

MATHEMATICS

ASSIGNMENT

2<sup>ND</sup> SEMESTER

Answer any one

- (a) Investigate for which values of  $\rho$  and  $\sigma$  of the system of equations

$$x + 2y + z = 1$$

$$2x + y + 3z = \sigma$$

$x + y\rho + 3z = \sigma + 1$  will have (i) a unique solution and (ii) no solution.

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OR,

- (b) Is the system of equations  $x + y - z = 6, 2x - 3y + z = 1, 2x - 4y + 2z = 1$  solvable?

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OR,

- (c) If  $\alpha$  be a multiple root of order three of the equation  $x^4 + bx^2 + cx + d = 0$ , then show that

$$\alpha = -\frac{8d}{3c}.$$

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