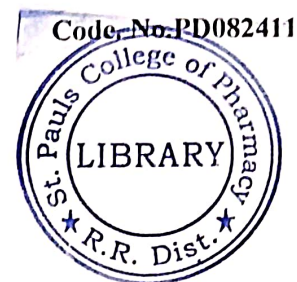


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Pharm.D I Year (6 YDC) (Main) Examination July/August 2024

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

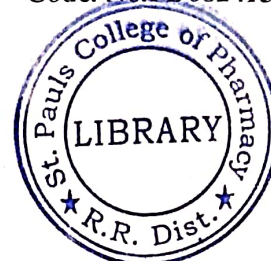
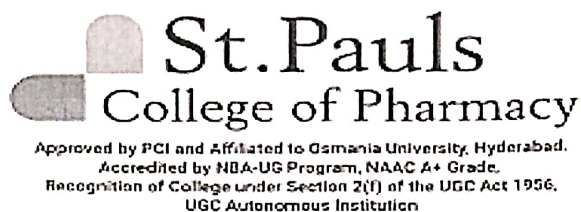
PART B

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

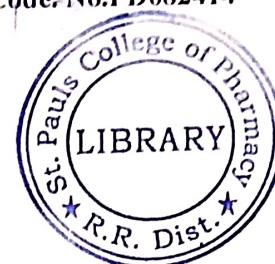
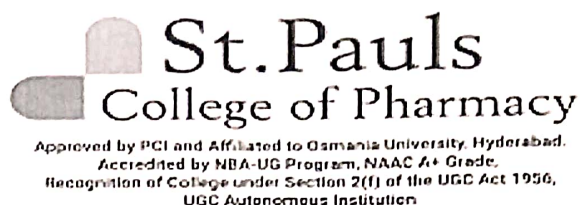
PART B

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

Code No. PD082414



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)

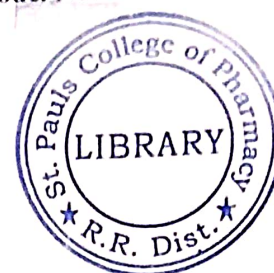
Q.No.	Question	CO	BL
1	Define Isomerism? Write the classification of isomerism	2	1
2	Write the structural formula of the following compounds (a) 2,2-dichloro ethane (b) 3-chloro-3-methyl -1-butene	1	1
3	Explain the mechanism of SN1 reaction.	3	2
4	Write about acidity of carboxylic acids	2	1
5	Explain 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

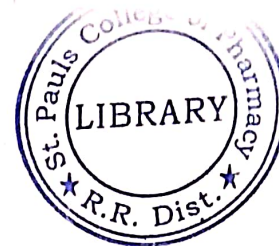
(5 x 10 = 50 Marks)

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

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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 $5 \frac{dy}{dx} = 7 - y \left(\frac{dy}{dx}\right)^3$.	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

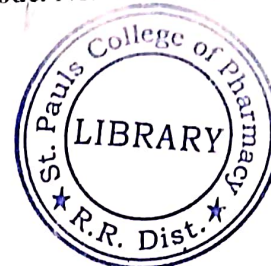
(5 x 10 = 50 Marks)

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

Code. No.PD082416B

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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
