

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER –2 (C2D)• EXAMINATION – WINTER - 2021

Subject Code: C320003**Date : 30-03-2022****Subject Name: ADVANCED MATHEMATICS(GROUP-2)****Time: 02:30 PM TO 04:00 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 non-programmable scientific calculator is permitted.
6. English version is authentic.

No.	Question Text and Option.			
1.	If $f(x) = \log e^x$ then $f(-1) =$ _____			
	A.	0	B.	1
	C.	-1	D.	e
1	જો $f(x) = \log e^x$ તો $f(-1) =$ _____			
	A.	0	B.	1
	C.	-1	D.	e
2.	$\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1} =$ _____			
	A.	$\frac{1}{3}$	B.	0
	C.	1	D.	3
૨.	$\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1} =$ _____			
	A.	$\frac{1}{3}$	B.	0
	C.	1	D.	3
3.	$\lim_{x \rightarrow \frac{\pi}{2}} \frac{\cos x}{\left(\frac{\pi}{2} - x\right)}$			
	A.	$\frac{\pi}{2}$	B.	1
	C.	-1	D.	$-\frac{\pi}{2}$
3.	$\lim_{x \rightarrow \frac{\pi}{2}} \frac{\cos x}{\left(\frac{\pi}{2} - x\right)}$			
	A.	$\frac{\pi}{2}$	B.	1
	C.	-1	D.	$-\frac{\pi}{2}$
4.	$\lim_{x \rightarrow 0} (1+x)^{\frac{1}{x}} =$ _____			
	A.	0	B.	$2x$
	C.	e	D.	∞

૪.	$\lim_{x \rightarrow 0} (1+x)^{\frac{1}{x}} = \underline{\hspace{2cm}}$		
	A.	0	B. $2x$
	C.	e	D. ∞
5.	$f(x) = x \cos x$ is _____ function.		
	A.	odd	B. even
	C.	constant	D. 0
૫.	$f(x) = x \sec x$ _____ [વધેય છે..]		
	A.	અડધી	B. બેડી
	C.	તરતર	D. 0
6.	$\lim_{x \rightarrow 0} (\operatorname{cosec}^2 x - \cot^2 x) = \underline{\hspace{2cm}}$		
	A.	0	B. 1
	C.	-1	D. 5
૬.	$\lim_{x \rightarrow 0} (\operatorname{cosec}^2 x - \cot^2 x) = \underline{\hspace{2cm}}$		
	A.	0	B. 1
	C.	-1	D. 5
7.	If $f(x) = x^3 - 3$ then $f(2) = \underline{\hspace{2cm}}$		
	A.	-11	B. 5
	C.	0	D. -3
૭.	જો $f(x) = x^3 - 3$ તો $f(2) = \underline{\hspace{2cm}}$		
	A.	-11	B. 5
	C.	0	D. -3
8.	$\lim_{x \rightarrow 0} \frac{5^x - 1}{x} = \underline{\hspace{2cm}}$		
	A.	$\log_e 5$	B. $\log_5 e$
	C.	1	D. 0
૮.	$\lim_{x \rightarrow 0} \frac{5^x - 1}{x} = \underline{\hspace{2cm}}$		
	A.	$\log_e 5$	B. $\log_5 e$
	C.	1	D. 0
9.	$\lim_{n \rightarrow \infty} \frac{\sum n}{n^2} = \underline{\hspace{2cm}}$		
	A.	$\frac{1}{2}$	B. 4
	C.	$\frac{1}{4}$	D. 2
૯.	$\lim_{n \rightarrow \infty} \frac{\sum n}{n^2} = \underline{\hspace{2cm}}$		
	A.	$\frac{1}{2}$	B. 4
	C.	$\frac{1}{4}$	D. 2
10.	$\lim_{n \rightarrow \infty} \frac{2n+3}{2+3n} = \underline{\hspace{2cm}}$		
	A.	$\frac{3}{2}$	B. 1

	C.	$\frac{2}{3}$	D.	0
૧૦.	$\lim_{n \rightarrow \infty} \frac{2n+3}{2+3n} = \underline{\hspace{2cm}}$			
	A.	$\frac{3}{2}$	B.	1
	C.	$\frac{2}{3}$	D.	0
11.	If A(3,1) and B(2,1), then AB = $\underline{\hspace{2cm}}$			
	A.	$\sqrt{29}$	B.	1
	C.	0	D.	3
૧૧.	જો A(3,1) અને B(2,1), તો AB = $\underline{\hspace{2cm}}$			
	A.	$\sqrt{29}$	B.	1
	C.	0	D.	3
12.	The slope of line $x + y - 8 = 0$ is $\underline{\hspace{2cm}}$			
	A.	0	B.	1
	C.	-1	D.	8
૧૨.	રેખા $x + y - 8 = 0$ નો ઢાળ $\underline{\hspace{2cm}}$ છે.			
	A.	0	B.	1
	C.	-1	D.	8
13.	Mid point of the point A(2,3) and B(4,7) is $\underline{\hspace{2cm}}$			
	A.	(5,3)	B.	(3,5)
	C.	(6,10)	D.	(2,4)
૧૩.	બિંદુઓ A(2,3) અને B(4,7) નું મધ્યબિંદુ $\underline{\hspace{2cm}}$ છે.			
	A.	(5,3)	B.	(3,5)
	C.	(6,10)	D.	(2,4)
14.	y – intercept of $2x + y - 5$ is $\underline{\hspace{2cm}}$			
	A.	-2	B.	5
	C.	-5	D.	$\frac{5}{2}$
૧૪.	રેખા $2x + y - 5$ નો y – અંતર્ખંડ $\underline{\hspace{2cm}}$ છે.			
	A.	-2	B.	5
	C.	-5	D.	$\frac{5}{2}$
15.	Slope of line passing through points A(5,7) and B(2,1) is $\underline{\hspace{2cm}}$			
	A.	3	B.	2
	C.	4	D.	$\frac{1}{2}$
૧૫.	બિંદુઓ A(5,7) અને B(2,1) માંથી પસાર થતી રેખા નો ઢાળ $\underline{\hspace{2cm}}$ છે.			
	A.	3	B.	2
	C.	4	D.	$\frac{1}{2}$
16.	Slope of line making an angle $\frac{\pi}{3}$ with positive direction of X – axis is $\underline{\hspace{2cm}}$			

	A.	$\sqrt{3}$	B.	1
	C.	$\frac{1}{\sqrt{2}}$	D.	$\frac{1}{\sqrt{3}}$
૧૬.	X –અક્ષ ની ધન દિશા સાથે $\frac{\pi}{3}$ ખૂણો બનાવે તો તેનો ઢાળ _____ થાય			
	A.	$\sqrt{3}$	B.	1
	C.	$\frac{1}{\sqrt{2}}$	D.	$\frac{1}{\sqrt{3}}$
17.	Radius of $x^2 + y^2 = 36$ is _____			
	A.	-6	B.	6
	C.	± 6	D.	1
૧૭.	$x^2 + y^2 = 36$ ની ત્રિજ્યા _____ છે.			
	A.		B.	
	C.		D.	
18.	Centre of the circle $x^2 + y^2 - 2x + 6y - 15 = 0$ = _____			
	A.	(1,-3)	B.	(-1,-3)
	C.	(-1,3)	D.	(0,0)
૧૮.	વર્તુળ $x^2 + y^2 - 2x + 6y - 15 = 0$ નું કેન્દ્ર _____			
	A.	(1,-3)	B.	(-1,-3)
	C.	(-1,3)	D.	(0,0)
19.	_____ is not a equation of line from given below.			
	A.	$x + y = 0$	B.	$x + 2y = 0$
	C.	$x^2 + y^2 = 0$	D.	$2x + y = 0$
૧૯.	_____ રેખા નું સમીકરણ નથી..			
	A.	$x + y = 0$	B.	$x + 2y = 0$
	C.	$x^2 + y^2 = 0$	D.	$2x + y = 0$
20.	Distance between two points $(-2,0)$ and $(2,0)$ is _____			
	A.	4	B.	5
	C.	6	D.	2
૨૦.	બિંદુઓ $(-2,0)$ અને $(2,0)$ વચ્ચે નું અંતર _____ છે.			
	A.	4	B.	5
	C.	6	D.	2
21.	For circle $x^2 + y^2 = 1$ centre is _____			
	A.	(0,1)	B.	(-1,1)
	C.	(0,0)	D.	(1,1)
૨૧.	વર્તુળ $x^2 + y^2 = 1$ નું કેન્દ્ર _____ છે.			
	A.	(0,1)	B.	(-1,1)
	C.	(0,0)	D.	(1,1)
22.	Equation of line having slope 2 and passes through the point $(1,2)$ is _____			

	A.	$2x - y = 0$	B.	$2x - 2y = 0$
	C.	$x - y = 0$	D.	$2x + y = 0$
૨૨.	ઢાળ 2 અને બિંદુ (1,2) માથી પસાર થતી રેખાનું સમીકરણ _____ છે.			
	A.	$2x - y = 0$	B.	$2x - 2y = 0$
	C.	$x - y = 0$	D.	$2x + y = 0$
23.	Slope of the line $2x - 2y - 6 = 0$ is _____			
	A.	2	B.	-2
	C.	1	D.	-1
૨૩.	રેખા $2x - 2y - 8 = 0$ નો ઢાળ _____ છે.			
	A.	2	B.	-2
	C.	1	D.	-1
24.	Mid point of the point A(2, -3) and B(8, -7) is _____			
	A.	(5,-5)	B.	(-3,2)
	C.	(-5,5)	D.	(2,-3)
૨૪.	બિંદુઓ A(2, -3) અને B(8, -7) નું મધ્યબિંદુ _____ છે.			
	A.	(5,-5)	B.	(-3,2)
	C.	(-5,5)	D.	(2,-3)
25.	$\frac{d}{dx} (\operatorname{cosec}^2 x - \cot^2 x) =$ _____			
	A.	-1	B.	1
	C.	0	D.	None of these
૨૫.	$\frac{d}{dx} (\operatorname{cosec}^2 x - \cot^2 x) =$ _____			
	A.	-1	B.	1
	C.	0	D.	આમાંથી કોઈ નહિ
26.	$\frac{d}{dx} (3 \sin x - 4 \sin^3 x) =$ _____			
	A.	$-\cos 3x$	B.	$3 \cos 3x$
	C.	$\sin 3x$	D.	0
૨૬.	$\frac{d}{dx} (3 \sin x - 4 \sin^3 x) =$ _____			
	A.	$-\cos 3x$	B.	$3 \cos 3x$
	C.	$\sin 3x$	D.	0
27.	$\frac{d}{dx} (a^x) =$ _____			
	A.	a^x	B.	$a^x \log_e x$
	C.	$x^x \log_e a$	D.	$\log_e a$
૨૭.	$\frac{d}{dx} (a^x) =$ _____			
	A.	a^x	B.	$a^x \log_e x$
	C.	$x^x \log_e a$	D.	$\log_e a$
28.	$\frac{d}{dx} (\log \sin x)$			

	A.	$\sin x$	B.	$\cot x$
	C.	$\tan x$	D.	$-\cot x$
28.	$\frac{d}{dx}(\log \sin x)$			
	A.	$\sin x$	B.	$\cot x$
	C.	$\tan x$	D.	$-\cot x$
29.	$\frac{d}{dx}(\tan^{-1} x + \cot^{-1} x) =$ _____			
	A.	1	B.	-1
	C.	0	D.	$\frac{\pi}{2}$
30.	$\frac{d}{dx}(\tan^{-1} x + \cot^{-1} x) =$ _____			
	A.	1	B.	-1
	C.	0	D.	$\frac{\pi}{2}$
31.	If $f(x) = e^x$ then $y_2 =$ _____			
	A.	1	B.	0
	C.	e^x	D.	$-e^x$
32.	If $f(x) = e^x$ then $y_2 =$ _____			
	A.	1	B.	0
	C.	e^x	D.	$-e^x$
33.	If $f(x) = e^{3x}$, then $f'(0) =$ _____			
	A.	3	B.	$3e$
	C.	1	D.	0
34.	If $f(x) = e^{3x}$, then $f'(0) =$ _____			
	A.	3	B.	$3e$
	C.	1	D.	0
35.	If $f(x) = 2x^2 - 10$ then $f'(x) =$ _____			
	A.	$4x - 1$	B.	$4x$
	C.	$2x$	D.	1
36.	If $f(x) = 2x^2 - 10$ then $f'(x) =$ _____			
	A.	$4x - 1$	B.	$4x$
	C.	$2x$	D.	1
37.	$\frac{d}{dx} 3^{\log_3 x} =$ _____			
	A.	$\frac{1}{x}$	B.	$3^{\log_3 x}$
	C.	1	D.	$\log_3 x$
38.	$\frac{d}{dx} 3^{\log_3 x} =$ _____			
	A.	$\frac{1}{x}$	B.	$3^{\log_3 x}$

	C.	1	D.	$\log_3 x$
34.	For function $f(x)$ if has maxima at $x = a$			
	A.	$f''(a) < 0$	B.	$f''(a) = -1$
	C.	$f''(a) > 0$	D.	None of these
3૪.	વિધેય $f(x)$, $x = a$ આગળ મહત્તમ હોય તો _____			
	A.	$f''(a) < 0$	B.	$f''(a) = -1$
	C.	$f''(a) > 0$	D.	આમાંથી કોઈ નહિ
35.	If $f(x) = 50x$ then $f'(x) =$ _____			
	A.	50	B.	25
	C.	1	D.	0
૩૫.	જો $f(x) = 50x$ તો $f'(x) =$ _____			
	A.	50	B.	25
	C.	1	D.	0
36.	If $f(x) = 3x^2 - 2x + 1$, then $f'(-1) =$ _____			
	A.	-8	B.	5
	C.	8	D.	4
૩૬.	જો $f(x) = 3x^2 - 2x + 1$, તો $f'(-1) =$ _____			
	A.	-8	B.	5
	C.	8	D.	4
37.	$\frac{d}{dx}(x^n) =$ _____			
	A.	nx^n	B.	nx^{n-1}
	C.	$\frac{1}{n}x^n$	D.	$\frac{x^{n+1}}{n+1}$
૩૭.	$\frac{d}{dx}(x^n) =$ _____			
	A.	nx^n	B.	nx^{n-1}
	C.	$\frac{1}{n}x^n$	D.	$\frac{x^{n+1}}{n+1}$
38.	$\frac{d}{dx}(\log \cos x) =$ _____			
	A.	$\tan x$	B.	$\cot x$
	C.	$-\tan x$	D.	$-\cot x$
૩૮.	$\frac{d}{dx}(\log \cos x) =$ _____			
	A.	$\tan x$	B.	$\cot x$
	C.	$-\tan x$	D.	$-\cot x$

39.	If $f(x) = \tan^{-1} x$ then $f'(x) =$ _____			
	A.	$\frac{1}{1-x^2}$	B.	$\frac{1}{1+x^2}$
	C.	1	D.	$1+x^2$
૩૯.	જો $f(x) = \tan^{-1} x$ તો $f'(x) =$ _____			
	A.	$\frac{1}{1-x^2}$	B.	$\frac{1}{1+x^2}$
	C.	1	D.	$1+x^2$
40.	If $x = \sin \theta, y = \cos \theta$ then $\frac{dy}{dx} =$ _____			
	A.	$-\tan \theta$	B.	$\tan \theta$
	C.	$-\cot \theta$	D.	$\cot \theta$
૪૦.	જો $x = \sin \theta, y = \cos \theta$ તો $\frac{dy}{dx} =$ _____			
	A.	$-\tan \theta$	B.	$\tan \theta$
	C.	$-\cot \theta$	D.	$\cot \theta$
41.	If $x = \cos x$, then $\frac{d^2y}{dx^2} =$ _____			
	A.	$-y$	B.	y
	C.	$\sin x$	D.	$-\sin x$
૪૧.	જો $x = \cos x$, તો $\frac{d^2y}{dx^2} =$ _____			
	A.	$-y$	B.	y
	C.	$\sin x$	D.	$-\sin x$
42.	Equation of the motion of moving particle is given by $s = t^3 + 3t^2 - 6t + 9$ then velocity at $t = 1$ second is _____			
	A.	1	B.	2
	C.	3	D.	4
૪૨.	ગતિ કરતી કણ નું સમીકરણ $s = t^3 + 3t^2 - 6t + 9$ તો $t = 1$ સેકન્ડમાં ગળ વેગ _____ છે.			
	A.	1	B.	2
	C.	3	D.	4
43.	$\int \cot x dx =$ _____			
	A.	$\log \sin x + c$	B.	$\log \cos x + c$
	C.	$\log \sec x + c$	D.	$\log \operatorname{cosec} x + c$
૪૩.	$\int \cot x dx =$ _____			
	A.	$\log \sin x + c$	B.	$\log \cos x + c$
	C.	$\log \sec x + c$	D.	$\log \operatorname{cosec} x + c$
44.	$\int x^5 dx =$ _____			

	A.	$\frac{x^6}{6}$	B.	$\frac{x^5}{5}$
	C.	$5x^6$	D.	$5 \log x$
88.	$\int x^5 dx = \underline{\hspace{2cm}}$			
	A.	$\frac{x^6}{6}$	B.	$\frac{x^5}{5}$
	C.	$5x^6$	D.	$5 \log x$
45.	$\int \frac{1}{x} dx = \underline{\hspace{2cm}} + c$			
	A.	$\log x $	B.	$-\log x$
	C.	$\frac{1}{x^2}$	D.	$\frac{-1}{x^2}$
84.	$\int \frac{1}{x} dx = \underline{\hspace{2cm}} + c$			
	A.	$\log x $	B.	$-\log x$
	C.	$\frac{1}{x^2}$	D.	$\frac{-1}{x^2}$
46.	$\int_0^1 x dx = \underline{\hspace{2cm}}$			
	A.	1	B.	-1
	C.	$\frac{-1}{2}$	D.	$\frac{1}{2}$
85.	$\int_0^1 x dx = \underline{\hspace{2cm}}$			
	A.	1	B.	-1
	C.	$\frac{-1}{2}$	D.	$\frac{1}{2}$
47.	$\int (\sin^2 x + \cos^2 x) dx = \underline{\hspace{2cm}} + c$			
	A.	x	B.	2x
	C.	$\tan x$	D.	1
89.	$\int (\sin^2 x + \cos^2 x) dx = \underline{\hspace{2cm}} + c$			
	A.	x	B.	2x
	C.	$\tan x$	D.	1
48.	$\int 5^x dx = \underline{\hspace{2cm}}$			
	A.	5^x	B.	$\frac{5^x}{\log x}$
	C.	$\frac{5^x}{\log 5}$	D.	$\log 5$
86.	$\int 5^x dx = \underline{\hspace{2cm}}$			
	A.	5^x	B.	$\frac{5^x}{\log x}$

	C.	$\frac{5^x}{\log 5}$	D.	$\log 5$
49.	$\int e^{\log_e x} dx = \text{_____} + c$			
	A.	1	B.	x
	C.	$\frac{x^2}{2}$	D.	x^2
੪੯.	$\int e^{\log_e x} dx = \text{_____} + c$			
	A.	1	B.	x
	C.	$\frac{x^2}{2}$	D.	x^2
50.	$\int \frac{-1}{1+x^2} dx = \text{_____} + c$			
	A.	$\cot^{-1} x$	B.	$\cos^{-1} x$
	C.	$\tan^{-1} x$	D.	$-\cot^{-1} x$
੫੦.	$\int \frac{-1}{1+x^2} dx = \text{_____} + c$			
	A.	$\cot^{-1} x$	B.	$\cos^{-1} x$
	C.	$\tan^{-1} x$	D.	$-\cot^{-1} x$
51.	$\int \frac{1}{\sqrt{a^2-x^2}} dx = \text{_____} + c$			
	A.	$\frac{1}{a} \cos^{-1} \left(\frac{x}{a} \right)$	B.	$\cos^{-1} \left(\frac{x}{a} \right)$
	C.	$\frac{1}{a} \sin^{-1} \left(\frac{x}{a} \right)$	D.	$\sin^{-1} \left(\frac{x}{a} \right)$
੫੧.	$\int \frac{1}{\sqrt{a^2-x^2}} dx = \text{_____} + c$			
	A.	$\frac{1}{a} \cos^{-1} \left(\frac{x}{a} \right)$	B.	$\cos^{-1} \left(\frac{x}{a} \right)$
	C.	$\frac{1}{a} \sin^{-1} \left(\frac{x}{a} \right)$	D.	$\sin^{-1} \left(\frac{x}{a} \right)$
52.	$\int_{-\pi}^{\pi} \tan x dx = \text{_____}$			
	A.	$-\pi$	B.	0
	C.	π	D.	2π
੫੨.	$\int_{-\pi}^{\pi} \tan x dx = \text{_____}$			
	A.	$-\pi$	B.	0
	C.	π	D.	2π
53.	$\int e^x \left(\frac{1}{x} - \frac{1}{x^2} \right) dx = \text{_____}$			
	A.	$\frac{e^x}{x}$	B.	$\frac{e^x}{x^2}$

	C.	xe^x	D.	$(x-1)e^x$
43.	$\int e^x \left(\frac{1}{x} - \frac{1}{x^2} \right) dx = \underline{\hspace{2cm}}$			
	A.	$\frac{e^x}{x}$	B.	$\frac{e^x}{x^2}$
	C.	xe^x	D.	$(x-1)e^x$
54.	$\int 5 dx = \underline{\hspace{2cm}}$			
	A.	x	B.	$5x$
	C.	1	D.	0
48.	$\int 5 dx = \underline{\hspace{2cm}}$			
	A.	x	B.	$5x$
	C.	1	D.	0
55.	$\int \left(x + \frac{1}{x} \right) dx = \underline{\hspace{2cm}} + C$			
	A.	$1 + \log x$	B.	$1 - \log x$
	C.	1	D.	None of these
44.	$\int \left(x + \frac{1}{x} \right) dx = \underline{\hspace{2cm}} + C$			
	A.	$1 + \log x$	B.	$1 - \log x$
	C.	1	D.	અભિપ્રી કોઈ નહિ
56.	$\int_1^e \frac{dx}{x} = \underline{\hspace{2cm}}$			
	A.	1	B.	0
	C.	e	D.	$e-1$
45.	$\int_1^e \frac{dx}{x} = \underline{\hspace{2cm}}$			
	A.	1	B.	0
	C.	e	D.	$e-1$
57.	$\int \frac{1}{x^2 + 25} dx = \underline{\hspace{2cm}} + c$			
	A.	$\tan^{-1} \left(\frac{x}{5} \right)$	B.	$\frac{1}{5} \tan^{-1} \left(\frac{x}{5} \right)$
	C.	$\frac{1}{5} \tan^{-1} \left(\frac{5}{x} \right)$	D.	$\tan^{-1} \left(\frac{5}{x} \right)$
49.	$\int \frac{1}{x^2 + 25} dx = \underline{\hspace{2cm}} + c$			
	A.	$\tan^{-1} \left(\frac{x}{5} \right)$	B.	$\frac{1}{5} \tan^{-1} \left(\frac{x}{5} \right)$
	C.	$\frac{1}{5} \tan^{-1} \left(\frac{5}{x} \right)$	D.	$\tan^{-1} \left(\frac{5}{x} \right)$
58.	$\int_0^1 4x^3 dx = \underline{\hspace{2cm}}$			
	A.	0	B.	1
	C.	2	D.	3

૫૮.	$\int_0^1 4x^3 dx = \underline{\hspace{2cm}}$		
	A.	0	B. 1
	C.	2	D. 3
59.	Range of the observation 17,15,25,34 and 32 is <u> </u>		
	A.	18	B. 19
	C.	34	D. 17
૫૯.	17,15,25,34 અને 32 નો વિસ્તાર <u> </u> છે.		
	A.	18	B. 19
	C.	34	D. 17
60.	Mean of first eighth natural number is <u> </u>		
	A.	36	B. 72
	C.	16	D. $\frac{9}{2}$
૬૦.	પ્રથમ આઠ પ્રાકૃતિક સંખ્યા નો મધ્યક <u> </u> છે.		
	A.	36	B. 72
	C.	16	D. $\frac{9}{2}$
61.	If $x_1 x_2 \dots \dots \dots x_n$ are given n observation of ungrouped data then their mean $\bar{x} = \underline{\hspace{2cm}}$		
	A.	$\frac{\sum x_i}{n}$	B. $n \sum x_i$
	C.	$\sum x_i$	D. $\frac{\sum x_i}{2}$
૬૧.	જો $x_1 x_2 \dots \dots \dots x_n$ અવર્ગીકૃત માહિતી ના અવલોકનો હોય તો તેનો મધ્યક $\bar{x} = \underline{\hspace{2cm}}$ છે.		
	A.	$\frac{\sum x_i}{n}$	B. $n \sum x_i$
	C.	$\sum x_i$	D. $\frac{\sum x_i}{2}$
62.	If mean of the observation 4,7,6, k, 5 and 9 is 6 then k = <u> </u>		
	A.	4	B. 5
	C.	6	D. 9
૬૨.	અવલોકનો 4,7,6, k, 5 અને 9 નો માધ્યક 6 છે તો k = <u> </u>		
	A.	4	B. 5
	C.	6	D. 9
63.	<u> </u> of the following formulae gives the relation between Mean , Mode and Median		
	A.	$Z = 2\bar{X} - 3M$	B. $Z - 2\bar{X} = 3M$
	C.	$Z = 3M - 2\bar{X}$	D. $Z + 3M - 2\bar{X} = 0$

	_____ સૂત્ર મધ્યક, મધ્યસ્થ, અને બહુલક વચ્ચે નો સંબંધ બતાવે છે.			
૬૩.	A.	$Z = 2\bar{X} - 3M$	B.	$Z - 2\bar{X} = 3M$
	C.	$Z = 3M - 2\bar{X}$	D.	$Z + 3M - 2\bar{X} = 0$
64.	Mode of the first seven odd number is _____			
	A.	0	B.	5
	C.	7	D.	6
૬૪.	સાત એકી સંખ્યા નો બહુલક _____ છે.			
	A.	0	B.	5
	C.	7	D.	6
65.	The mean and median of 50 observations are 25 and 20 respectively then the mode is _____			
	A.	25	B.	20
	C.	100	D.	10
૬૫.	50 અવલોકનો મધ્યક અને મધ્યસ્થ અનુક્રમે 25 અને 20 તો બહુલક _____ છે.			
	A.	25	B.	20
	C.	100	D.	10
66.	To find the standard deviation of ungrouped data first we have to find first _____			
	A.	deviation	B.	mean
	C.	median	D.	mode
૬૬.	અવર્ગીકૃત અવલોકનો માટે પ્રમાણિત વિચલન શોધવા પ્રથમ _____ શોધવું પડે.			
	A.	વિચલન	B.	સરેરાશ
	C.	મધ્યસ્થ	D.	બહુલક
67.	For the data 13,11,15,23,34,32,12,23,33 median is _____			
	A.	23	B.	33
	C.	34	D.	11
૬૭.	અવલોકનો 13,11,15,23,34,32,12,23,33 નો મધ્યસ્થ _____ છે.			
	A.	23	B.	33
	C.	34	D.	11
68.	For grouped data with n observations, formula for the mean is _____			
	A.	$\bar{x} = \frac{\sum f_i x_i}{n}$	B.	$\bar{x} = \frac{\sum_{i=1}^n f_i x_i}{n}$
	C.	$\bar{x} = \sum_{i=1}^n f_i x_i$	D.	$\bar{x} = f_i x_i$
૬૮.	વર્ગીકૃત n અવલોકનો માટે, મધ્યક નું સૂત્ર _____ છે.			
	A.	$\bar{x} = \frac{\sum f_i x_i}{n}$	B.	$\bar{x} = \frac{\sum_{i=1}^n f_i x_i}{n}$
	C.	$\bar{x} = \sum_{i=1}^n f_i x_i$	D.	$\bar{x} = f_i x_i$

69.	If $f(x) = \log x$ then $f(x) - f(y) =$ _____		
	A.	$f(x + y)$	B. $f(x + y)$
	C.	$f(x \cdot y)$	D. $f\left(\frac{x}{y}\right)$
69.	If $f(x) = \log x$ then $f(x) - f(y) =$ _____		
	A.	$f(x + y)$	B. $f(x + y)$
	C.	$f(x \cdot y)$	D. $f\left(\frac{x}{y}\right)$
70.	If $f(x) = \log e^x$ then $f(0) =$ _____		
	A.	0	B. 1
	C.	2	D. -1
70.	If $f(x) = \log e^x$ then $f(0) =$ _____		
	A.	0	B. 1
	C.	2	D. -1
