

# St. Pauls College of Pharmacy

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Accredited by NBA-UG Program, NAAC A+ Grade.  
Recognition of College under Section 2(f) of the UGC Act 1956.  
UGC Autonomous Institution



## **B.Pharmacy I Semester (PCI) (Supple) Examination Jul/Aug 2024**

**Subject & Code: Human Anatomy and Physiology I & BP101T**

**Time: 3 Hours**

**Max.Marks: 75**

### **PART- A**

**Note: Answer ALL questions**

**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define Anatomy and Physiology	1	1
2	Name the various layers of the human skin.	2	1
3	Describe the functions of blood.	4	2
4	Draw a labelled diagram of the human eye.	4	1
5	Define cardiac cycle and cardiac output.	6	1
6	Discuss about the neuromuscular junction.	5	2
7	Define homeostasis.	4	1
8	Classify the bones of the appendicular skeleton.	3	2
9	Differentiate bradycardia and tachycardia.	6	2
10	What is electrocardiogram?	6	1

### **PART B**

**Note: Answer any TWO questions**

**(2 x 10 = 20 Marks)**

Q.No.	Question	CO	BL
11	Illustrate the anatomy of human heart.	6	5
12	Construct a flowchart to explain autonomic nervous system.	5	6
13	Describe the lymph organs and add a note on the functions of human lymphatic system.	4	5

### **PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

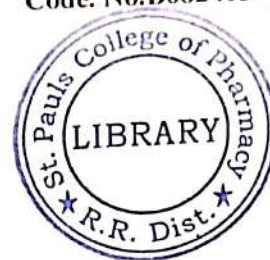
Q.No.	Question	CO	BL
14	Categorize various blood disorders.	4	4
15	Describe the various parts of human nose.	4	2
16	Write briefly about the cranial nerves.	5	4
17	Write about the regulation of blood pressure.	5	2
18	Explain the mechanism of blood clotting.	4	3
19	Explain the various parts of human tongue.	4	3
20	Discuss briefly about the bones of axial skeleton.	3	2
21	Compare various types of tissues.	1	4
22	Illustrate the physiology of muscle contraction.	3	4

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Code. No.B082413

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## B.Pharmacy I Semester (PCI) (Supple) Examination July/August 2024

Subject: Pharmaceutics-I

Time: 3 Hours

Max.Marks: 75

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Define prescription and list out the parts of prescription.	2	1
2	What are eutectic mixtures give examples.	4	1
3	Illustrate the differences between syrups and elixirs.	4	6
4	Define posology and dosage form.	4	1
5	Enumerate the examples of emulsifying agents.	5	2
6	What is displacement value?	4	1
7	Define ointment with examples.	4	1
8	Calculate the dose of a child of 3 years with adult dose of 500mg.	2	4
9	Convert the strength of 88% v/v of alcohol in proof spirit.	4	3
10	Classify the liquid dosage forms.	4	2

PART B

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
11	Describe the methods of preparation of emulsions. Write a note on its stability problems & remedies to overcome.	4 & 6	3
12	Define pharmaceutical incompatibilities and explain the types of incompatibilities with suitable examples.	3	3
13	Discuss the factors affecting dermal penetration of drugs and write a brief note on evaluation of semisolids.	4	4

PART C

Note: Answer any SEVEN questions

(7 x 5 = 35 Marks)

Q.No.	Question	CO	BL
14	Write short notes on USP.	1	1
15	Describe various solubility enhancement techniques.	4	2
16	List out the differences between flocculated and deflocculated suspensions.	4	6
17	Discuss on different types of suppository bases.	5	2
18	Describe the method of preparation of gels with one suitable example.	4	4
19	Briefly discuss about formulation of lotions.	4	3
20	Describe the official preparation of compound powders.	4	2
21	Mention the factors affecting posology.	4	2
22	Briefly discuss the significance of pharmacy as a career.	1	4

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**B.Pharmacy I Semester (PCI) (Supple) Examination Jul/August 2024**

**Subject: PHARMACEUTICAL INORGANIC CHEMISTRY BP104T**

**Time: 3 Hours**

**Max.Marks: 75**

**PART- A**

**Note: Answer ALL questions**

**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Explain the chemical reaction involved in the limit test for Sulphate.	3	3
2	Enlist the sources of impurities in pharmaceuticals.	2	3
3	Define Buffers. Give few examples.	4	1
4	What are dentifrices? Give two examples.	4	2
5	Define antacids. Write any two ideal properties of antacids.	6	1
6	Mention the uses of Boric acid and Magnesium sulphate?	6	2
7	Define Astringents. Give two examples.	4	1
8	Write the uses of Potassium iodide and Ferrous gluconate.	6	1
9	What is radioactivity? Which instruments are used to measure radioactivity?	6	2
10	Define half life. Write its formula.	6	1

**PART B**

**Note: Answer any TWO questions**

**(2 x 10 = 20 Marks)**

Q.No.	Question	CO	BL
11	Discuss the method of preparation, properties and medicinal uses of i) Potassium chloride ii) Sodium Iodide <sup>131</sup> I iii) Rochelle salt (4+3+3)	6	3
12	Explain the principle, preparation and uses involved in the assay of i) Calcium gluconate ii) Hydrogen peroxide (5+5)	4	3
13	Explain radiopharmaceuticals in detail with special emphasis on their pharmaceutical applications. (5+5)	6	3

**PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Explain the principle and procedure involved in the limit test for Iron.	3	3
15	Explain the preparation, properties and medicinal uses of Zinc eugenol cement.	6	3
16	Briefly discuss the history of Pharmacopoeia.	1	2
17	Discuss the preparation, properties, assay and medicinal uses of Aluminium hydroxide gel.	6	3
18	Discuss the preparation, properties, assay and medicinal uses of Bentonite.	6	3
19	Explain the principle and procedure involved in the assay of Ferrous sulphate.	4	3
20	Write about poisons and antidotes and explain the mechanism with suitable examples.	4	3
21	Explain the principle and procedure involved in the limit test for Chlorides.	3	3
22	Write the properties, preparation and uses of Technetium-99m and Ammonium chloride.	6	3

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Code. No.B082412

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## B.Pharmacy I Semester (PCI) (Supple) Examination July/August 2024

Subject: Pharmaceutical Analysis

Time: 3 Hours

Max.Marks: 75

PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Define primary and secondary standard substances with examples.	1	1
2	Explain significant figures with suitable examples.	1	2
3	How do you standardize 0.1 M sodium thiosulfate?	2	5
4	List out the indicators used in non-aqueous titrations.	3	1
5	Differentiate between co-precipitation and post-precipitation.	4	4
6	Describe the principle of diazotization titration.	4	2
7	List out various redox indicators.	6	1
8	Outline various sources of errors.	1	1
9	Mention various electrodes used in potentiometry.	5	3
10	Write the advantages of conductometric titrations.	5	3

PART B

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
11	Write about the theories of acid-base indicators.	3	3
12	Classify redox titrations. Write the principle and applications of cerimetry and iodometry.	6	3
13	Discuss the principle of complexometric titrations. Explain the estimation of calcium gluconate.	4	2

PART C

Note: Answer any SEVEN questions

(7 x 5 = 35 Marks)

Q.No.	Question	CO	BL
14	Define potentiometric titration and explain the principle involved along with its applications.	1	1 & 2
15	Define errors. Describe various methods to overcome errors in pharmaceutical analysis.	1	1 & 2
16	How do you prepare and standardize 2 N hydrochloric acid?	2	5
17	Explain the principle and applications of non-aqueous titrations with example.	3	2
18	Outline the steps involved in gravimetric analysis and discuss them briefly.	4	1 & 2
19	Describe the principle involved in Mohr's and Volhard's methods.	4	2
20	Write the principle and applications of iodimetric titrations.	6	3
21	What is reference electrode? Explain the construction and working of any one of the same.	5	1 & 2
22	Write the principle and applications of polarography.	5	3

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Code. No.B022411

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## B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024

Subject & Code: Human Anatomy and Physiology- I BP101T

Time: 3 Hours

Max.Marks: 75

### PART- A

Note: Answer ALL questions

(10 x 2 = 20 Marks)

Q.No.	Question	CO	BL
1	Define meiosis and mitosis.	1	1
2	Name the various parts of the human nose.	2	1
3	Enumerate the functions of blood.	2	1
4	Draw a labelled diagram of the human eye.	2	1
5	What is electrocardiogram?	6	2
6	Write about the neuromuscular junction.	5	3
7	Define homeostasis.	4	1
8	Name the bones of the axial skeleton.	3	1
9	Define bradycardia and tachycardia.	6	1
10	Define cardiac cycle and cardiac output.	6	1

### PART B

Note: Answer any TWO questions

(2 x 10 = 20 Marks)

Q.No.	Question	CO	BL
11	Illustrate the elements of conduction system of human heart.	6	4
12	Construct a flow chart to explain peripheral nervous system.	5	6
13	Illustrate the lymph organs and add a note on the functions of human lymphatic system.	1	4

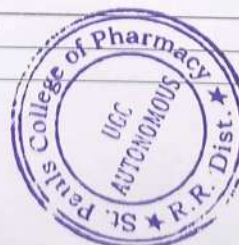
### PART C

Note: Answer any SEVEN questions

(7 x 5 = 35 Marks)

Q.No.	Question	CO	BL
14	Write a brief note on anemia.	4	3
15	Describe the various parts of human skin.	1	2
16	Write briefly about the spinal nerves.	5	3
17	Illustrate the functions of the parasympathetic nervous system.	5	4
18	Explain the mechanism of blood grouping.	4	2
19	Explain the various parts of human ear.	1	4
20	Discuss briefly about the bones of appendicular skeleton.	3	2
21	Compare different forms of intracellular signaling.	1	4
22	Explain the physiology of muscle contraction.	1	4

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**B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024**

**Subject: Pharmaceutical Analysis-BPI02T**

**Time: 3 Hours**

**Max.Marks: 75**

**PART- A**

**Note: Answer ALL questions**

**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define accuracy and precision with examples.	1	1
2	Write about the significance of Pharmacopoeia in Pharmaceutical Analysis.	1	3
3	How do you prepare 0.1 M oxalic acid?	2	5
4	List out the solvents used in non-aqueous titrations.	3	1
5	Differentiate between iodometry and iodimetry.	6	4
6	Classify complexometric titrations.	4	2
7	List out types of redox titrations.	6	1
8	What are metal ion indicators?	4	1
9	Summarize the applications of conductometry.	5	2
10	Write Ilkovic equation and give its significance.	5	3

**PART B**

**Note: Answer any TWO questions**

**(2 x 10 = 20 Marks)**

Q.No.	Question	CO	BL
11	Discuss the principle and steps involved in gravimetric analysis.	4	2
12	Classify acid-base titrations. Explain the theory involved in titrations of strong acid against strong base with relevant examples.	3	3
13	Write the principle and applications of polarography. Explain the construction and working of dropping mercury electrode.	5	3 & 4

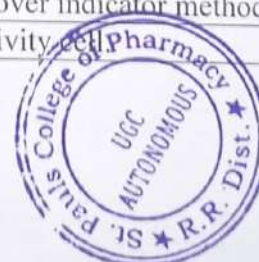
**PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Describe briefly about various types of errors.	1	2
15	Write the preparation and standardization of 0.5 N sodium hydroxide	2	5
16	How to estimate Sodium benzoate? Discuss in detail.	3	2
17	Differentiate between Mohr's and Volhard's methods of precipitation titrations.	4	4
18	Explain briefly about pH indicators.	3	2
19	Write the principle and applications of cerimetric titrations.	6	3
20	Define primary and secondary standard substances. Describe their properties with suitable examples.	1	1 & 2
21	What are potentiometric titrations? Write their advantages over indicator method.	5	1
22	Draw and explain the construction and working of conductivity cell.	5	1 & 2

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Code No. BP022413



**B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024**

**Subject: Pharmaceutics-I-BP103T**

**Time: 3 Hours**

**Max.Marks: 75**

**PART- A**

**Note: Answer ALL questions**

**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define effervescent powders with few examples.	4	1
2	List out the different types of ointment bases.	5	1
3	Illustrate the differences between creams and pastes.	4	6
4	Define posology and dosage form.	4	1
5	Enumerate the examples of emulsifying agents.	5	1
6	What is displacement value.	4	2
7	What are eutectic mixtures give examples.	4	1
8	Write various formulae used for calculation of dose of a child	2	1
9	Find out the strength of 65.7% v/v of alcohol in proof spirit.	4	3
10	Classify the solid dosage forms.	4	2

**PART B**

**Note: Answer any TWO questions**

**(2 x 10 = 20 Marks)**

Q.No.	Question	CO	BL
11	Describe the method of preparation of suspensions and write a note on stability problems & remedies to overcome instability in suspensions.	4 & 6	4
12	Define pharmaceutical incompatibilities and explain different types of incompatibilities with suitable examples.	3	4
13	Define prescription; write in detail about parts of prescription.	2	3

**PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Write short notes on IP.	1	1
15	Describe the excipients used in the formulation of liquid dosage form and mention its uses.	5	4
16	Write differences between flocculated and deflocculated suspensions.	4	6
17	Discuss about evaluation of suppositories.	4	5
18	Describe the method of preparation of cold cream with any one formulation.	4	3
19	Briefly discuss the formulation of liniments with suitable example.	5	3
20	Explain various identification tests of emulsions.	4	2
21	Describe the mechanism and factors affecting dermal penetration of drugs.	4	4
22	Briefly discuss the significance of pharmacy as a career in academia vs industry.	1	5

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**B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024**

**Subject: Pharmaceutical Inorganic Chemistry BP104T**

**Time: 3 Hours**

**Max.Marks: 75**

**PART- A**

**Note: Answer ALL questions**

**(10 x 2 = 20 Marks)**

Q.No.	Question	CO	BL
1	Define limit test. Give examples of limit tests official in Indian Pharmacopoeia.	3	1
2	Enlist the types of impurities in pharmaceutical substances.	2	3
3	Explain the Henderson-Hasselbalch equation for acidic and basic buffers.	5	3
4	What are electrolytes? Give two examples.	5	1
5	List out the medicinal uses of Kaolin and Magnesium hydroxide.	6	2
6	Define antimicrobials. Give two examples.	4	1
7	What are Expectorants? Explain the properties of any one expectorant.	4	2
8	Define Haematinics. Write two examples.	4	1
9	Explain the terms radioactivity and half life.	6	3
10	What are the precautions should be taken while handling radiopharmaceuticals.	6	2

**PART B**

**Note: Answer any TWO questions**

**(2 x 10 = 20 Marks)**

Q.No.	Question	CO	BL
11	Discuss the method of preparation, properties and medicinal uses of i) Calcium carbonate ii) Zinc sulphate iii) Sodium bicarbonate (4+3+3)	6	3
12	Explain the principle and procedure involved in the assay of i) Copper sulphate ii) Chlorinated lime (5+5)	4	3
13	Write notes on i) Modified limit test for Chloride and Sulphate ii) Properties of $\alpha$ , $\beta$ and $\gamma$ radiations (5+5)	3, 6	2

**PART C**

**Note: Answer any SEVEN questions**

**(7 x 5 = 35 Marks)**

Q.No.	Question	CO	BL
14	Give an account on Iodine and its preparations.	6	2
15	Write short notes on electrolyte replacement therapy.	6	2
16	Discuss the applications of radiopharmaceuticals with suitable examples.	6	3
17	Outline the sources of impurities in pharmaceuticals with suitable examples.	2	3
18	Select an acidifier and explain the principle and procedure involved in its assay	4	5
19	What is Rochelle salt? Discuss its preparation, assay and uses.	6	4
20	Explain the principle involved in the limit test for Arsenic.	3	3
21	Discuss the role of buffers in pharmaceutical systems with suitable examples.	4	3
22	Explain the preparation, properties and medicinal uses of Sodium Iodide $^{131}\text{I}$ .	6	3

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Code. No.B022415

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## B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024

Subject: Communication Skills-BP105T

Time: 1.5 Hours

Max.Marks: 35

### PART- A

Note: Answer any ONE question

(1 x 10 = 10 Marks)

Q.No.	Question	CO	BL
1	Explain two situations in your life where you have experienced miscommunication.	1	2
2	Define writing skills, elaborate on the importance and strategies used for effective writing.	5	6

### PART B

Note: Answer any FIVE questions

(5 x 5 = 25 Marks)

Q.No.	Question	CO	BL
3	Define an Interview and explain various types of Interviews.	4	1
4	Illustrate the process of Communication.	2	3
5	Write atleast five frequently asked questions in a job interview with answers.	4	3
6	Relate the significance of oral presentation in the career of a pharmacist.	5	2
7	Write the Dos and Don'ts of a Group Discussion.	4	3
8	Listening is most crucial to develop Speaking-Explain	3	2
9	Explain the barriers in written communication.	3	2

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## B.Pharmacy I Semester (PCI) (Main) Examination Feb/March 2024

Subject: Remedial Mathematics –BP106RMT

Time: 1.5 Hours

Max.Marks: 35

### PART- A

Note: Answer any ONE question

(1 x 10 = 10 Marks)

Q.No.	Question	CO	BL
1	Compute the adjoint and inverse of the matrix $\begin{bmatrix} 2 & 3 & 4 \\ 4 & 3 & 1 \\ 1 & 2 & 4 \end{bmatrix}$ .	2	3
2	Solve the differential equation $(y^2 - 2xy)dx + (2xy - x^2)dy = 0$	5	5

### PART B

Note: Answer any FIVE questions

(5 x 5 = 25 Marks)

Q.No.	Question	CO	BL
3	Split into partial fractions $\frac{2x-3}{(x-2)(x-3)}$ .	1	1
4	Define Non – singular matrix. Is the matrix Non – singular matrix $\begin{bmatrix} 1 & 2 & 5 \\ 3 & 8 & 15 \\ -2 & 9 & -10 \end{bmatrix}$ .	2	2
5	Find the derivative of $e^x + x^n + 5 \log x$	6	2
6	Evaluate the integral $\int x^2 \cos x dx$ .	5	3
7	Find $L(5 \cos t + 2 \sin 3t)$ .	5	3
8	Find the Characteristic equation of the matrix $A = \begin{bmatrix} 1 & 2 & 2 \\ 0 & 2 & 1 \\ -1 & 2 & 2 \end{bmatrix}$ .	2	2
9	Show that $16 \log\left(\frac{16}{15}\right) + 12 \log\left(\frac{25}{24}\right) + 7 \log\left(\frac{81}{80}\right) + \log 2 = 1$	3	3

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