

Pharm.D 1 Year (6 YDC) (Instant) Examination Dec / Jan 2024-25

Subject: HUMAN ANATOMY AND PHYSIOLOGY & 1.1

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Draw a typical diagram of bone and mention its functions.	1	1
2	Describe the following terms: (a) Anemia (b) Thrombocytopenia	2	2
3	Describe the functions of the spleen and add note on splenomegaly.	3,5	2
4	Define the following terms: (a) Atherosclerosis (b) Arteriosclerosis	3	1
5	Define the following terms: (a) Tidal volume (b) Vital capacity	3,5	1
6	What are the auxiliary parts of the GIT and enlist the functions.	3	1
7	Illustrate the process of micturition.	3	4
8	Write about Myasthenia gravis?	6	3
9	Write about the reflex arc.	3,5	3
10	Outline different methods of contraception.	4	1,4

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Explain in detail (a) Renin-Angiotensin System (b) ECG	3,5	2
12	(a) Describe the anatomical features of a nephron with the help of diagram (b) Explain in detail the various steps involved in the formation of urine.	3	2
13	Discuss in detail about the synthesis, storage, transportation of and function of the thyroid gland.	3	2
14	Describe the structure and functions of the cerebrum in detail.	3,5	2
15	Write a short note on (a) Oogenesis (b) Spermatogenesis	3,5	3
16	Describe the anatomy of the lung and write a note on transport of respiratory gases.	3,5	2
17	Define and classify various types of tissues and write a note on epithelial tissue.	1	1,2
18	Describe anatomical features of the ear and add note on the physiology of hearing.	5	2



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Pharm.D I Year (6 YDC) (Instant) Examination Dec / Jan 2024-25

Subject: PHARMACEUTICS &1.2

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	What is dispensing?	1	4
2	Define the term additive effect along with advantages and disadvantages.	2	6
3	Write clark's formula and explain its importance.	2	5
4	Define alcohol dilution.	2	3
5	What is the role of glycerin in throat paints?	1	4
6	What is cracking of emulsions?	4	1
7	What are emollients?	4	2
8	What are suppositories? Write its applications.	1	1
9	Define synergism and give examples.	1	2
10	Define gargles and give examples with formula.	1	1

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Write in detail about British Pharmacopoeia.	3	1
12	What is prescription? Explain various parts of prescription in detail.	1	2
13	Classify Powders and Write in detail about Eutectic Powders.	1	2
14	Give the differences between lotion and liniment.	1	1
15	Enumerate the advantages and disadvantages of suspension.	1	2
16	What is Percolation? Explain in detail about continuous hot percolation.	1	3
17	What are the ideal properties of suppository bases and write in detail about types of bases.	4	3
18	Describe different methods to correct physical incompatibility.	6	3



Pharm.D I Year (6 YDC) (Instant) Examination Dec/ Jan 2024-25

Subject: Pharmaceutical Medicinal Biochemistry & 1.3T

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

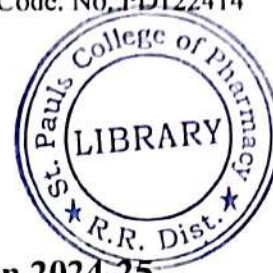
Q.No.	Question	CO	BL
1	Write a short note on Urinary tract calculi	5	3
2	Discuss briefly on different states of Nitrogen balance	4	2
3	Explain the role of Vitamins and Non-vitamins in enzyme catalyzed reactions with suitable examples.	1	2
4	Define ETC and give the structure of mitochondrion depicting ETC	3	1
5	What is creatinine clearance? Brief out its diagnostic significance	5	1
6	Define Genetic code and give its characteristic features.	4	1
7	Summarize the transport mechanisms across biological membrane.	1	2
8	What do you understand by HMP shunt? Illustrate its Significances	2	4
9	Give the procedure for estimation of calcium in serum.	6	5
10	Construct a table showing the Glycogen storage disease - Biochemical lesions and characteristic features	3	6

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Write about a. Isoenzymes and their therapeutic and diagnostic applications. b. Enzyme inhibitions with suitable examples	1	3
12	Explain: a) β - oxidation b) Hypercholesterolemia	2	2
13	Detail the process of Translation and explain how it became a favourite target for inhibition by antibiotics.	4	2 & 6
14	Discuss on Biological Oxidation and its uncouplers.	3	2
15	Elaborate on Krebs cycle with its energetics and justify its Amphibolic role.	2	1 & 5
16	Illustrate the following with suitable chemical reactions: a. Catabolism of Amino acids b. Production of Bile Pigments	4	4
17	Explain the following: a. Lipid profile tests b. Water Balance and electrolyte distribution in body.	5	2
18	a. Summarize the composition and functions of Lipoproteins. Explain how lipoproteins contribute to Atherosclerosis. b. Simplify on RIA and its applications	6 5 7	2 2 4



Pharm.D I Year (6 YDC) (Instant) Examination Dec / Jan 2024-25

Subject: Pharmaceutical Organic Chemistry & 1.4

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	What are Intermolecular Forces? Write the types of Intermolecular Forces	1	1
2	Define alkyl halides? Write the structures of the following organic compounds (a) 1-Bromo-2-methylpropane (b) 1-chloro-2-methylbutane (c) Butanoic acid	4	2
3	Explain the mechanism of SN2 reaction.	6	1
4	Write a note on hyper conjugation	3	1
5	Explain the activating and deactivating groups with example.	2	2
6	Write a note on acidity of carboxylic acids	4	1
7	Explain the allylic rearrangements	3	4
8	Explain the mechanism of aldol condensation	2	2
9	Write about Kolbe reaction	1	1
10	Write the structure and uses of aspirin and tartaric acid	1	3

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Explain the mechanism and stereochemistry of SN1 and SN2 reaction with examples	3	4
12	(a) Explain the mechanism of free radical reaction of methane (b) Write about the nucleophilic addition reaction of carboxylic acids	2	5
13	(a) Write the mechanism of dehydro halogenation of alkyl halides (b) Write the evidence for E2 mechanism	1	1
14	Write the mechanism involved in the following; (a) Reimer tieman's reaction (b) fries rearrangement.	5	2
15	Explain the mechanism of 1,2 and 1,4 additions in conjugated dienes	6	3
16	Write the preparation , assay and uses of (a) salicylic acid (b) saccharin sodium (c) lactic acid	2	5
17	(a) Discuss the reaction and mechanism of cannizzaro reaction (b) Explain the oxidation reduction reaction with examples	4	5
18	(a) Explain the Lowry bronsted and Lewis theories (b) write a note on protic and aprotic solvents	2	4



Pharm.D I Year (6 YDC) (Instant) Examination Dec/ Jan 2024-25

Subject: Remedial Mathematics 1.6T

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	If $\begin{bmatrix} 5 & 4 \\ 1 & 2 \end{bmatrix}$ show that $A^2 - 7A + 6I = 0$.	3	2
2	Simplify $2(1 - 2\sin^2\theta)\cos 4\theta$.	3	2
3	Find the distance between the points $(0, 0)$ and $(-4, 7)$.	3	1
4	Evaluate $\lim_{x \rightarrow 0} \frac{\cos 2x + 2}{\cos x - \sin x}$.	4	1
5	Evaluate $\int e^{2x} dx$.	4	2
6	Define differential equation.	1	1
7	Define Laplace transform.	5	1
8	Find the value of $\int \frac{dx}{x(x-1)}$.	4	3
9	Write the order and degree of the differential equation $\frac{dy}{dx} = 1 - y\left(\frac{dy}{dx}\right)^4$.	1	2
10	If $A = \begin{bmatrix} 1 & 3 & 2 \\ 0 & 2 & -1 \\ 1 & -3 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 6 & -2 \\ 0 & -5 & 7 \\ -1 & 1 & 5 \end{bmatrix}$ then find $A + B$.	3	1

PART B

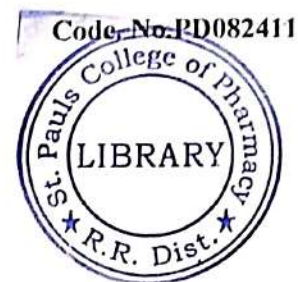
Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Solve the equations $x + y - z = 5, 2x + y + 2z = 5, 3x + 2y + 4z = 7$ by using Cramer's rule.	2	3
12	Prove that $\cot(A + 15^\circ) - \tan(A - 15^\circ) = \frac{4 \cos 2A}{1 + 2 \sin 2A}$.	3	3
13	a) Find the equation of the straight line passing through $(1, -2)$ and whose slope is 3. [5M]	3	1
	b) Find the equation of the circle passing through $(1, 1)$ and $(2, 2)$ and having the radius 1. [5M]	3	2
14	Find the derivative of $\frac{x^2 - 2x}{(x+1)^2}$.	4	2
15	a) Find the value of $\int_0^1 \sqrt{x(1-x)} dx$ [5M]	4	3
	b) Evaluate $\int \cos^4 x \sin x dx$. [5M]	4	2
16	Solve the differential equation $\frac{dy}{dx} + \frac{y}{x} = \frac{\log x}{x}$.	1	3
17	Find the Laplace transform of $t^2 + \cos 2t \sin 2t + e^{4t}$.	5	3
18	Show that $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = (a-b)(b-c)(c-a)$.	3	3

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Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

Subject & Code: HUMAN ANATOMY AND PHYSIOLOGY & 1.1

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Draw a typical diagram of bone and mention its functions.	1	1
2	Describe the following terms: (a) Anemia (b) Thrombocytopenia	2	2
3	Describe the functions of the spleen and add note on splenomegaly.	3,5	2
4	Define the following terms: (a) Atherosclerosis (b) Arteriosclerosis	3	1
5	Define the following terms: (a) Tidal volume (b) Vital capacity	3,5	1
6	What are the auxiliary parts of the GIT and enlist the functions.	3	1
7	Illustrate the process of micturition.	3	4
8	Write about Myasthenia gravis?	6	3
9	Write about the reflex arc.	3,5	3
10	Outline different methods of contraception.	4	1,4

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Explain in detail (a) Renin-Angiotensin System (b) ECG	3,5	2
12	(a) Describe the anatomical features of a nephron with the help of diagram (b) Explain in detail the various steps involved in the formation of urine.	3	2
13	Discuss in detail about the synthesis, storage, transportation of and function of the thyroid gland.	3	2
14	Describe the structure and functions of the cerebrum in detail.	3,5	2
15	Write a short note on (a) Oogenesis (b) Spermatogenesis	3,5	3
16	Describe the anatomy of the lung and write a note on transport of respiratory gases.	3,5	2
17	Define and classify various types of tissues and write a note on epithelial tissue.	1	1,2
18	Describe anatomical features of the ear and add note on the physiology of hearing.	5	2

Code. No. PD082415



Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

Subject: Pharmaceutical Inorganic Chemistry & 1.5

Time: 3 Hours

Max. Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Give the principle reaction of limit test for chlorine.	2	1
2	Define antacids and give any two examples.	2	1
3	Name four indicators used in the Non-Aqueous titrations with colour change.	1	1
4	Define electrolyte and give the composition of any electrolyte mixture	3	1
5	Define Normality and how do you prepare 0.1N, 250ml HCl solution.	1	4
6	Discuss difference detection methods for trace elements.	4	3
7	Discuss the mechanism of action of Anti microbial with any one example.	4	3
8	Define complexometry and Explain the examples of metal ion indicators.	1	2
9	Explain the preparation of sodium carbonate.	2	2
10	Define Cathartics with examples.	2	1

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Explain the limit test for arsenic with neat labelled diagram.	2	2
12	Discuss the different types of Neutralisation curves with examples.	1	2
13	Describe the Radio Pharmaceuticals used in Pharmacy with note of storage.	6	3
14	Explain about the miscellaneous Pharmaceutical compounds and uses.	5	3
15	Explain the estimation of Barium sulfate by gravimetry.	3	5
16	Explain the dental products and sodium fluoride preparation and uses.	5	4
17	Explain the Different types of Acidifiers with examples.	2	3
18	Explain the Estimation of sodium benzoate.	1	5

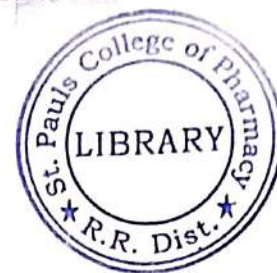
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**Pharm.D I Year (6 YDC) (Main) Examination July/August 2024****Subject & Code: Pharmaceutical Organic Chemistry & 1.4****Time: 3 Hours****Max.Marks: 70****PART- A****Note: Answer ALL questions****(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define Isomerism? Write the classification of isomerism	2	1
2	Write the structural formula of the following compounds (a) 2,2-dichloro ethane (b) 3-chloro-3-methyl -1-butene	1	1
3	Explain the mechanism of SN1 reaction.	3	2
4	Write about acidity of carboxylic acids	2	1
5	Explain the mechanism of free radical addition reaction at carbon-carbon double bond	4	4
6	Write about 1, 2- elimination of alkyl halides.	3	1
7	Explain the acidity of phenol.	2	2
8	Write about benzoin condensation	6	2
9	Explain the concept involved in basicity of amines	2	3
10	Write the structure and uses of Chlorbutol and salicylic acid	7	1

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

Q.No.	Question	CO	BL
11	(a) What are cycloalkanes? Explain Bayers strain theory for stability of cycloalkanes (b) Compare between SN1 reaction and SN2 reaction	3	2 5
12	Explain the reaction, mechanism and stereochemistry of E2 reaction	4	2
13	Explain the orientation and reactivity of free radical addition to conjugated dienes.	4	3
14	(a) Explain the mechanism of friedel craft alkylation (b) Explain the effect of halogen on electrophilic aromatic substitution in alkyl benzene.	3	1 2
15	Write the mechanism of nucleophilic addition reaction of carboxylic acid	4	2
16	Write the preparation , assay and uses of (a) Tartaric acid (b) benzyl benzoate (c) Vanillin	7	2
17	Write the mechanism involved in the following; (a) Perkin condensation (b) Michael addition.	6	2



Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

Subject: Medicinal Biochemistry & 1.3

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Define Michaelis Menton constant and give its significance	1	1
2	Discuss briefly about Gluconeogenesis	2	2
3	Summarize on water balance and electrolyte distribution in body	6	2
4	Write a short note on Oxidative phosphorylation.	3	3
5	List out the abnormal constituents of urine and give test procedures for identification of any two of them.	5	1
6	Define Genetic code and give their characteristic features	4	1
7	Write briefly on facilitated diffusion across membranes.	1	3
8	Give protocol for estimation of total serum cholesterol and give desirable and risk levels of serum non-HDL-Cholesterol.	7	5
9	Illustrate the role of insulin and glucagon on regulation of carbohydrate metabolism	2	4
10	Discuss briefly on Malfunction of a cell.	5	2

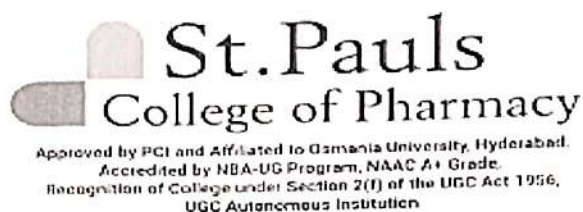
PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	a. Write the Nomenclature and IUB classification of enzymes. b. Explain about the different Enzyme inhibitions with suitable examples	1	1 2
12	Explain about β – oxidation of saturated fatty acids	2	2
13	Discuss the events taking place at the DNA replication fork and add a note on the DNA repair mechanisms.	4	2
14	Describe RIA and ELISA with suitable applications	7	2
15	Demonstrate Krebs's cycle and its significance. Add a note on energetic.	8	6
16	Explain ETC and brief out on its inhibitors.	3	2
17	Write a short note on the following: a. Enlist liver function tests and discuss the significance of the selected enzyme tests in the diagnosis of Liver diseases. b. Write the reactions of HMP shunt and illustrate the significance of its metabolites.	5 2	1 4
18	a. Discuss the composition and functions of Lipoproteins. Add a short note on Hypercholesterolemia b. Brief out on determination of serum sodium and potassium in body fluids	7 6	2 5

Code No. PD082412



Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

Subject & Code: PHARMACEUTICS & 1.2

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	What is inscription? Write its importance.	1	4
2	Define the term Tachyphylaxis.	2	6
3	Name the editions of Indian Pharmacopoeia	3	5
4	Define proof spirit. Discuss its importance	2	3
5	Define suspension and discuss various types of suspensions.	4	4
6	What is phase inversion in emulsion? How do you prevent?	1	1
7	What are humectants?	4	2
8	What is displacement value? Discuss with formula.	3	2
9	What is antagonism?	2	2
10	Define nasal drops.	1	1

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Write in detail about U.S. pharmacopoeia.	3	1
12	Discuss about handling of prescription and sources of errors in prescription.	1	
13	Classify Powders. Write in detail about effervescent and efflorescent powders with examples.	1	2
14	Classify liquid dosage forms. Differentiate between gargles and mouthwash.	1	1
15	Define suspension. Write a note on method of preparation of suspension.	1	2
16	Define maceration. Discuss on different types of maceration.	1	3
17	What are the evaluation methods of suppositories?	1	3
18	Discuss in detail about chemical incompatibility.	6	1



Pharm.D IYear (6 YDC) (Main) Examination July/August 2024

Subject & Code: Remedial Mathematics 1.6M

Time: 3 Hours

Max. Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	If $\begin{vmatrix} x & 4 \\ 4 & x \end{vmatrix} = 0$, find x .	3	1
2	Find the value of $\cos 15^\circ$.	3	2
3	Find the equation of the line whose slope is 16 and intercepts with the y-axis is 1.	1	2
4	State Euler's theorem on homogeneous functions of two variables.	4	1
5	Evaluate $\int_1^2 x^2 dx$.	4	1
6	Write the order and degree of the differential equation $5 \frac{dy}{dx} = 7 - y(\frac{dy}{dx})^3$.	1	2
7	Define the linearity property.	5	1
8	Find the distance between the points (2,8) and (-1,5).	3	3
9	If $\begin{bmatrix} 5 & 4 \\ 1 & 2 \end{bmatrix}$ show that $A^2 - 7A + 6I = 0$.	3	2
10	Find the Laplace transform of $\sin 2t \cos t$.	5	3

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	If $A = \begin{bmatrix} 3 & 4 & 5 \\ 1 & 2 & 0 \\ 5 & 1 & 1 \end{bmatrix}$, then find A^{-1} .	3	2
12	If $\sin A = \frac{3}{5}$, $\cos B = \frac{9}{41}$, then find the value of $\sin(A - B)$ and $\sin(A + B)$.	3	2
13	Find the equation of the line passing through the point (1, 1) and perpendicular to the line passing through the points (3, 5) and (-6, -2).	1	3
14	Find $\frac{\partial u}{\partial x}$ and $\frac{\partial u}{\partial y}$ for $u = e^x(\sin xy + \cos xy)$.	4	2
15	a) Find $\int x^2 e^x dx$. [5M]	4	1
	b) Evaluate $\int_0^\pi x \sin x dx$. [5M]	4	2
16	a) Solve the differential equation $\frac{dy}{dx} = \frac{x^2 + y^2}{2xy}$. [5M]	1	3
	b) Form the differential equation from the equation $x^2 + y^2 = 4ax$, 'a' being arbitrary constant. [5M]	1	2
17	Find Laplace transform of $e^{-3t}(\cos 4t + 3\sin 4t)$.	5	3
18	Solve the equations $x + 2y - 2z = 3$, $2x - 5y + 4z = -4$, $4x - y + 3z = 5$ by using Cramer's rule.	2	3

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Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

Subject & Code: Remedial Biology

Time: 3 Hours

Max.Marks: 70

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	What is pollination and give its importance	1	2
2	Write a note on inflorescence	1	1
3	Write short notes on plant tissues	1	3
4	Give the functions of plasma membrane	1	2
5	Explain about metamorphosis	1	4
6	Explain the structure of neuron	1	3
7	Write about morphology of a leaf	1	2
8	Write about tadpole	4	1
9	Write about yeast	4	3
10	Write a note on simple fruits	2	4

PART B

Note: Answer any FIVE questions

(5 x 10 = 50 Marks)

Q.No.	Question	CO	BL
11	Write about the study of classes Pisces and Aves	6	1
12	Describe the circulatory system of frog	5	3
13	Explain about absorption of water and minerals in plants	1	2
14	Write in detail about Study of animal tissues?	5	4
15	Describe the economic importance and medicinal values of Solanaceae and Leguminosae	3	2
16	Describe the structure of monocot and dicot root with a neat labelled diagram	1	5
17	Explain in detail about poisonous animals	6	2
18	Illustrate the light reactions of photosynthesis	1	4
