

Select the correct option from the following questions
2 x 10 = 20

- The rank of the quadratic form $5x_1^2 + 2x_1x_2 - 2x_2^2$ is
(a) 1 (b) 2 (c) 3 (d) 0
 - The associated matrix of the quadratic $3x^2 - y^2 + 5z^2$ is
(a) $\begin{pmatrix} 3 & 0 & 1 \\ 0 & -1 & 0 \\ 1 & 0 & 5 \end{pmatrix}$ (b) $\begin{pmatrix} 3 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 5 \end{pmatrix}$ (c) $\begin{pmatrix} 3 & 1 & 0 \\ 1 & 0 & 2 \\ 0 & 2 & 1 \end{pmatrix}$ (d) none of these
 - The characteristic equation of the matrix $A = \begin{pmatrix} 1 & 0 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 0 \end{pmatrix}$ is
(a) $\lambda^3 + \lambda^2 - \lambda - 1 = 0$ (b) $\lambda^3 - \lambda^2 - \lambda + 1 = 0$
(c) $\lambda^3 - \lambda + 2 = 0$ (d) $\lambda^3 - \lambda^2 + \lambda - 1 = 0$
 - The eigen values of the matrix $\begin{pmatrix} 2 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 5 \end{pmatrix}$ are
(a) 1, 2, 3 (b) -2, -3, -5 (c) 2, -3, 5
(d) 2, 3, 5
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- cumulative frequency curve of
(a) one type (b) two types (c) three types
(d) four types.
 - The mode of the following data
3, 9, 2, 8, 7, 1, 1, 9, 5, 6, 6, 2, 9, 7, 8, 4, 6 is
(a) 1 (b) 2 (c) 6 (d) none of these
 - If the A.M and Median of the following distribution are 10 and 9 respectively, the mode of the distribution is
(a) 7 (b) 0.5 (c) 9.5 (d) 1
 - The — symbol is used to represent input and output operation in a flow-chart
(a) circle (b) Parallelogram (c) Rectangle
(d) Diamond.
 - Algorithms and flow-charts are used for
(a) Better programming (b) Efficient Coding
(c) Easy testing and debugging
(d) All of these.
 - The most appropriate diagram to represent the five year plan outlook of India in different economic areas is
(a) Pie diagram (b) line chart (c) Bar chart
(d) none of these.