

Q-2 (C) Evaluate :

[05]

(1) ${}_9P_2 + {}_6P_3 + 3! + {}_4C_0$

(2) ${}_{20}C_4 \div {}_{10}C_2$

(3) ${}_{1000}C_{998}$

Q-3 (A) Find the equation of a line passing through the points $(-1, 2)$ and $(5, -3)$. Also find slope and both the intercepts. [05]

Q-3 (B) Obtain the equation of a line passing through the intersection of the lines $x-4y+18=0$ and $x+y-12=0$ and having slope $1/5$. [05]

Q-3 (C) Obtain the equation of a line passing through the point $A(x_1, y_1)$ and having slope m . [05]

OR

Q-3 (A) Find the equation of a line passing through the intersection of the lines $x+2y-1=0$ and $2x+3y-4=0$ and making equal intercepts on both the axes. [05]

Q-3 (B) Find the equation of a line passing through the points (x_1, y_1) and (x_2, y_2) . [05]

Q-3 (C) If the distance between to points $A(-3, -2)$ and $B(a, 1)$ is $3\sqrt{10}$ then find the value of a . [05]

Q-4 (A) Write the meaning and uses of linear programming and solve the following linear programming problem by graphical method. [08]

Max $Z = 6x + 7y$

s.t.

$2x + 4y \leq 48$

$4x + 2y \leq 60$

$x, y \geq 0$

Q-4 (B) Solve the following transportation problem by "VAM" (vogie's Approximation method) for the following data. [07]

	D_1	D_2	D_3	D_4	Demand
O_1	5	8	3	6	30
O_2	4	5	7	4	50
O_3	6	2	4	5	20
Supply	20	40	30	10	

OR