



Code No. F-13253

FACULTY OF PHARMACY

Pharma. D (6 YDC) I - Year (Main & Backlog) Examination, August 2025

Subject: Human Anatomy and Physiology

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Classify muscle? Write about smooth muscle?
2. Discuss the structure of small intestine.
3. What is the composition of pancreatic juice?
4. What are the functions of Blood?
5. Write the functions of parathyroid hormone?
6. Define the following terms Myocardial infarction and Angina pectoris.
7. Explain the term spermatogenesis.
8. What is micturition? Discuss micturition reflex?
9. Write about (i) Inspiratory reserve volume (ii) Vital capacity
10. Explain ball and socket joint with example.

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. Describe the anatomical features of eye with a neat labeled diagram and discuss the physiology of vision.
12. Draw a neat labelled diagram of cerebrum. Write the important functions of cerebrum.
13. Define haemostasis. Explain the mechanism of coagulation of blood with clotting factors.
14. Explain different phases of Menstrual Cycle. Give the physiological functions of Oestrogen.
15. Describe the Anatomy of lungs with neat diagram and explain physiology of respiration.
16. Define Tissue? Classify epithelial tissues and write their location and function.
17. Define cardiac cycle? Write in detail about phases of cardiac cycle.
18. Discuss the anatomy of gastrointestinal tract and role of GIT and its accessory organs in digestion?

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FACULTY OF PHARMACY

Pharm. D I - Year (6 YDC) (Main & Backlog) Examination, August 2025

Subject: Pharmaceutics

Time: 3 Hours

Max.Marks:70

PART – A

Note: Answer all the questions

(10 x 2 = 20 Marks)

1. Define the Terms (i) Gargles (ii) Mouth washes.
2. Define Dosage form and classify the dosage forms based on Route of Administration with Examples.
3. Write short notes on Handling of Prescription.
4. Write a brief account on Dusting powders.
5. What will be the Dose for a child of 5years if the Adult Dose of a Drug is 400 mg.
6. Calculate the amount of 95% alcohol required to prepare 500 ml of 40% alcohol.
7. Define Displacement value and enlist its significance.
8. Differentiate between Lotions and Liniments.
9. Write about Ideal qualities of coloring agents used in Pharmaceutical preparations.
10. Mention various reasons which causes of Physical Incompatibility with Examples.

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. Write a detail notes on Development of Pharmaceutical Industry and Education in India.
12. Define Posology and discuss various Factors which Influence the Selection of Dose.
13. What are Effervescent granules? Explain the preparation methods of Effervescent granules?
14. Write a note on Formulation and Evaluation of Suspensions.
15. Write in detail about the steps involved in Percolation process with neat diagram.
16. Define Suppositories and write about different types of Suppositories bases.
17. Define Incompatibility and explain different types of Therapeutic Incompatibilities and how to overcome.
18. Write a note on (i) Evaluation of Emulsions (ii) Sutures and Ligatures.



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FACULTY OF PHARMACY

Pharm. D I - Year (6 YDC) (Main & Backlog) Examination, August 2025

Subject: Medicinal Biochemistry

Time: 3 Hours

Max.Marks:70

PART - A

Note: Answer all the questions

(10 x 2 = 20 Marks)

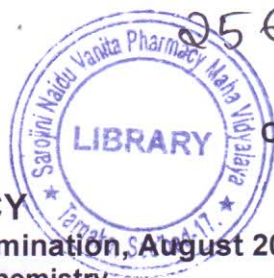
1. List out the energy rich compounds & discuss the biological significance of ATP.
2. What are Isoenzymes? Write a note on their therapeutic application.
3. Calculate the energetics of complete oxidation of glucose under aerobic conditions.
4. Write about atherosclerosis.
5. Define oxidative phosphorylation. Write a note on its significance.
6. What is nitrogen balance?
7. Discuss the characteristics of genetic code.
8. Write about the creatinine clearance test.
9. What is the significance of lipid profile tests?
10. Write a note on SGPT & SGOT.

PART - B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. Explain HMP pathway and write a note on its significance.
12. Explain the metabolism of ketone bodies and write a note on ketoacidosis.
13. Describe the technique of RIA and its application in diagnostics.
14. Write about the various abnormal constituents of urine and their clinical significance.
15. Explain the urea cycle and the related metabolic disorders.
16. Explain β oxidation of saturated fatty acids with a note on its regulation.
17. Describe the biosynthesis of pyrimidine nucleotides and its regulation.
18. Discuss the nomenclature and IUB classification of enzymes with examples for each class.



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Code No. G-13257

FACULTY OF PHARMACY**Pharma. D (6 YDC) I - Year (Main & Backlog) Examination, August 2025****Subject: Pharmaceutical Inorganic Chemistry****Time: 3 Hours****Max. Marks: 70****PART - A****Note: Answer all the questions.****(10 x 2 = 20 Marks)**

1. What are primary standard and secondary standard substances, give examples.
2. Define accuracy and precision.
3. Calculate the normality of 400 ml solution containing 5g of sodium hydroxide.
4. Write the composition and uses of ORS.
5. Write the method of preparation and uses of milk of magnesia.
6. Define Cathartics. Give examples.
7. What are masking and demasking agents, give examples.
8. Define co-precipitation and post precipitation.
9. What are antacids? Write the ideal properties of antacids.
10. Write the preparation and uses of nitrous oxide.

PART - B**Note: Answer any five questions.****(5 x 10 = 50 Marks)**

11. Explain in detail about the neutralization curves.
12. Write the method of preparation, assay and uses of Sodium Chloride and Calcium gluconate.
13. Explain the limit test for Arsenic with a neat labelled diagram.
14. (a) Write the importance of fluorides as anti-caries agents.
(b) Explain how end point is detected in Complexometric titrations.
15. (a) Write a note on essential trace elements.
(b) Write about types of solvents used in non-aqueous titrations.
16. What are Radiopharmaceuticals. Write about applications of radiopharmaceuticals.
17. (a) Explain the mechanism of action of antimicrobials. Write method of preparation, assay and uses of Hydrogen peroxide.
(b) Write a note on Volhards method.
18. Explain the mechanism of action of antidotes used in cyanide poisoning and write the method of preparation and assay of sodium thiosulphate.

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Code No. G-13256

FACULTY OF PHARMACY

Pharma. D (6 YDC) I Year (Main & Backlog) Examination, August 2025
Subject: Pharmaceutical Organic Chemistry

Time: 3 Hours

Max. Marks: 70

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define nucleophiles with examples.
2. Explain about Friedel-Crafts acylation.
3. Write the structures of the following compounds.
a) 1, 2-dibromo-2-methylpropane b) 2,5 –diethyl hexane
4. Define isomerism with examples.
5. Write about Kolbe's reaction.
6. Write the structure and uses of a) Dimercaprol b) Lactic acid
7. Write a short note on intermolecular forces.
8. Define ozonolysis with example.
9. Write about the structure and uses of methyl salicylate and vanillin.
10. Define Bayer's Strain theory.

PART – B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. Explain in detail about the reaction, mechanism of electrophilic aromatic substitution reactions of benzene.
12. Write a short note on the following.
a) Cannizzaro reaction
b) Diazotization and coupling
13. Explain in detail about the mechanism, stereochemistry, kinetics and rearrangement in S_N2 reaction.
14. Write a note on E2 reaction with respect to mechanism and stereochemistry.
15. Explain in detail about the acidity of phenols with respect to the effect of substituents.
16. Write the structure, method of preparation, assay and uses of
a) Salicylic acid b) Chlorbutanol
17. Describe in detail about the reaction, mechanism of electrophilic addition of alkenes.
18. Explain in detail about
a) 1,2 & 1,4-addition of conjugated dienes b) Stability of dienes

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FACULTY OF PHARMACY

Pharm. D I-Year (6YDC) (Main & Backlog) Examination, September 2025

Subject: Remedial Mathematics

Time: 3 Hours

Max.Marks:70

PART-A

Note: Answer all the questions

(10 x 2 = 20 Marks)

1. Solve for $x \begin{bmatrix} x^2 & 1 \\ 2 & 3 \end{bmatrix} + \begin{bmatrix} 2x & 3 \\ 1 & 4 \end{bmatrix} = \begin{bmatrix} 3 & 4 \\ 3 & 7 \end{bmatrix}$.
2. If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ show that $A^2 - 5A + 7I = 0$.
3. If $\tan A = \frac{1}{8}$, $\tan B = \frac{7}{9}$ then find the value of $\tan(A+B)$.
4. Find the equation of straight line passing through (5, 4) and parallel to $2x + 3y + 7 = 0$.
5. Evaluate $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$.
6. Find the derivative of the function $\frac{x^2 + 5}{2x + 3}$.
7. $U = x^3 y^2 - y \sin x$ then find $\frac{\partial u}{\partial x}$, $\frac{\partial u}{\partial y}$.
8. Evaluate $\int \frac{x}{1+x^4} dx$.
9. Define the order and degree and find order and degree of the $D.E. 1 + \left(\frac{d^2 y}{dx^2} \right)^2 = \left[2 + \left(\frac{dy}{dx} \right)^2 \right]^{\frac{3}{2}}$.
10. Find the Laplace transforms $e^{2t} + 4t^3 - 2 \sin 2t + 3 \cos 3t$.

PART-B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. Solve the system of equations by Cramer's rule
 $x + 2y - z = 1$, $3x + 5y - 2z = 5$, $2x + 6y + 3z = -2$
12. (a) If $\sin A = \frac{4}{3}$, $\sin B = \frac{5}{13}$ Find the value of $\sin(A+B)$.
(b) If $\tan(A+B) = m$, $\tan(A-B) = n$; then find $\tan 2A$.
13. Find the equation of circle passing through the three points (3, 4) (3, 2) (1, 4).
14. (a) Evaluate $\lim_{x \rightarrow 0} \frac{\tan x - \sin x}{x^3}$.
(b) Find the derivative of the function $\frac{x + \cos x}{x + \sin x}$.

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15. If $u = \cos^{-1} \left[\frac{x+y}{\sqrt{x} + \sqrt{y}} \right]$ then show that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = -\frac{1}{2} \cot u$.

16. Evaluate (a) $\int \frac{1}{5+4 \cos x} dx$.

(b) $\int x^2 \sin x dx$.

17. Solve the differential equation $x \frac{dy}{dx} + y = (1+x)e^x$.

18. Find the Laplace transform (a) $\{\sin 2t \sin 3t\}$

(b) $\{e^{5t} \cos 5t\}$
