JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

M.Sc.-I Semester (Biotechnology)

COURSE CODE (CREDITS): 20MS1MA111 (2) MAX. MARKS: 15

COURSE NAME: Basics of Mathematics and Statistics

COURSE INSTRUCTOR: P K Pandey MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*

(b)Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

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1. Express the linear equation $14x - 2y + 18 = 0$ in the form $y = mx + c$. [2]

2. Find the points where line $5x - 3y + 15 = 0$ intersects the x-axis, and y-axis. [2]

3. Consider the linear equation $y = \frac{9}{5}x + 32$, where x and y respectively denote the temperatures in Celsius, and Fahrenheit. If $y = 95$ Fahrenheit, compute the temperature in Celsius. [3]

4. Find a quadratic equation whose roots are 2 and 3. [2]

5. Solve the quadratic equation $x^2 - 3x + 2 = 0$. [3]

6. For the matrix $A = \begin{bmatrix} 1 & -1 & 3 \\ 0 & -2 & 4 \\ 2 & -3 & 0 \end{bmatrix}$, find $A + A^T$ [3]

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