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I/IV B.PHARMACY DEGREE EXAMINATION,
APRIL/MAY 2024.

(Regular/Supplementary)

First Semester

Paper II — PHARMACEUTICAL ANALYSIS – I

Time : Three hours

Maximum : 75 marks

SECTION A — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

1. What are the different methods to express concentration of solutions? Explain.
2. What is acid-base titration? Explain the Neutralisation curve in acid-base titration.
3. Discuss fajan's method of precipitation titration. Explain about co precipitation and post perception.
4. Explain the basic principles involved in redox titrations. Give the applications of titration with Potassium iodate.
5. Explain the principle of potentiometric titration and method to determine end point of potentiometric titration

6. What are the various steps involved in gravimetric analysis, give a brief note on them?
7. What are primary and secondary standards? Give examples of primary standards used in different types of titrations. Enlist the ideal properties of the primary standard.

SECTION B — ($5 \times 5 = 25$ marks)

Answer any FIVE questions.

8. How do you calculate the equivalent weight and molecular weight of a substance? Give examples.
9. Write the principle and procedure of Non-aqueous titration involving halogenated salt of weak bases.
10. Give the application of the Gravimetric technique in the quantitative determination of barium as Barium sulphate.
11. Explain the conductometric titration curves for strong acid with a weak base.
12. Explain the different steps involved in locating the endpoint in Potentiometric titrations.
13. Explain the principle involved in the Complexometric titrations in detail and how will you estimate Magnesium Sulphate.
14. Explain the construction and working of the glass electrodes. What are the advantages of the glass electrode?

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I/IV B.PHARMACY DEGREE EXAMINATION,
APRIL/MAY 2024

(Regular/Supplementary)

First Year – First Semester

Paper III – PHARMACEUTICS – I

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 10 = 50 marks)

Answer any FIVE questions.

1. Explain the factors affecting dose selection. Give any two Formulae to calculate children's dose.
2. Explain geometric dilution with an example? Discuss briefly solubility enhancement techniques.
3. What is the various instability of emulsion? Discuss them with their cause and precautions to avoid them?
4. Define displacement value. How will you determine displacement value? Calculate the amount of theobroma oil required to prepare six boric acid suppositories. Dose of boric acid is 120 mg per suppository and displacement value is 1.5.

5. Give ideal characteristics of base to be used for preparation of semisolid dosage form. Write a note on ointment.
6. Define prescription. Explain the handling of prescriptions. Write about the sources of errors in prescription.
7. Define and classify emulsion. Write the various identification tests for emulsion type. Discuss briefly the stability problems and methods to overcome the suspension.

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

8. Discuss Pediatric dose calculations based on age, body weight, and body surface area.
9. How do you prepare effervescent granules by the fusion method?
10. Define and classify suspension. Write the advantages and disadvantages of suspension.
11. Enumerate the ideal characteristics of a suppository base. The displacement value of zinc oxide is 5.0. Calculate the amount of cocoa butter required to make five such suppositories containing 100 mg of zinc oxide per suppository.

12. Write a note on evaluation parameters for semisolid dosage form.
13. Explain in detail the different vehicles used in monophasic dosage forms. Give their advantages and disadvantages.
14. What will be the dose for a child of 5 years if the adult dose of a drug is 400 mg?

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I/IV B.PHARMACY DEGREE EXAMINATION,
APRIL/MAY 2024.

First Semester

Paper IV – PHARMACEUTICAL INORGANIC
CHEMISTRY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 10 = 50 marks)

Answer any FIVE questions.

1. Explain the principle and procedure involved in the limit test of arsenic with a neat Labelled diagram of Gutzeit's apparatus.
2. What are buffers? Explain the mechanism of buffer action with an example. Briefly discuss the role of buffers in pharmacy.
3. What are Antacids? Classify them with examples. Give the ideal properties of Antacids. Write the preparation, assay and uses of sodium bicarbonate.
4. Define antimicrobial agents. Write the principle involved in the preparation and assay of hydrogen peroxide.

5. What are radiopharmaceuticals? Discuss the importance of radioisotopes used in Medicine. Explain in detail any one method employed for the measurement of radioactivity.
6. (a) Explain the method of preparation and assay of Ammonium chloride.
(b) What are expectorants? Give example and mechanism of action.
7. (a) What are dentifrices? Classify them with an example. Write a note on the role of fluoride as an Anticaries agent.
(b) Discuss the role of fluorides in dental caries.

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

8. Write the procedure and principles for the limit tests for
(a) Sulphates
(b) Iron.
9. Write a note on electrolytes used in replacement therapy.
10. What are gastrointestinal protectives and adsorbents? Write a short note on kaolin.

11. What are emetics? Write the method of preparation and assay Of Copper sulphate.
12. Write a note on radiopharmaceutical sodium iodide I^{131} .
13. Explain the Lewis acid and Lewis base with example.
14. Write a note on Pharmacopoeia of India.

I/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, APRIL/MAY-2024
First Semester Non-University
(Effective from the admitted batch 2017-2018)
COMMUNICATION SKILLS

Time: 1 Hour 30 Min.**Maximum Marks: 35****SECTION-A****Answer any TWO questions****2 x 10 = 20Marks**

1. a) What are different barriers to Communication and how will you eliminatethem?
(Or)
c) What is Communication? Explain importance of Communication in detail.
2. a) What do you mean by Perspectives in Communication? Explain different factors affecting our perspectives in Communication?
(Or)
b) What do mean by listening. Explain common barriers/obstacles to listening.

SECTION-B**Answer any Five Questions****5 x 3 = 15 Marks**

3. Why are different elements of Communication?
 4. What do you mean by Communication Styles? Explain Communication style matrix in detail with suitable examples.
 5. Discuss interview handling skills?
 6. Explain listening skills in pharmacy practice.
 7. Differentiate between Verbal and Non-Verbal communication.
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Total No. of Questions: 08

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I/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, APRIL/MAY-2024**First Semester Non-University**

(Effective from the admitted batch 2017-2018)

MATHEMATICS

Time: 1 Hour 30 Min.

Maximum Marks: 35

SECTION-A

Answer any TWO Questions

2 x 10 = 20 Marks

1. Show that $\begin{vmatrix} 1 & a & a^2 \\ 1 & b & b^2 \\ 1 & c & c^2 \end{vmatrix} = (a-b)(b-c)(c-a)$ (CO: 2; PO: 2, 3, 4, 5,6,7,11)

2. Evaluate $\int x^3 e^{ax} dx$ (CO: 4; PO: 2, 3, 4, 5,6,7,11)

3. Solve $y' - 5y = e^{5x}$ given $y(0) = 2$ (CO: 5; PO: 2, 3, 4, 5,6,7,11)

SECTION-B

Answer any Three Questions

3 x 5 = 15 Marks

4. Resolve $\frac{2x-3}{(x+5)(x-2)}$ into partial fractions. (CO: 1; PO: 2, 3, 4, 5,6,7,11)

5. Rate method is used to calculate pharmacokinetics parameter and it is given by the differential equation $\frac{dx_u}{dt} = K_e X_0 e^{-kt}$

Prove that $\log \frac{dx_u}{dt} = \frac{-kt}{2.3} + \log(K_e X_0)$ (CO: 1; PO: 2, 3, 4, 5,6,7,11)

6. If the lines $6x - 10y + 3 = 0$ and $kx - 5y + 8 = 0$ are parallel, then find the value of k . (CO: 3; PO: 2, 3, 4, 5,6,7,11)

7. If $y = \frac{1-x^2}{1+x^2}$ then find dy/dx . (CO: 3; PO: 2, 3, 4, 5,6,7,11)

8. If the amount of drug that dissolve in the body is given by the equation $c(t) = e^{2t}$. Calculate the total amount of drug that dissolve between

0 to 2 hours, where 2 is elimination rate constant. For this find $\int_0^2 e^{2t} dt$

(CO: 6; PO: 2, 3, 4, 5,6,7,11)



Total No. of Questions: 09

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I/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, APRIL/MAY-2024

First Semester {Non-University}

B. PHARMACY

(Effective from the admitted batch 2017-18)

Remedial Biology

Time: 1 Hour 30 Min.

Maximum Marks: 35

SECTION-A

Answer any Two of the following

2 X 10 = 20 Marks

1. Explain about Animal Cell?
2. Describe the Nitrogen Cycle?
3. Write a short notes on Photosynthesis?

SECTION-B

Answer Five of the following

5 X 3 = 15 Marks

4. Write a short notes on Nucleus?
 5. Write the general characters of living organisms?
 6. Describe the Pituitary gland?
 7. Write the differences between plants & Animals?
 8. Write the structure of Mitochondria?
 9. Write the short notes on plant tissue?
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