Sub Code: BP106T

B PHARM (SEM-I)

THEORY EXAMINATION 2021

REMEDIAL MATHEMATICS

Time:1.5Hours ***Total Marks: 35***

Note: Attempt all Sections.

SECTION A

Short Answer (Attempt any 5 questions) 5 x 5 = 25

a.Form the differential equation from the relation $y = ax+bx^2$

b.Solve the system of equations by Cramer's rule:

$x-y+z = 4;$

$2x+3y+3z = 5$

$3x-2y+z = 7$

c. Find the derivative of $x^2 \operatorname{cosec} x$.

d. The fourth term of a geometric progression exceeds the second term by 24 and the sum of second and third term is 6. Find the progression.

e.Solve $(x + 1)\, dy/dy + 1 = 2e–y$.

f.Two men on the same side of a building notice that the angles of elevation to the top of the building are 30^o and 60^o respectively. If the height of the building is known to be 80 m, find the distance between the two men.

g. Find the equation of straight line passing through (1,1) and perpendicular to the line passing through the points (3,5) and (-6,-2)

SECTION B

Long Answer (Attempt any 1 questions) 1 x 10 = 10

a. Solve the system of equation using matrix method

$2x – y + z + 3 = 0$

$3x – z + 8 = 0$

$2x + 6y – 2 = 0$

b Calculate mean and median

Salary (in Rs.)	90-110	110-130	130-150	150-170	170-190	190-210	210-230	230-250
No. of workers	55	60	70	100	65	30	20	10