

JC BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY, YMCA, Faridabad  
First Sessional Exam-2024

Prog. Name: B.tech(ME)

Course Code: BSC201

Course Name: (Mathematics-III)

Semester: III

Max. Marks: 15

Time: 90 min.

All Questions are Compulsory.

Q 1) Solve the equation  $(x^2 - yz)p + (y^2 - zx)q = z^2 - xy$ . (3)

Q 2) Solve the equation  $2z + p^2 + qy + 2y^2 = 0$ . (4)

Q 3) Solve the equation  $\frac{\partial^2 z}{\partial x^2} + \frac{\partial^2 z}{\partial x \partial y} - 6 \frac{\partial^2 z}{\partial y^2} = \cos(2x + y)$ . (4)

Q 4) Compute the Bowley's coefficient of skewness for the following frequency distribution. (4)

| Marks           | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|-----------------|------|-------|-------|-------|-------|
| No. of students | 2    | 7     | 10    | 5     | 3     |