

Code No: F-7163/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy I - Semester (PCI) (Main & Backlog) Examination, March 2024**

**Subject: Remedial Biology**

**Time: 1 ½ Hours**

**Max. Marks: 35**

**Note: Answer any One Question from Part – A and any five questions from Part – B. Draw neat labelled diagram where ever necessary**

**PART – A (1 x 10 = 10 Marks)**

1. Write a descriptive note on root modification with neat labelled diagram.
2. Describe various components of blood with neat labelled diagram.

**PART – B (5 x 5 = 25 Marks)**

3. Write a note on nitrogen cycle and biological nitrogen fixation.
4. Write a note on Binomial method of nomenclature.
5. Differentiate between prokaryotic and eukaryotic cell.
6. Describe mechanism of breathing.
7. Write about the functions of hormones secreted by pituitary gland.
8. What are the steps involved in blood coagulations.
9. Define tissues and describe various types of plant tissues with their functions.

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**FACULTY OF PHARMACY****B. Pharmacy I Semester (PCI) (Main & Backlog) Examination, March 2024****Subject: Remedial Mathematics****Time: 1 ½ Hours****Max. Marks: 35****PART - A****Note: Answer any one questions.****(1 x 10 = 10 Marks)**

- Using cramer's rule solve the system of equations  $2x-y+3z=9$ ,  $x+y+z=6$  and  $x-y+z=2$ .
- Resolve into partial fractions  $\frac{(2x-1)}{(2x+3)(x+1)}$ .

**PART - B****Note: Answer any five questions.****(5 x 5 = 25 Marks)**

- If  $x=1+\log_a bc$ ,  $y=1+\log_b ca$  and  $z=1+\log_a ab$ , prove that  $xyz = xy + yz + zx$ .
- Find the equation of the line dividing the line segment joining (2,3) and (4,-5) in the ratio 2:3 and having slope  $-3/2$ .
- Find the derivative of  $\frac{\cos x}{x^2} \frac{e^x}{5x+4}$ .
- Find the Laplace transform of  $3t + 2 \cos t + 7t^3$ .
- Evaluate  $\int \frac{dx}{4x^2 - 49}$ .
- Prove that  $\frac{1}{\log_a bc} + \frac{1}{\log_b ab} = 1$ .
- Show that  $\lim_{x \rightarrow 2} \frac{x^2 + 5x + 6}{2x^2 - 3x} = 10$ .

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