

MALINI KISHOR SANGHVI JUNIOR COLLEGE OF COMMERCE

F.Y.J.C SECOND UNIT TEST

ACADEMIC YEAR: 2022-2023

NAME:

DIVISION:

ROLL NUMBER:

SUBJECT: MATHS

DURATION: 1 HOUR

MARKS: 25

NOTE:

- 1) All questions are compulsory.
- 2) Answers to the questions are to be written in this paper itself

Examiner's Sign.

Marks Obtained

/25

Supervisor's Sign

Select and write the most appropriate answers from the given alternatives:

- (1) Find the range of the following data:
575, 609, 335, 280, 729, 544, 852, 427, 967, 250 is _____ (2)
(a) 700 (b) 967 (c) 250 (d) 717
- (2) If $Q.D = 5.5$ $Q_3 = 16$ $Q_1 =$ _____ (2)
(a) 5 (b) 6 (c) 1 (d) 0
- (3) $n = 18$ $\sum (x - \bar{x})^2 = 144$ $Var(x) =$ _____ (2)
(a) 4 (b) 5 (c) 8 (d) 1
- (4) If $n_1 = 100$ $n_2 = 150$ $\bar{x}_1 = 50$ combined mean $\bar{x}_c = 44$ then $\bar{x}_2 =$ _____ (2)
(a) 45 (b) 40 (c) 35 (d) 47

(5) If $\text{var}(x)=9$ $\text{var}(y)=4$ $n_1=10$ $n_2=10$ $d_1=-2$ $d_2=2$ combined S.D = _____ (2)
 (a) $\sqrt{10.5}$ (b) $\sqrt{7}$ (c) $\sqrt{5}$ (d) 7

(6) MEAN = 25 S.D=5 coefficient of variation = _____ (2)
 (a) 10% (b) 5% (c) 20% (d) 15%

(7) If $y = x + \sqrt{x}$ $\frac{dy}{dx} =$ _____ (2)
 (a) $x+1$ (b) $1+\sqrt{x}$ (c) $\frac{1}{\sqrt{x}}$ (d) $1 + \frac{1}{2\sqrt{x}}$

(8) If $y = (x^3)(\log x)$ $\frac{dy}{dx} =$ _____ (2)
 (a) $\frac{1}{x}$ (b) $3x^4$ (c) $3x^2 \log x$ (d) $3x^2 \log x + x^2$

(9) If $y = \frac{x}{x+3}$ $\frac{dy}{dx} =$ _____ (2)
 (a) $\frac{3}{(x+3)^2}$ (b) $(x+3)^2$ (c) $\frac{2}{(x+3)^2}$ (d) $\frac{1}{(x+3)^2}$

(10) If $D = \frac{27}{p}$ the Marginal demand when $p = 3$ is _____ (2)

- (a) 3 (b) -3 (c) 1 (d) 5

(11) The total cost $C = 5x^3 + 2x^2 + 4$ the average cost when $x = 4$ is _____ (2)

- (a) 89 (b) 85 (c) 75 (d) 70

(12) If $C = 5x^3 + 2x^2 + 4$ find the marginal cost when $x = 1$ (2)

- (a) 21 (b) 23 (c) 10 (d) 5

(13) $y = 5$ $\frac{dy}{dx} =$ _____ (1)

- (a) 0 (b) 5 (c) 1 (d) -1