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BH-BP-107
Bachelor Of Pharmacy
First Semester Examination, 2022
Paper-Seventh
(Remedial Mathematics)

Time Allowed: 1.5 Hours
Maximum Marks: 35

UNIT - I

Q. 1. (a) Write the partial fraction of the following function:

$$\frac{3x + 5}{2x^2 - 5x^2 - 3}$$

(b) What are real valued functions? Write their properties.

or

. (a) Find the partial fractions of the following function:

$$\frac{x}{(x+1)(x-1)(x+2)}$$

(b) Write the classification of real valued functions.

UNIT - II

Q. 2. Find the value of a, b, c and d if:

$$\begin{bmatrix} a & +b & 3 \\ 5 & +c & ab \end{bmatrix} = \begin{bmatrix} 6 & d \\ -1 & 8 \end{bmatrix}$$

Or

Without Expanding show that:

$$\begin{vmatrix} 41 & 1 & 5 \\ 79 & 7 & 9 \\ 29 & 5 & 3 \end{vmatrix} = 0$$

UNIT - III

Q. 3. (a) Differentiate $e^x Sin\,(x),\ \ w.r.t.\ \ x$

(b) Find the maximum and minimum values of the function

$$y = 2x^3 - 15x^2 + 36x + 11$$

Or

(a) Differentiate $log(sec\,x\ +\ tan\,x)$

(b) Differentiate $x\,Sin\,(x) + e^x$

UNIT - IV

Q. 4. (a) Find the equation of the line passing through the point (2, 3) and perpendicular to the line 4x + 3y = 10

(b) Find the slope of a straight line that passes through (-5,2) (6,7)

Or

(a) Find the equation of a straight line that passes through the point (–2, 3) and perpendicular to the straight line 2x + 4y + 7 = 0.

(b) Find the slope of a straight line that passes through (1,3) (4,3).

UNIT - V

Q. 5. (a) Evaluate $\int \sqrt{2x + 3x}\,dx$

(b) Find the Laplace transform of the function $t^3.e^{2t}$

Or

(a) Evaluate $\frac{dy}{dx} - y = xe^x$

(b) Find the Laplace transform of the function $f(t) = \ \ e^{-at}$