

Government Polytechnic, Diglipur

Recruitment for the Post of Lecturer (Maths) on Contractual Basis

Date of Examination: 18/08/2026

Exam Time: 10:00 AM - 12:00 PM

Exam Slot: A1

ANSWER KEY

#	Question	Answer Key	Remarks
1	If $A = \begin{bmatrix} 2 & 3 \\ 1 & -2 \end{bmatrix}$ and $A^{-1} = aA$, then the value of a is A. 7 B. -7 C. $\frac{1}{7}$ D. $-\frac{1}{7}$	C	
2	The $\int \frac{\cos x}{(1+\sin x)(2+\sin x)} dx$ equals A. $\log(1 + \sin x)(2 + \sin x) + C$ B. $\log \left \frac{2+\sin x}{1+\sin x} \right + C$ C. $\log \left \frac{1+\sin x}{2+\sin x} \right + C$ D. None of these	C	
3	If $\log a = 0.5678$ then $\log \sqrt{a} =$ A. $\sqrt{0.5678}$ B. $0.5678 \div 2$ C. $0.5678 - 2$ D. 2.5678	B	
4	The inverse of the matrix by using elementary operations $\begin{bmatrix} 1 & 2 \\ 2 & -1 \end{bmatrix}$ is A. $\begin{bmatrix} \frac{1}{3} & \frac{2}{3} \\ \frac{2}{5} & -\frac{1}{3} \end{bmatrix}$ B. $\begin{bmatrix} \frac{1}{5} & \frac{2}{5} \\ \frac{2}{5} & -\frac{1}{5} \end{bmatrix}$ C. $\begin{bmatrix} \frac{1}{7} & \frac{2}{7} \\ \frac{2}{7} & -\frac{1}{7} \end{bmatrix}$ D. None of these.	B	
5	The square matrix $[a_{ij}]$ in which $a_{ij} = 0$ for $i \neq j$ and $a_{ij} = k(\text{constant})$ for $i = j$ is called a A. unit matrix B. null matrix C. diagonal matrix D. scalar matrix	D	
6	What is $\frac{\log_{10} 5}{\log_{10} 3}$ equal to? A. $\frac{5}{3}$ B. $\log_{10} (5-3)$ C. $\log_{10} 5 - \log_{10} 3$ D. $\log_3 5$	D	
7	The number of all possible matrices of order 3x3 with each entry 0 or 1 is A. 27 B. 18 C. 81 D. 512	D	

8	A 3×3 matrix $A = [a_{ij}]$ whose elements are given by $a_{ij} = (i + j)^2$ is A. $\begin{bmatrix} 4 & 9 & 16 \\ 9 & 16 & 25 \\ 16 & 25 & 36 \end{bmatrix}$ B. $\begin{bmatrix} 4 & 9 & 16 \\ 9 & 16 & 25 \\ 16 & 25 & 26 \end{bmatrix}$ C. $\begin{bmatrix} 4 & 9 & 16 \\ 9 & 16 & 25 \\ 16 & 25 & 36 \end{bmatrix}$ D. None of these	C	
9	Solution of system of linear equations $2x + 5y = 1, 3x + 2y = 7$ is A. $x = 3, y = -3$ B. $x = 3, y = -1$ C. $x = -1, y = 3$ D. None of these	B	
10	The value of the determinant $\begin{vmatrix} 2 & 3 & 4 \\ -5 & 6 & -10 \\ 1 & 7 & 2 \end{vmatrix}$ is A. -440 B. 0 C. 328 D. 488	B	
11	The $\int \frac{x}{(x-1)(x-2)} dx$ equals A. $\log \left \frac{(x-1)^2}{x-2} \right + C$ B. $\log \left \frac{(x-2)^2}{x-1} \right + C$ C. $\log \left \left(\frac{x-1}{x-2} \right)^2 \right + C$ D. $\log (x-1)(x-2) + C$	B	
12	If $A = \begin{bmatrix} 1 & -1 & 1 \\ 0 & 2 & 3 \\ 2 & 1 & 0 \end{bmatrix}$ and $B = (\text{adj } A)$, and $C = 5A$, then $\frac{ \text{adj } B }{ C }$ A. 5 B. 25 C. -1 D. 1	D	
13	The $\int \frac{dx}{x(x^2+1)}$ equals A. $\log x - \frac{1}{2} \log x^2+1 + C$ B. $\log x + \frac{1}{2} \log x^2+1 + C$ C. $-\log x + \frac{1}{2} \log x^2+1 + C$ D. $\frac{1}{2} \log x + \log x^2+1 + C$	A	
14	If $A = \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$, then $A + A' = I$, if the value of α is A. $\frac{\pi}{6}$ B. $\frac{\pi}{3}$ C. π D. $\frac{3\pi}{2}$	B	
15	Matrices A and B will be inverse of each other only if A. $AB=BA$ B. $AB=BA=0$ C. $AB=0, BA=I$ D. $AB=BA=I$	D	

16	Which of the given values of x and y make the following pair of matrices equal? $\begin{bmatrix} 3x+7 & 5 \\ y+1 & 2-3x \end{bmatrix} = \begin{bmatrix} 0 & y-2 \\ 8 & 4 \end{bmatrix}$ A. $x = \frac{-1}{3}, y = 7$ B. $x = \frac{-1}{3}, y = \frac{-2}{3}$ C. $y = 7, x = \frac{-2}{3}$ D. Not possible to find	D	
17	If $A = \begin{bmatrix} x & y^3 \\ 2 & 0 \end{bmatrix} = \begin{bmatrix} 1 & 8 \\ 2 & 0 \end{bmatrix}$, then $\begin{bmatrix} x & y \\ 2 & 0 \end{bmatrix}^{-1} =$ A. $\begin{bmatrix} 0 & -2 \\ -2 & 1 \end{bmatrix}$ B. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ C. $\begin{bmatrix} 0 & -8 \\ -2 & 1 \end{bmatrix}$ D. $\begin{bmatrix} 0 & \frac{1}{2} \\ \frac{1}{2} & \frac{-1}{4} \end{bmatrix}$	D	
18	If $A = \begin{bmatrix} 2 & 4 & 1 \\ 5 & -6 & 2 \\ 2 & 1 & 5 \end{bmatrix}$, the trace of A is A. 8 B. 1 C. -5 D. 3	B	
19	The $\int \frac{dx}{(x^2-9)}$ equals _____ A. $\frac{1}{6} \ln \left \frac{x-3}{x+3} \right + C$ B. $\frac{1}{6} \ln \left \frac{x+3}{x-3} \right + C$ C. $\ln \left \frac{x+3}{x-3} \right + C$ D. $\frac{1}{3} \ln \left \frac{x-3}{x+3} \right + C$	A	
20	If $A = \begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$, then $A^3 + 3A^2 - 4A + I$ is equal to A. $\begin{bmatrix} -14 & -51 \\ -17 & -14 \end{bmatrix}$ B. $\begin{bmatrix} -14 & 51 \\ -17 & -14 \end{bmatrix}$ C. $\begin{bmatrix} -1 & -1 \\ -1 & 0 \end{bmatrix}$ D. $\begin{bmatrix} 1 & 1 \\ 1 & 0 \end{bmatrix}$	B	
21	The value of $3 \tan^{-1} \frac{1}{2} + 2 \tan^{-1} \frac{1}{5} + \sin^{-1} \frac{142}{65\sqrt{5}}$ is equal to A. $\frac{\pi}{4}$ B. $\frac{\pi}{2}$ C. π D. None of these	C	
22	The value of $\frac{\cos(\pi+x)\cos(-x)}{\sin(\pi-x)\cos(\frac{\pi}{2}+x)}$ is A. $\sin^2 x$ B. $\cot^2 x$ C. $\tan^2 x$ D. $\cos^2 x$	B	

23	If $0 < x < \frac{\pi}{4}$, then the value of $\sqrt{1 - \sin 2x}$ is A. $\cos x - \sin x$ B. $\cos x + \sin x$ C. $\sin x - \cos x$ D. $(\sin x - \cos x)^2$	A	
24	The value of $\sin(\tan^{-1}x)$, $x < 1$ is equal to A. $\frac{x}{\sqrt{1-x^2}}$ B. $\frac{1}{\sqrt{1-x^2}}$ C. $\frac{1}{\sqrt{1+x^2}}$ D. $\frac{x}{\sqrt{1+x^2}}$	D	
25	If $\sin^{-1}x + \cot^{-1}\left(\frac{1}{2}\right) = \frac{\pi}{2}$, then x is equal to A. 0 B. $\frac{1}{\sqrt{5}}$ C. $\frac{2}{\sqrt{5}}$ D. $\frac{\sqrt{3}}{2}$	B	
26	Which is correct? A. $\sin 3x = 3\sin x - 4\sin^3 x$ B. $\sin 3x = 4\sin x - 3\sin^3 x$ C. $\sin 3x = 3\sin^3 x - 4\sin x$ D. $\sin 3x = 4\sin^3 x - 3\sin x$	A	
27	The value of $\sin(-690^\circ)\cos(-300^\circ) + \cos(-750^\circ)\sin(-240^\circ)$ A. 2 B. -1 C. 1 D. 0	C	
28	The value of $\cos^{-1}\left(\cos\frac{7\pi}{6}\right)$ is equal to A. $\frac{7\pi}{6}$ B. $\frac{5\pi}{6}$ C. $\frac{\pi}{3}$ D. $\frac{\pi}{6}$	B	
29	The value of $\tan^{-1}\sqrt{3} - \sec^{-1}(-2)$ is equal to A. π B. $-\frac{\pi}{3}$ C. $\frac{\pi}{3}$ D. $\frac{2\pi}{3}$	B	
30	The principal value branch of $\sec^{-1}x$ is A. $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right] - \{0\}$ B. $(0, \pi) - \left\{\frac{\pi}{2}\right\}$ C. $(0, \pi)$ D. $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$	B	

31	If $\sin^{-1}x = y$, then A. $0 \leq y \leq \pi$ B. $\frac{-\pi}{2} \leq y \leq \frac{\pi}{2}$ C. $0 < y < \pi$ D. $\frac{-\pi}{2} < y < \frac{\pi}{2}$	B	
32	The value of $\frac{\cos 7x + \cos 5x}{\sin 7x - \sin 5x}$ is A. $-\cot x$ B. $\tan x$ C. $-\tan x$ D. $\cot x$	D	
33	If $\tan \theta = \frac{1}{2}$ and $\tan \phi = \frac{1}{3}$, then $\tan(\theta + \phi) =$ A. 45° B. 1 C. 0 D. 135°	B	
34	The value of $\cos 1050^\circ$ is A. $-\sqrt{3}$ B. $\frac{2}{\sqrt{3}}$ C. $\frac{\sqrt{3}}{2}$ D. $\frac{1}{\sqrt{3}}$	C	
35	If $f(x) = \cos^2 x + 1$, then A. $2 \leq f(x) \leq 1$ B. $0 < f(x) < 1$ C. $0 \leq f(x) \leq 1$ D. $1 \leq f(x) \leq 2$	D	
36	If $\sin x = 0$ then $x =$ A. $n\pi$ B. $(2n + 1)\pi/2$ C. $(n + 1)\pi$ D. $n\pi/2$	A	
37	If $\cos x = 1/2$, then $\cos 3x =$ _____ A. 0 B. -1 C. $1/\sqrt{2}$ D. 1	B	
38	The solutions of a trigonometric equation for which _____ are called principal solutions. A. $0 < x < 2\pi$ B. $0 \leq x < \pi$ C. $0 \leq x < 2\pi$ D. $0 \leq x < n\pi$	C	
39	The value of $\tan (19\pi/6)$ is equal to a) $\sqrt{3}$ b) $-1/\sqrt{3}$ c) $-\sqrt{3}$ d) $1/\sqrt{3}$	D	

40	Find the principal solutions of the equation $\tan x = -\sqrt{3}$. A. $\pi/6, 5\pi/6$ B. $\pi/3, 5\pi/3$ C. $\pi/3, 2\pi/3$ D. $2\pi/3, 5\pi/3$	D	
41	The slope of the line $4x - 2y + 7 = 0$ is (A) -2 (B) $-\frac{1}{2}$ (C) 2 (D) $\frac{1}{2}$	C	
42	The distance from the point $(1, 2)$ to the line $5x + 12y - 3 = 0$ is (A) 1 unit (B) 2 units (C) 3 units (D) 5 units	B	
43	A train of length 560 m moves with a uniform speed of 12.5 m/s. If time x is measured in seconds and the distance y of the last coach from the entry point is measured in meters, the equation of its motion is (A) $y = 12.5x + 560$ (B) $y = 12.5x - 560$ (C) $y = 560x - 12.5$ (D) $y = -12.5x - 560$	B	
44	In the general equation $ax + by + c = 0$, the slope of the line, when $b \neq 0$, is (A) $\frac{a}{b}$ (B) $-\frac{a}{b}$ (C) $\frac{b}{a}$ (D) $-\frac{b}{a}$	B	
45	The seventh term of an arithmetic progression is 30 and the tenth term is 21. The common difference of the A.P. is (A) 3 (B) -3 (C) 7 (D) -7	B	
46	A line passes through $(2, 3)$ and is parallel to the x -axis. Its equation is (A) $x = 2$ (B) $y = 2$ (C) $x = 3$ (D) $y = 3$	D	

47	If a line makes an angle 90° with the positive x-axis, its slope is (A) 0 (B) 1 (C) -1 (D) Undefined	D	
48	In the equation $\frac{x}{a} + \frac{y}{b} = 1$, the values a and b represent respectively (A) Slope and y-intercept (B) x-intercept and y-intercept (C) y-intercept and slope (D) Two slopes	B	
49	The perpendicular distance from $(1, 2)$ to the line $3x + 4y - 11 = 0$ is (A) 0 (B) 1 (C) 2 (D) 5	A	
50	Which equation represents the line joining $(0, 2)$ and $(2, 6)$? (A) $y = x + 2$ (B) $y = 2x + 2$ (C) $y = 2x - 2$ (D) $y = 3x + 2$	B	
51	Which pair of lines is parallel? (A) $2x + 3y + 1 = 0$ and $4x + 6y - 5 = 0$ (B) $2x + 3y + 1 = 0$ and $3x - 2y + 5 = 0$ (C) $x + 2y = 0$ and $2x - y = 0$ (D) $3x - y = 0$ and $x + 3y = 0$	A	
52	A line cuts an intercept of 5 units on the negative y-axis and is inclined at 150° to the positive x-axis. Its equation is (A) $y = -\frac{x}{\sqrt{3}} - 5$ (B) $y = \frac{x}{\sqrt{3}} - 5$ (C) $y = -\sqrt{3}x - 5$ (D) $y = -\frac{x}{\sqrt{3}} + 5$	A	
53	Consider the lines $l_1 : 3x + 4y = 5, \quad l_2 : 4x - 3y = 1,$ $l_3 : 4x + 3y = 7, \quad l_4 : 3x + 4y = 2.$ Which pair of lines is perpendicular? (A) l_1 and l_2 (B) l_1 and l_4 (C) l_2 and l_3 (D) l_3 and l_4	A	

54	The equation of the line parallel to $3x + 4y - 7 = 0$ and passing through $(1, 2)$ is (A) $3x + 4y - 11 = 0$ (B) $3x + 4y + 11 = 0$ (C) $4x + 3y - 10 = 0$ (D) $3x - 4y + 5 = 0$	A	
55	The equation of a straight line is $2x + 3y - 6 = 0$. The point where the line cuts the y-axis is (A) $(3, 0)$ (B) $(0, 2)$ (C) $(2, 0)$ (D) $(0, 3)$	B	
56	The line r passes through $(-2, 2)$ and $(5, 8)$, and the line s passes through $(-8, 7)$ and $(-2, 0)$. Which statement is correct? (A) r and s are parallel (B) r and s are perpendicular (C) r and s have the same slope (D) r is a vertical line	B	
57	If two points used in the two-point form have the same x-coordinate, the resulting line is (A) Horizontal (B) Vertical (C) Parallel to the x-axis (D) Passing through the origin	B	
58	Two lines have slopes 2 and $-\frac{1}{2}$. The angle between the two lines is (A) 30° (B) 45° (C) 60° (D) 90°	D	
59	The equation of the line passing through the point $(2, 3)$ with slope 4 is (A) $y - 2 = 4(x - 3)$ (B) $y - 3 = 4(x - 2)$ (C) $y + 3 = 4(x + 2)$ (D) $y - 3 = 2(x - 4)$	B	
60	Find the distance between the points $(5, 4)$ and $(2, 0)$. (A) 3 units (B) 4 units (C) 5 units (D) 7 units	C	
61	For the curve $y = x^2$, the slope of the normal at $x = 1$ is (A) 2 (B) -2 (C) $\frac{1}{2}$ (D) $-\frac{1}{2}$	D	

62	The value of $\int x^2 dx$ is (A) $x^3 + C$ (B) $\frac{x^3}{3} + C$ (C) $\frac{x^2}{2} + C$ (D) $2x + C$	B	
63	If $f'(x)$ changes sign from positive to negative at $x = c$, then f has (A) a local minimum at c (B) a local maximum at c (C) no extremum at c (D) a point of discontinuity at c	B	
64	If $y = \sin(x^2)$, then $\frac{dy}{dx}$ is (A) $\cos(x^2)$ (B) $2x \cos(x^2)$ (C) $\sin(2x)$ (D) $2x \sin(x^2)$	B	
65	Evaluate $\lim_{n \rightarrow \infty} \left[\frac{n}{n^2} + \frac{n}{n^2 + 1^2} + \frac{n}{n^2 + 2^2} + \cdots + \frac{n}{n^2 + (n-1)^2} \right].$ (A) $\frac{\pi}{2}$ (B) $\frac{\pi}{4}$ (C) 1 (D) $\frac{\pi}{3}$	B	
66	Evaluate $\lim_{x \rightarrow 0} \frac{xe^x - \log(1+x)}{x^2}$. (A) 1 (B) $\frac{1}{2}$ (C) $\frac{3}{2}$ (D) 2	C	
67	If $y = (x^2 + 1)^5$, then $\frac{dy}{dx}$ is (A) $5(x^2 + 1)^4$ (B) $10x(x^2 + 1)^4$ (C) $2x(x^2 + 1)^5$ (D) $10(x^2 + 1)^5$	B	
68	The derivative of $y = \log x$ is (A) x (B) $\frac{1}{x}$ (C) $\log x$ (D) e^x	B	
69	The domain of $f(x) = \frac{1}{x-2}$ is (A) $\mathbb{R}$ (B) $\mathbb{R} \setminus \{0\}$ (C) $\mathbb{R} \setminus \{2\}$ (D) $\mathbb{R} \setminus \{-2\}$	C	

70	The area under the curve $y = x$ between $x = 0$ and $x = 2$ is (A) 1 (B) 2 (C) 3 (D) 4	B	
71	Consider $f(x) = \begin{cases} x^2 \sin\left(\frac{1}{x}\right), & x \neq 0, \\ 0, & x = 0. \end{cases}$ Which of the following is correct? (A) f is not continuous at 0 (B) f is continuous but not differentiable at 0 (C) f is differentiable at 0, but f' is not continuous at 0 (D) Both f and f' are continuous at 0	C	
72	Evaluate $\lim_{x \rightarrow 0} \frac{1 - \cos x}{x^2}$. (A) 0 (B) $\frac{1}{2}$ (C) 1 (D) 2	B	
73	The value of $\int \cos x \, dx$ is (A) $-\sin x + C$ (B) $\sin x + C$ (C) $\cos x + C$ (D) $-\cos x + C$	B	
74	If $y = x^2$, then the slope of the tangent at $x = 2$ is (A) 2 (B) 4 (C) 6 (D) 8	B	
75	If $f'(c) = 0$, then c is called a (A) point of discontinuity (B) stationary point (C) point outside the domain (D) point where f is undefined	B	
76	Using integration by parts, evaluate $\int x e^x \, dx$. (A) $e^x(x + 1) + C$ (B) $x e^x + C$ (C) $e^x(x - 1) + C$ (D) $x^2 e^x + C$	C	
77	If $y = x^x, x > 0$, then $\frac{dy}{dx}$ is (A) x^x (B) x^{x-1} (C) $x^x(1 + \ln x)$ (D) $x^x \ln x$	C	

78	The function $f(x) = x^2$ has at $x = 0$ (A) a local maximum (B) a local minimum (C) neither a maximum nor a minimum (D) a point of discontinuity	B	
79	For a Cartesian curve, if $y_1 = \frac{dy}{dx}$, $y_2 = \frac{d^2y}{dx^2}$, the radius of curvature is (A) $\frac{1 + y_1^2}{y_2}$ (B) $\frac{(1 + y_1^2)^{3/2}}{y_2}$ (C) $\frac{y_2}{(1 + y_1^2)^{3/2}}$ (D) $\frac{(1 + y_1^2)^2}{y_2}$	B	
80	If $x = a \cos t$, $y = a \sin t$, then $\frac{dy}{dx}$ is (A) $\tan t$ (B) $-\tan t$ (C) $\cot t$ (D) $-\cot t$	D	
81	If the variance of a dataset is 25, its standard deviation is (A) 5 (B) 10 (C) 25 (D) 125	A	
82	The coefficient of range for the data 2, 6, 10, 14 is (A) $\frac{3}{4}$ (B) $\frac{1}{2}$ (C) $\frac{2}{3}$ (D) $\frac{3}{5}$	A	
83	The marks obtained by a student in four subjects are 50, 60, 70, and 80 with weights 1, 2, 3, and 4 respectively. The weighted mean is (A) 65 (B) 70 (C) 75 (D) 80	B	
84	The mean deviation about the mean for the observations 5, 10, 15 is (A) 0 (B) 5 (C) 10 (D) 3.33	D	
85	The sum of squares of deviations from the mean for 10 observations is 250. The variance is (A) 5 (B) 10 (C) 25 (D) 125	C	

86	For the following frequency distribution, find the mean deviation about the mean. <table border="1"> <tr> <td>x</td><td>2</td><td>4</td><td>6</td></tr> <tr> <td>f</td><td>1</td><td>2</td><td>1</td></tr> </table> (A) 0 (B) 1 (C) 2 (D) 4	x	2	4	6	f	1	2	1	B	
x	2	4	6								
f	1	2	1								
87	The standard deviation of n observations is (A) $\frac{\sum x_i - \bar{x} }{n}$ (B) $\frac{\sum (x_i - \bar{x})}{n}$ (C) $\sqrt{\frac{\sum (x_i - \bar{x})^2}{n}}$ (D) $\frac{\sum (x_i - \bar{x})^2}{n}$	C									
88	Consider the following grouped data. <table border="1"> <tr> <td>Class Interval</td><td>10–20</td><td>20–30</td><td>30–40</td></tr> <tr> <td>Frequency</td><td>1</td><td>3</td><td>4</td></tr> </table> Using class marks, the mean deviation about the mean is (A) 2.5 (B) 6.25 (C) 7.5 (D) 6.75	Class Interval	10–20	20–30	30–40	Frequency	1	3	4	B	
Class Interval	10–20	20–30	30–40								
Frequency	1	3	4								
89	The coefficient of variation is calculated as (A) $\frac{\text{SD}}{\text{Mean}} \times 100$ (B) $\frac{\text{Mean}}{\text{SD}} \times 100$ (C) $\frac{\text{Variance}}{\text{Mean}} \times 100$ (D) $\frac{\text{Range}}{\text{Mean}} \times 100$	A									
90	If each observation in a data set is multiplied by 3, then the new variance is (A) $3\sigma^2$ (B) $6\sigma^2$ (C) $9\sigma^2$ (D) $\sigma^2 + 3$	C									
91	Data A has mean 50 and standard deviation 5. Data B has mean 40 and standard deviation 8. Which data set is more consistent? (A) A (B) B (C) Both are equally consistent (D) Cannot be compared	A									

92	The coefficient of variation is a (A) Relative measure of dispersion (B) Measure of central tendency (C) Measure of range only (D) Frequency	A									
93	Consider the following grouped data. <table border="1"> <tr> <td>Class Interval</td><td>0–10</td><td>10–20</td><td>20–30</td></tr> <tr> <td>Frequency</td><td>1</td><td>2</td><td>2</td></tr> </table> Using class marks, the standard deviation is (A) 5 (B) $2\sqrt{14}$ (C) 10 (D) $14\sqrt{2}$	Class Interval	0–10	10–20	20–30	Frequency	1	2	2	B	
Class Interval	0–10	10–20	20–30								
Frequency	1	2	2								
94	If the variance of a data set is zero, then (A) All observations are equal (B) All observations are different (C) The mean is zero (D) The range is always one	A									
95	If L is the largest value and S is the smallest value, the coefficient of range is (A) $\frac{L+S}{L-S}$ (B) $\frac{L-S}{L+S}$ (C) $L-S$ (D) $\frac{L}{S}$	B									
96	For a discrete frequency distribution, the mean deviation about the mean is (A) $\frac{\sum f x-\bar{x} }{\sum f}$ (B) $\frac{\sum fx}{\sum f}$ (C) $\frac{\sum f(x-\bar{x})^2}{\sum f}$ (D) $\sum f x-\bar{x}$	A									
97	For the following frequency distribution, the mean deviation about the mean is <table border="1"> <tr> <td>x</td><td>1</td><td>2</td><td>3</td></tr> <tr> <td>f</td><td>1</td><td>1</td><td>2</td></tr> </table> (A) 0.5 (B) 0.75 (C) 1.5 (D) 2	x	1	2	3	f	1	1	2	B	
x	1	2	3								
f	1	1	2								
98	The class intervals of a grouped data are 400–450, 450–500, 500–550. The range is (A) 50 (B) 100 (C) 150 (D) 200	C									

99	In calculating a weighted mean, the weights represent (A) The deviations from the mean (B) The relative importance of the observations (C) The range of the observations (D) The variance of the observations	B	
100	The mean deviation about the mean of 1, 3, 5, 7 is (A) 1 (B) 2 (C) 3 (D) 4	B	