Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER-C to D Bridge Course EXAMINATION –Summer- 2019

Subject Code:C320003 Date: 03-06-2019

Subject Name: ADVANCED MATHEMATICS(GROUP-2)

Time:10:30 AM to 12:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make Suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Use of programmable & Communication aids are strictly prohibited.**
5. **Use of only simple calculator is permitted in Mathematics.**
6. **English version is authentic.**

No. Question Text and Option. પ્રશ્ન અને વિકલ્પો.

If A(5,-1) and B(-3,5) then co-ordinates of midpoint of $\overline{AB}$ are _____ .

1. A. (1,2) B. (-1,2)
   C. (1,3) D. $(1,-3)$

A (5,-1) અને B (-3, 5) માટે $\overline{AB}$ ના મધ્યબિંદુનાં યામ _____ થાશે.

૧. A. (1,2) B. (-1,2)
   C. (1,3) D. $(1,-3)$

Distance between two points (4,3) and (1,2) is _____ .

2. A. $\sqrt{12}$ B. $\sqrt{11}$
   C. $\sqrt{10}$ D. $\sqrt{15}$

બિંદુઓ (4,3) અને (1,2) વચ્ચેનું અંતર _____ થાય.

૨. A. $\sqrt{12}$ B. $\sqrt{11}$
   C. $\sqrt{10}$ D. $\sqrt{15}$

If A(3,5), B(-1,3) and C (2,2) are vertices of triangle then _____ .

3. A. m∠A = 90° B. m∠B = 90°
   C. m∠C = 90 D. None of above

જો બિંદુઓ A(3,5), B(-1,3) અને C (2,2) ત્રીકોણનાં શિરોબિંદુઓ હોય તો _____ .

૩. A. m∠A = 90° B. m∠B = 90°
   C. m∠C = 90 D. None of above

Midpoint of line segment $\overline{AB}$ is M(5,-2) and A(2,-7) then coordinate of B is ___ .

4. A. (0,8) B. (8,3)
   C. (0,3) D. None of this

જો રેખાખંડ $\overline{AB}$ ના મધ્યબિંદુનાં યામ M(5,-2) હોય અને A(2,-7) હોય તો B નાં યામ _____ થાય.

૪. A. (0,8) B. (8,3)
   C. (0,3) D. None of this

Equation of line having slop -1 and passing from the point (2,1) is _____ .

5. A. $x+y-3=0$ B. $x-y+3=0$
   C. $x-y-3=0$ D. $x+y+3=0$

બિંદુ (2,1) માંથી પસાર થતી અને -1 ઢાળ વાળી રેખાનું સમીકરણ _____ છેP

૫. A. $x+y-3=0$ B. $x-y+3=0$
   C. $x-y-3=0$ D. $x+y+3=0$

X-intercept of the line $3x+2y-6=0$ is _____ .

6. A. 2 B. 3
   C. -6 D. -2

૬. રેખા $3x+2y-6=0$ નો Xvઅંતoખંડ_____ થાય.
   A. 2 B. 3

C. -6 D. -2

If two lines $5x + 2y - 3 = 0$ and $kx + 2y + 7 = 0$ are parallel if k= _____ .

7. A. 2 B. -7
C. 5 D. -3

જો બે રેખાઓ $5x + 2y - 3 = 0$ અને $kx + 2y + 7 = 0$ સમાંતર હોય તો k = _____ .

૭. A. 2 B. -7
C. 5 D. -3

Perpendicular distance between two lines $12x - 5y + 5 = 0$ and $12x - 5y - 8 = 0$ is _____ .

8. A. 2 B. -2
C. 1 D. -1

બે રેખાઓ $12x - 5y + 5 = 0$ અને $12x - 5y - 8 = 0$ વચ્ચેનું લંબન્તર _____ છે.

૮. A. 2 B. -2
C. 1 D. -1

Equation of the line passing through two point A (2, 3) and B (7, 5) is___ .P

9. A. $2x + 5y + 11 = 0$ B. $2x - 5y + 11 = 0$
C. $2x + 5y - 11 = 0$ D. $2x - 5y - 11 = 0$

A (2, 3) અને B (7, 5) માંથી પસાર થતી રેખાનું સમીકરણ _____ છે.

૯. A. $2x + 5y + 11 = 0$ B. $2x - 5y + 11 = 0$
C. $2x + 5y - 11 = 0$ D. $2x - 5y - 11 = 0$

Slope of the line passing through the point (8,5) and (1,-2) is _____.

10. A. -7 B. 7
C. 1 D. -1

બિંદુઓ (8,5) અને (1,-2) માંથી પસાર થતી રેખાનો ઢાળ _____ છે.

૧૦. A. -7 B. 7
C. 1 D. -1

Equation of a circle having centre (1,2) and radius 3 is _____ .

11. A. $(x+1)^2 + (y+2)^2 = 3$ B. $(x-1)^2 + (y-2)^2 = 3$
C. $(x+1)^2 + (y+2)^2 = 9$ D. $(x-1)^2 + (y-2)^2 = 9$

કેન્દ્ર (1,2) અને ત્રિજ્યા 3 વાળા વર્તુળનું સમીકરણ _____ છે.

૧૧. A. $(x+1)^2 + (y+2)^2 = 3$ B. $(x-1)^2 + (y-2)^2 = 3$
C. $(x+1)^2 + (y+2)^2 = 9$ D. $(x-1)^2 + (y-2)^2 = 9$

If equation of circle is $x^2 + y^2 - 4x + 6y - 7 = 0$ then centre of circle is =__.

12. A. (2,3) B. (-2,3)
C. $(2, -3)$ D. $(-2, -3)$

જો $x^2 + y^2 - 4x + 6y - 7 = 0$ વર્તુળનું સમીકરણ હોય તો વર્તુળનું કેન્દ્ર _____ છે.

૧૨. A. (2,3) B. (-2,3)
C. $(2, -3)$ D. $(-2, -3)$

Equation of the normal circle $x^2 + y^2 = r^2$ at the point (x_1, y_1) is _____ .

13. A. $x y_1 - x_1 y = 0$ B. $x_1 y - x y_1 = 0$
C. $x_1 y + x y_1 = 0$ D. $x_1 y - x y_1 + c = 0$

વર્તુળ $x^2 + y^2 = r^2$ નાં બિંદુ (x_1, y_1) આગળ અભિલંબનું સમીકરણ _____ થાય.

૧૩. A. $x y_1 - x_1 y = 0$ B. $x_1 y - x y_1 = 0$
C. $x_1 y + x y_1 = 0$ D. $x_1 y - x y_1 + c = 0$

Radius of the circle $x^2 + y^2 - 2x + 4y - 1 = 0$ is _____ .

14. A. 6 B. $\sqrt{6}$
C. 2 D. $\sqrt{7}$

વર્તુળ $x^2 + y^2 - 2x + 4y - 1 = 0$ ની ત્રિજ્યા _____ થાય.

૧૪. A. 6 B. $\sqrt{6}$
C. 2 D. $\sqrt{7}$

15. If $f(x) = 2^x - \log_2 x$, then $f(2) =$ _____.

A. 2 B. –2
C. 3 D. –3

જો $f(x) = 2^x - \log_2 x$, હોય તો $f(2)$ = _____.

૧૫. A. 2 B. –2
C. 3 D. –3

If $f(x) = logx\ then\ f(x) + f(y) =$ .....

16. A. $f(x+y)$ B. $f(x-y)$
C. $f(x \cdot y)$ D. $f\left(\frac{x}{y}\right)$

જો $f(x) = logx$ હોય તો $f(x) + f(y) =$ .....

૧૬. A. $f(x+y)$ B. $f(x-y)$
C. $f(x \cdot y)$ D. $f\left(\frac{x}{y}\right)$

If $f(x) = \frac{x-1}{x+1}$ then $f\left(\frac{1}{x}\right)$ =_____ .

17. A. $-f(x)$ B. $f(x)$
C. 1 D. 0

જો $f(x) = \frac{x-1}{x+1}$ હોય તો $f\left(\frac{1}{x}\right)$ =_____ .

૧૭. A. $-f(x)$ B. $f(x)$
C. 1 D. 0

If $f(x) = \cos x$ then $f\left(\frac{3\pi}{2} - x\right)$ = _____ .

18. A. -sin x B. sin x
C. cos x D. –cos x

જો $f(x) = \cos x$ હોય તો $f\left(\frac{3\pi}{2} - x\right)$ = _____ .

૧૮. A. -sin x B. sin x
C. cos x D. –cos x

If $f(x) = log_2 x\ then\ f(4) =$ _____ .

19. A. 1 B. 2
C. 0 D. $\frac{1}{2}$

જો $f(x) = log_2 x$ હોય તો $f(4)$ = _____ .

૧૯. A. 1 B. 2
C. 0 D. $\frac{1}{2}$

$\lim_{x \to 0} (1+x)^{\frac{1}{x}}$ = _____.

20. A. 1 B. –1
C. $\frac{1}{e}$ D. e

$\lim_{x \to 0} (1+x)^{\frac{1}{x}}$ = _____.

૨૦. A. 1 B. –1
C. $\frac{1}{e}$ D. e

$\lim_{x \to 0} \frac{5^x - 1}{x}$ = _____.

21. A. 1 B. $\log_e 5$
C. $\log_5 e$ D. 5

$\lim_{x \to 0} \frac{5^x - 1}{x}$ = _____.

૨૧. A. 1 B. $\log_e 5$
C. $\log_5 e$ D. 5

$\lim_{x \to 0} \frac{tan\ 3x}{x}$ = _____.

22. A. 3 B. $\frac{1}{3}$

C. –3 D. $-\frac{1}{3}$

$\lim_{x \to 0} \frac{tan\ 3x}{x}$ = _____.

২২. A. 3 B. $\frac{1}{3}$

C. –3 D. $-\frac{1}{3}$

$\lim_{x \to 0} \frac{2^x + \sin x - 1}{x}$ = _____.

23. A. $\log_e 2 + 1$ B. $\log_2 e + 1$

C. 1 D. 0

$\lim_{x \to 0} \frac{2^x + \sin x - 1}{x}$ = _____.

২৩. A. $\log_e 2 + 1$ B. $\log_2 e + 1$

C. 1 D. 0

$\lim_{x \to 0} \frac{\tan 5x}{\sin 3x}$ = _____ .

24. A. $\frac{3}{5}$ B. $\frac{5}{3}$

C. 1 D. None of this

$\lim_{x \to 0} \frac{\tan 5x}{\sin 3x}$ = _____ .

২৪. A. $\frac{3}{5}$ B. $\frac{5}{3}$

C. 1 D. None of this

$\lim_{x \to 3} \frac{x^2 - 5x + 6}{x - 3}$ = _____.

25. A. 1 B. 0

C. 3 D. 2

$\lim_{x \to 3} \frac{x^2 - 5x + 6}{x - 3}$ = _____.

২৫. A. 1 B. 0

C. 3 D. 2

$\lim_{n \to \infty} \frac{10n^2 + 2n - 1}{5n^2 - 3n + 4}$ = _____ .

26. A. ∞ B. 0

C. 10 D. 2

$\lim_{n \to \infty} \frac{10n^2 + 2n - 1}{5n^2 - 3n + 4}$ = _____ .

২৬. A. ∞ B. 0

C. 10 D. 2

$\lim_{x \to 0} \frac{x^2 + 3x + 2}{5x - 2}$ = _____ .

27. A. 0 B. 3

C. -1 D. 1

$\lim_{x \to 0} \frac{x^2 + 3x + 2}{5x - 2}$ = _____ .

২৭. A. 0 B. 3

C. -1 D. 1

$\lim_{x \to 0} \frac{4x - 3\sin x}{2\tan x - x}$ = _____ .

28. A. 4 B. 3

C. 1 D. 0

$\lim_{x \to 0} \frac{4x - 3\sin x}{2\tan x - x}$ = _____ .

২৮. A. 4 B. 3

C. 1 D. 0

29. $\lim_{x \to 2} \frac{x^3-8}{x-2} =$ _____ .
A. -12 B. 0
C. 8 D. 12

২৯. $\lim_{x \to 2} \frac{x^3-8}{x-2} =$ _____ .
A. -12 B. 0
C. 8 D. 12

30. $\frac{d}{dx}(\cot x) =$ _____.
A. $\frac{\cos x}{\sin x}$ B. $\text{cosec}^2 x$
C. $-\text{cosec}^2 x$ D. $\cot x \cdot \text{cosec}\, x$

৩০. $\frac{d}{dx}(\cot x) =$ _____.
A. $\frac{\cos x}{\sin x}$ B. $\text{cosec}^2 x$
C. $-\text{cosec}^2 x$ D. $\cot x \cdot \text{cosec}\, x$

31. $\frac{d}{dx}(sec^{-1}x) =$ _____.
A. $\frac{1}{\sqrt{1-x^2}}$ B. $\frac{1}{\sqrt{x^2-1}}$
C. $\frac{1}{|x|\sqrt{x^2-1}}$ D. $\frac{1}{|x|\sqrt{1-x^2}}$

৩১. $\frac{d}{dx}(sec^{-1}x) =$ _____.
A. $\frac{1}{\sqrt{1-x^2}}$ B. $\frac{1}{\sqrt{x^2-1}}$
C. $\frac{1}{|x|\sqrt{x^2-1}}$ D. $\frac{1}{|x|\sqrt{1-x^2}}$

32. $\frac{d}{dx}(sin^2x + cos^2x) =$ _____.
A. 1 B. 0
C. –1 D. $2 \sin x \cdot \cos x$

৩২. $\frac{d}{dx}(sin^2x + cos^2x) =$ _____.
A. 1 B. 0
C. –1 D. $2 \sin x \cdot \cos x$

33. $\frac{d}{dx}(\sqrt{x}) =$ _____.
A. 1 B. $\frac{1}{\sqrt{x}}$
C. $\frac{1}{2\sqrt{x}}$ D. $\frac{2}{\sqrt{x}}$

৩৩. $\frac{d}{dx}(\sqrt{x}) =$ _____.
A. 1 B. $\frac{1}{\sqrt{x}}$
C. $\frac{1}{2\sqrt{x}}$ D. $\frac{2}{\sqrt{x}}$

34. $\frac{d}{dx}(\sin 2x) =$ _____.
A. $2 \sin 2x$ B. $2 \cos 2x$
C. $-2 \sin 2x$ D. $-2 \cos 2x$

৩৪. $\frac{d}{dx}(\sin 2x) =$ _____.
A. $2 \sin 2x$ B. $2 \cos 2x$
C. $-2 \sin 2x$ D. $-2 \cos 2x$

35. $\frac{d}{dx} \sin(\log x) =$ _____.

A. $\frac{\cos(\log x)}{x}$ B. $\frac{-\cos(\log x)}{x}$

C. $\frac{\cos x}{x}$ D. $\cos(\frac{1}{x})$

$\frac{d}{dx}$ sin (*log x*) = _____.

૩૫. A. $\frac{\cos(\log x)}{x}$ B. $\frac{-\cos(\log x)}{x}$

C. $\frac{\cos x}{x}$ D. $\cos(\frac{1}{x})$

Differentiation of sin *x* w.r.t. cos *x* is _____.

36. A. tan *x* B. – tan *x*

C. cot *x* D. – cot *x*

sin *x* નું cos *x* ની સાપેક્ષે વિકલન _____ થાય.

૩૬. A. tan *x* B. – tan *x*

C. cot *x* D. – cot *x*

$\frac{d}{dx}$ $(\frac{1}{3x+5})$ = _____.

37. A. $-\frac{3}{(3x+5)^2}$ B. $-\frac{1}{(3x+5)^2}$

C. $(\frac{1}{3})$ D. $\frac{3}{(3x+5)^2}$

$\frac{d}{dx}$ $(\frac{1}{3x+5})$ = _____.

૩૭. A. $-\frac{3}{(3x+5)^2}$ B. $-\frac{1}{(3x+5)^2}$

C. $(\frac{1}{3})$ D. $\frac{3}{(3x+5)^2}$

$\frac{d}{dx}$ ($x^3 + 3^x + 3^3$) = _____.

38. A. $3x^2 + x \cdot 3^{x-1} + 3(3)^2$ B. $3x^2 + 3^x \log 3$

C. $x^3 + \log x + 3^x \log 3$ D. $3x^2 + x \log x + 3^2$

$\frac{d}{dx}$ ($x^3 + 3^x + 3^3$) = _____.

૩૮. A. $3x^2 + x \cdot 3^{x-1} + 3(3)^2$ B. $3x^2 + 3^x \log 3$

C. $x^3 + \log x + 3^x \log 3$ D. $3x^2 + x \log x + 3^2$

If u = $tan^{-1}x,\ v = cot^{-1}x, then\ \frac{du}{dv}$ = _____.

39. A. 1 B. -1

C. 0 D. None of above

જો u = $tan^{-1}x,\ v = cot^{-1}x,$ હોય તો $\frac{du}{dv}$ = _____.

૩૯. A. 1 B. -1

C. 0 D. None of above

If *y* = x cos x *then* $\frac{dy}{dx}$ = _____.

40. A. 1 – sin x B. – sin x

C. cos x + x sin x D. cos x – x sin x

જો *y* = x cos x હોય તો $\frac{dy}{dx}$ = _____.

૪૦. A. 1 – sin x B. – sin x

C. cos x + x sin x D. cos x – x sin x

41. If equation of motion of a particle s(t) = $t^3 - 6t^2 + 8t - 4$, velocity at t = 4 sec is _____.

A. 12m/sec
B. 8m/sec
C. $12m/sec^2$
D. $8m/sec^2$

એક કણ માટે ગતિનું સમીકરણ $s(t) = t^3 - 6t^2 + 8t - 4$, હોય તો t = 4 સેકન્ડ માટે વેગ _____ થાય.

૪૧.
A. 12m/sec
B. 8m/sec
C. $12m/sec^2$
D. $8m/sec^2$

Function $f(x)$, if _____then $f(x)$ has minima at x = 2 .

42.
A. $f'(2) = 0, f''(2) > 0$
B. $f'(2) = 0, f''(2) < 0$
C. $f'(2) < 0, f''(2) > 0$
D. $f'(2) < 0, f''(2) < 0$

વિધેય $f(x)$ માટે , _____ હોય તો $f(x)$ ની કિમંત x = 2 આગળ ન્યુનતમ થાય..

૪૨.
A. $f'(2) = 0, f''(2) > 0$
B. $f'(2) = 0, f''(2) < 0$
C. $f'(2) < 0, f''(2) > 0$
D. $f'(2) < 0, f''(2) < 0$

If $\frac{d^2}{dx^2}(\cos x + 2)$ _____.

43.
A. $-cosx + 2$
B. $-\cos x$
C. $\cos x + 2$
D. $\cos x$

If $\frac{d^2}{dx^2}(\cos x + 2)$ _____.

૪૩.
A. $-cosx + 2$
B. $-\cos x$
C. $\cos x + 2$
D. $\cos x$

If y = secθ and x = tanθ *then* $\frac{d^2y}{dx^2}$ = _____.

44.
A. $sin\theta$
B. $cos\theta$
C. $tan\theta$
D. None of this

જો y = secθ અને x = tanθ હોય તો $\frac{d^2y}{dx^2}$ = _____.

૪૪.
A. $sin\theta$
B. $cos\theta$
C. $tan\theta$
D. None of this

$\frac{d(sin^2x)}{dx}$ = _____.

45.
A. cos^2x
B. $2sinx$
C. $2sinx\ cosx$
D. $-2sinx\ cosx$

$\frac{d(sin^2x)}{dx}$ = _____.

૪૫.
A. cos^2x
B. $2sinx$
C. $2sinx\ cosx$
D. $-2sinx\ cosx$

$\int \tan x\, dx$ = _____.

46.
A. *log* | sin *x* | + c
B. *log* | cos *x* | + c
C. *log* | sec *x* | + c
D. *log* |cosec *x* |+c

$\int \tan x\, dx$ = _____.

૪૬.
A. *log* | sin *x* | + c
B. *log* | cos *x* | + c
C. *log* | sec *x* | + c
D. *log* |cosec *x* |+c

$\int \frac{5}{x}\, dx$ = _____.

47.
A. 5 *log* | *x* | + c
B. 0
C. $\frac{5}{x^2}$
D. 5

$\int \frac{5}{x}\, dx$ = _____.

૪૭.
A. 5 *log* | *x* | + c
B. 0
C. $\frac{5}{x^2}$
D. 5

$\int \tan^2 x\, dx$ = _____ + c .

48.
A. sec *x dx*
B. sec *x* · tan *x*

C. $\tan x - x$ D. $x - \tan x$

$\int \tan^2 x\, dx$ = _____ + c .

৪৫. A. $\sec x\, dx$ B. $\sec x \cdot \tan x$

C. $\tan x - x$ D. $x - \tan x$

$\int \frac{\sin x}{\cos^2 x}\, dx$ = _____+ C.

49. A. $\tan x$ B. $\sec x$

C. $\sec x \cdot \tan x$ D. $\operatorname{cosec} x$

$\int \frac{\sin x}{\cos^2 x}\, dx$ = _____+ C.

৪৫. A. $\tan x$ B. $\sec x$

C. $\sec x \cdot \tan x$ D. $\operatorname{cosec} x$

$\int \sin 3x\, dx$ = _____.

50. A. $\cos 3x + c$ B. $-\cos 3x + c$

C. $-3\cos 3x + c$ D. $-\frac{1}{3}\cos 3x + c$

$\int \sin 3x\, dx$ = _____.

৫০. A. $\cos 3x + c$ B. $-\cos 3x + c$

C. $-3\cos 3x + c$ D. $-\frac{1}{3}\cos 3x + c$

$\int_0^1 x\ dx$ = _____.

51. A. $\frac{1}{2}$ B. 1

C. $-\frac{1}{2}$ D. – 1

$\int_0^1 x\ dx$ = _____.

৫১. A. $\frac{1}{2}$ B. 1

C. $-\frac{1}{2}$ D. – 1

$\int_{-\pi}^{\pi} (x^5 + cosec^3 x)\ dx$ = _____ .

52. A. 5 B. 1

C. 0 D. 3

$\int_{-\pi}^{\pi} (x^5 + cosec^3 x)\ dx$ = _____ .

৫২. A. 5 B. 1

C. 0 D. 3

$\int_{-\pi}^{\pi} \tan x\ dx$ = _____ .

53. A. π B. 0

C. $-\pi$ D. 2π

$\int_{-\pi}^{\pi} \tan x\ dx$ = _____ .

৫৩. A. π B. 0

C. $-\pi$ D. 2π

$\int cos(2x-3)\, dx$ = _____+c .

54. A. $-\sin(2x-3)$ B. $-\sin(2x)$

C. $\frac{-\sin(2x-3)}{2}$ D. $\frac{\sin(2x-3)}{2}$

$\int cos(2x-3)\, dx$ = _____+c .

৫৪. A. $-\sin(2x-3)$ B. $-\sin(2x)$

C. $\frac{-\sin(2x-3)}{2}$ D. $\frac{\sin(2x-3)}{2}$

$\int (sin^2 x + cos^2 x)\, dx$ = _____ .

55. A. 0 B. 1

C. $\sin 2x + c$ D. $x + c$

$\int(sin^2x + cos^2x)\,dx =$ _____ .

૫૫. A. 0 B. 1
C. $\sin 2x + c$ D. $x + c$

Area covered by the curve $x^2 + y^2 = 4$ is _____ .

56. A. 2π B. 4π
C. 16π D. 4

વક્ર $x^2 + y^2 = 4$ દ્વારા ઘેરાયેલ પ્રદેશનું ક્ષેત્રફળ _____ થાય.

૫૬. A. 2π B. 4π
C. 16π D. 4

$\int \frac{1}{a^2 - x^2} dx =$ _____ .

57. A. $\frac{1}{2a} log \left|\frac{x-a}{x+a}\right|$ B. $\frac{1}{2a} log \left|\frac{x+a}{x-a}\right|$
C. $\frac{1}{a} log\sqrt{x+a}$ D. None of this

$\int \frac{1}{a^2 - x^2} dx =$ _____ .

૫૭. A. $\frac{1}{2a} log \left|\frac{x-a}{x+a}\right|$ B. $\frac{1}{2a} log \left|\frac{x+a}{x-a}\right|$
C. $\frac{1}{a} log\sqrt{x+a}$ D. None of this

If $f'(x) = \frac{1}{x^2+1}$ and $f(0) = 0$ then $f(x) =$ _____ .

58. A. x B. x^2
C. $tan^{-1}x$ D. $x + tan^{-1}x$

જો $f'(x) = \frac{1}{x^2+1}$ અને $f(0) = 0$ હોય તો $f(x) =$ _____ .

૫૮. A. x B. x^2
C. $tan^{-1}x$ D. $x + tan^{-1}x$

The area enclosed by the curve $y = x^2$, the X-axis and line $x = 2$ is _____ units.

59. A. $\frac{32}{3}$ B. $\frac{16}{3}$
C. $\frac{8}{3}$ D. $\frac{64}{3}$

વક્ર | $y = x^2$4 X- અક્ષ અને રેખા $x = 2$ થી ઘેરાયેલ પ્રદેશનું ક્ષેત્રફળ _____ છે.

૫૯. A. $\frac{32}{3}$ B. $\frac{16}{3}$
C. $\frac{8}{3}$ D. $\frac{64}{3}$

$\int_1^e \frac{dx}{x}$ =____.

60. A. 1 B. 0
C. e D. e-1

$\int_1^e \frac{dx}{x}$ =____.

૬૦. A. 1 B. 0
C. e D. e-1

For the data 13, 11, 15, 23, 34, 32, 12, 23, 33 median is _____ .

61. A. 23 B. 32
C. 34 D. 11

માહિતીનાં અવલોકનો 13, 11, 15, 23, 34, 32, 12, 23, 33 હોય તો મધ્યસ્થ _____ થશે.

૬૧. A. 23 B. 32
C. 34 D. 11

For the data 5, a, 6, 18, 12 mean is 9 then a = _____ .

62. A. 5 B. 4
C. 6 D. 18

માહિતીનાં અવલોકનો 5, a, 6, 18, 12 માટે જો મધ્યક 9 હોય તો a = _____ .

૬૨. A. 5 B. 4

C. 6 D. 18

For information mean is 1.43 and median is 1.32 then mode is ___.

63. A. 1 B. 1.1
C. 1.2 D. 0.9

જો માહિતીનો મધ્યક 1.43 અને મધ્યસ્થ 1.32 હોય તો બહુલક ___.

૬૩. A. 1 B. 1.1
C. 1.2 D. 0.9

For information 5, 7, 10, 13, 12, 6, 17, mean deviation from mean is ___.

64. A. 4 B. 3.42
C. 3 D. None of this

જો માહિતીનાં અવલોકનો 5, 7, 10, 13, 12, 6, 17 હોય તો મધ્યકથી સરેરાશ વિચલન ___.

૬૪. A. 4 B. 3.42
C. 3 D. None of this

The range of the data 17, 15, 25, 34, 32 is _____.

65. A. 18 B. 19
C. 34 D. 17

અવલોકનો 17, 15, 25, 34, 32 નો વિસ્તાર _____ થાય.

૬૫. A. 18 B. 19
C. 34 D. 17

For the observation -5, 5, -2, 8, -8, 6, 0,-1 and -10, median = _____ .

66. A. 0 B. 1
C. 2 D. -1

અવલોકનો -5, 5, -2, 8, -8, 6, 0, -1 અને -10 માટે4 મધ્યસ્થ = _____ .

૬૬. A. 0 B. 1
C. 2 D. -1

Formula of mean deviation from median is _____ .

67. A. $\delta M = \frac{1}{n}\sum|x_i - M|$ B. $\delta M = \sum|x_i - M|$
C. $\delta M = \sum|x_i - \bar{x}|$ D. None of Above

મધ્યસ્થથી સરેરાશ વિચલન નું સૂત્ર _____ K[P

૬૭. A. $\delta M = \frac{1}{n}\sum|x_i - M|$ B. $\delta M = \sum|x_i - M|$
C. $\delta M = \sum|x_i - \bar{x}|$ D. None of Above

Mean of the first n natural number is _____ .

68. A. $\frac{n}{2}$ B. $\frac{n-1}{2}$
C. $\frac{n}{2}+1$ D. $\frac{n+1}{2}$

પ્રથમ n પ્રાકૃતિક સંખ્યાનો મધ્યક _____ છે.

૬૮. A. $\frac{n}{2}$ B. $\frac{n-1}{2}$
C. $\frac{n}{2}+1$ D. $\frac{n+1}{2}$

Mean deviation of n observations $x_1, x_2, \ldots\ldots x_n$ using mean $\bar{x}$ is _____.

69. A. $n\sum_{i=1}^{n}|x_i - \bar{x}|$ B. $\sum_{i=1}^{n}|x_i - \bar{x}|$
C. $\frac{1}{n}\sum_{i=1}^{n}|x_i - \bar{x}|$ D. None of this

$x_1, x_2, \ldots\ldots x_n$ અવલોકનોનું મધ્યક નો ઉપયોગ કરી સરેરાશ વિચલન _____.

૬૯. A. $n\sum_{i=1}^{n}|x_i - \bar{x}|$ B. $\sum_{i=1}^{n}|x_i - \bar{x}|$

C. $\frac{1}{n}\sum_{i=1}^{n}|x_i - \bar{x}|$ D. None of this

Mode of observations 12,1,7,6,5,4,8,6,9,11,6,12,5,7,6 is _____.

70. A. 5 B. 6
C. 12 D. 7

12,1,7,6,5,4,8,6,9,11,6,12,5,7,6 નો બહુલક _____.

૭૦. A. 5 B. 6
C. 12 D. 7

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