		ANS
	The Bodwad Sarvajanik Co-op Education Society Ltd, Bodwad **Arts, Commerce & Science College, Bodwad, Dist.-Jalgaon** **FYBSc** **Mathematics Paper II,sem I: MTH-102** **Subject: Calculus** **Question Bank**	**ANS**
1	$\lim_{x \to 1} \frac{Logx}{x-1}$ is …………… A. 0 B. 1 C. 2 D. None of these	**B**
2	$\lim_{x \to 5} \frac{x^2-4x-5}{x^2+2x-35}$ is ………… A. 0 B. 5 C. 0.5 D. None of these	**C**
3	$\lim_{x \to 7} \frac{x^2-10x+21}{x^2-12x+35}$ is ………… A. 7 B. 2 C. 0 D. None of these	**B**
4	$\lim_{x \to 0} \frac{\tan x - x}{x - \sin x}$ is ………… A. 0 B. 2 C. 0 D. None of these	**B**
5	$\lim_{x \to 7} \frac{e^x - e^{-x} - 2x}{x^2 sinx}$ is ………… A. 0 B. 1/3 C. 1 D. None of these	**B**
6	$\lim_{x \to \infty} \frac{logx}{x}$ is ………… A. 0 B. -1 C. 1 D. None of these	**A**
7	$\lim_{x \to \pi} \frac{\log(\pi - x)}{cotx}$ is ………… A. 0	**A**

	B. π C. -π D. None of these	
8	$\lim_{x \to 0} \frac{cosecx}{logx}$ is ………… A. 0 B. ∞ C. -∞ D. None of these	**C**
9	$\lim_{x \to 0} \frac{logx}{cotx}$ is ………… A. 0 B. ∞ C. -∞ D. None of these	**A**
10	$\lim_{x \to 0} xlogx$ is ………… A. 0 B. 1 C. ∞ D. None of these	**A**
11	$\lim_{x \to 0}(1 - cosx)(cotx)$ is ………… A. 0 B. 1 C. -1 D. None of these	**A**
12	$\lim_{x \to 0} sinxlogx$ is ………… A. 0 B. 1 C. -1 D. None of these	**A**
13	$\lim_{x \to 0} tanxlogx$ is ………… A. 0 B. 1 C. -1 D. None of these	**A**
14	$\lim_{x \to 0}(cosecx - cotx)$ is ………… A. 0 B. 1 C. -1 D. None of these	**A**
15	$\lim_{x \to \pi/2}(secx - tanx)$ is ………… A. 1	**B**

	B. 0 C. -1 D. None of these	
16	$\lim_{x\to 0} x^x$ is ………... A. 1 B. -1 C. 0 D. None of these	**A**
17	$\lim_{x\to a}(x-a)^{(x-a)}$ is ………... A. 1 B. -1 C. 0 D. None of these	**A**
18	$\lim_{x\to 0}(cosx)^{(cotx)}$ is ………... A. 1 B. -1 C. 0 D. None of these	**A**
19	$\lim_{x\to \pi/2}(sinx)^{(tanx)}$ is ………... A. 1 B. -1 C. 0 D. None of these	**A**
20	Every continuous function on closed and bounded interval is…….. A. bounded B. not bounded C. Can't say D. None of these	**A**
21	Every differentiable function is continuous is… A. True B. False	**A**
22	Every continuous function is differentiable is… A. True B. False	**B**
23	The function $f(x) = \|x\|$ is ………at x = 0. A. Not continuous B. continuous but not differentiable C. neither continuous nor differentiable D. differentiable	**B**
24	The function $f(x) = \|x - a\|$ is ………at x = 0. A. Differentiable B. continuous but not differentiable	**B**

	C. neither continuous nor differentiable D. Not continuous	
25	The function $\mathrm{f}(\mathrm{x}) = \|\mathrm{x} - 1\|$ is ………at x = 0. A. neither continuous nor differentiable B. both continuous and differentiable C. continuous but not differentiable D. differentiable but not continuous	**C**
26	The function $x sin\frac{1}{x}$ is ………at x = 0. A. both continuous and differentiable B. neither continuous nor differentiable C. differentiable but not continuous D. continuous but not differentiable	**D**
27	By Rolle's Theorem if a function f (x) defined on [a, b] is i) continuous in [a, b], ii) derivable in (a, b) and iii) f (a) = f (b). Then there exists some c ∈ (a, b) such that ……….. A. f '(c) = 0 B. f '(c) ≠ 0 C. f '(c) < 0 D. f '(c) > 0	**A**
28	Using Rolle's theorem for the function $x^2 - 1$ in [-1, 1] the value of c is….. A. -1 B. 1 C. 0 D. None of these	**C**
29	Using Rolle's theorem for the function $x^2 - 6x + 5$ in [1, 5] the value of c is….. A. 3 B. 1 C. 5 D. None of these	**A**
30	Using Rolle's theorem for the function $x^2 + 2x - 8$ in [-4, 2] the value of c is…. A. -4 B. 2 C. -1 D. None of these	**C**
31	Using Lagranges's M. V. T. for the function $1 - x^2$ in [1, 2] the value of c is….. A. 1 B. 1.5 C. 2 D. None of these	**B**
32	Using Lagranges's M. V. T. for the function $x^2 - 4x + 3$ in [1, 4] the value of c is.. A. 2.5	**A**

	B. 1 C. 4 D. None of these	
33	A function f (x) is said to be monotonic increasing function if $x_1 < x_2 \Longrightarrow$ .... A. $f(x_1) < f(x_2)$ B. $f(x_1) > f(x_2)$ C. $f(x_1) = f(x_2)$ D. None of these	**A**
34	A function f (x) is said to be monotonic decreasing function if $x_1 < x_2 \Longrightarrow$ .... A. $f(x_1) < f(x_2)$ B. $f(x_1) > f(x_2)$ C. $f(x_1) = f(x_2)$ D. None of these	**B**
35	The function f (x) = 7x – 3 is ....function on R. A. strictly increasing B. strictly decreasing C. Neither decreasing nor increasing D. None of these	**A**
36	The function f (x) = ax + b, where a, b are constant and a > 0 is ......function on R. A. strictly increasing B. strictly decreasing C. Neither decreasing nor increasing D. None of these	**A**
37	The function f (x) = x^2 is ....function in (-∞, 0). A. strictly increasing B. strictly decreasing C. Neither decreasing nor increasing D. None of these	**B**
38	A function f (x) is monotonic increasing function if ....∀ x ∈ (a, b) A. $f'(x) > 0$ B. $f'(x) < 0$ C. $f'(x) = 0$ D. $f'(x) \neq 0$	**A**
39	A function f (x) is monotonic decreasing function if ....∀ x ∈ (a, b) A. $f'(x) > 0$ B. $f'(x) < 0$ C. $f'(x) = 0$ D. $f'(x) \neq 0$	**B**
40	By using Cauchy's Mean Value Theorem for the functions $f(x) = e^x$ and $g(x) = e^{-x}$ in [a, b], the value of c is .... A. $\frac{a+b}{2}$ B. a C. b	**A**

	D. None of these	
41	True or False . $\lim_{x\to 1}\left[x^{(x-1)}\right] = e$ A)True B)False	**A**
42	True or False . $\lim_{\theta\to 0}\frac{\sin\theta}{\theta} = 1$ A)True B)False	**A**
43	True or False . $\lim_{\theta\to 0}\frac{\tan\theta}{\theta} = 1$ A)True B)False	**A**
44	True or False . $f(x) = \lvert x\rvert$ is continuous at x=0 A)True B)False	**A**
45	True or False . $f(x) = \lvert x\rvert$ is not continuous at x=0 A)True B)False	**B**
46	True or False . $\lim_{x\to a}\frac{x^n-a^n}{x-a} = na^{n-1}$ A)True B)False	**A**
47	True or False . $\lim_{x\to 0}\frac{a^n-1}{x} = \log a$ A)True B)False	**A**
48	True or False . $\lim_{x\to 0}\frac{e^x-1}{x} = 1$ A)True B)False	**A**
49	True or False . $\lim_{x\to 0}(1+x)^{\frac{1}{x}} = e$ A)True B)False	**A**

50	True or False . $\lim_{x \to \infty} \frac{k}{x^p} = 0 \ (p > 0)$ A)True B)False	**A**
51	The process of differentiating the same function again and again is called .... A) successive integration B) differentiation C) successive differentiation D) integration	(C)
52	If $y = x^m$ then for $m > n, y_n = \ldots\ldots\ldots$ A) $\frac{m!}{(m-n)!} x^{m-n}$ B) $n!$ C) 0 D) None of these	(A)
53	If $y = x^n$ then $y_n = \ldots\ldots\ldots\ldots$ A) 0 B) n C) $n!$ D) nx^{n-1}	(C)
54	If $y = x^m$ then for $m < n, y_n = \ldots\ldots\ldots$ A) m B) 0 C) n D) $n!$	(B)
55	If $y = (ax+b)^m$ then for $m > n, y_n = \ldots\ldots\ldots$ A) $\frac{m!a^n}{(m-n)!}(ax+b)^{m-n}$ B) $n!\,a^n$ C) 0 D) None of these	(A)
56	If $y = (ax+b)^n$ then $y_n = \ldots\ldots\ldots$ A) n B) $n!\,a^n$ C) 0 D) None of these	(B)
57	If $y = (ax+b)^m$ then for $m < n, y_n = \ldots\ldots\ldots$ A) $\frac{m!a^n}{(m-n)!}(ax+b)^{m-n}$ B) $n!\,a^n$ C) 0 D) None of these	(C)
58	If $y = e^{ax}$ then $y_n = \ldots\ldots\ldots$	(C)

	A) e^{ax} B) ae^{ax} C) $a^n e^{ax}$ D) $a^2 e^{ax}$	
59	If $y = e^{5x}$ then $y_3 =$ .... A) $5e^{5x}$ B) $25e^{5x}$ C) $125e^{5x}$ D) e^{5x}	(C)
60	If $y = e^{ax+b}$ then $y_n =$ .... A) e^{ax+b} B) ae^{ax+b} C) e^{ax} D) $a^n e^{ax+b}$	(D)
61	If $y = \frac{1}{ax+b}$ then $y_n =$ .... A) $\frac{n!a^n}{(ax+b)^{n+1}}$ B) $\frac{(-1)^n n!a^n}{(ax+b)^n}$ C) $\frac{n!a^n}{(ax+b)^n}$ D) $\frac{(-1)^n n!a^n}{(ax+b)^{n+1}}$	(D)
62	If $y = \frac{1}{x+a}$ then $y_n =$ .... A) $\frac{(-1)^n n!}{(x+a)^{n+1}}$ B) $\frac{(-1)^n n!}{(x+a)^n}$ C) $\frac{(-1)^n n!}{(x+a)^{n-1}}$ D) None of these	(A)
63	If $y = \frac{1}{x-a}$ then $y_n =$ .... A) $\frac{(-1)^n n!}{(x-a)^{n+1}}$ B) $\frac{n!}{(x+a)^{n+1}}$ C) $\frac{1}{(x+a)^{n-1}}$ D) $\frac{-1}{(x-a)^2}$	(A)
64	If $\log(ax+b)$ then $y_n =$ .... A) $\frac{1}{(ax+b)^2}$ B) $\frac{(-1)^n}{(ax+b)^{n+1}}$ C) $\frac{(-1)^n n!a^n}{(ax+b)^{n+1}}$ D) $\frac{(-1)^{n-1}(n-1)!a^n}{(ax+b)^n}$	(D)
65	If $\log(x+5)$ then $y_n =$ .... A) $\frac{1}{x+5}$ B) $\frac{(-1)^{n-1}}{(x+5)^n}$ C) $\frac{(n-1)!}{(x+5)^n}$ D) $\frac{(-1)^{n-1}(n-1)!}{(x+5)^n}$	(D)
66	If $y = \sin(ax+b)$ then $y_n =$	(A)

	A) $a^n \sin(ax+b+\frac{n\pi}{2})$ B) $a\sin(ax+b)$ C) $a^n \cos(ax+b+\frac{n\pi}{2})$ D) $a\cos(ax+b)$	
67	If $y = \sin(3x)$ then $y_n = $ ………… A) $3^n \sin(3x+\frac{n\pi}{2})$ B) $3\sin(3x)$ C) $3^n \cos(3x+\frac{n\pi}{2})$ D) $3\cos(3x)$	(A)
68	If $y = cos\ (ax+b)$ then $y_n = $ ………… A) $a^n \cos(ax+b+\frac{n\pi}{2})$ B) $a\sin(ax+b)$ C) $a^n \sin(ax+b+\frac{n\pi}{2})$ D) $a\cos(ax+b)$	(A)
69	If $y = \cos(3x)$ then $y_2 = $ ………… A) $-3\sin 3x$ B) $-9\cos 3x$ C) $-\sin 3x$ D) $-\cos 3x$	(B)
70	If $y = e^{ax}\sin(bx+c)$ then $y_n = $ ………… A) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\cos(bx+c)$ B) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\cos(bx+c+ntan^{-1}\frac{b}{a})$ C) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\sin(bx+c)$ D) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\sin(bx+c+ntan^{-1}\frac{b}{a})$	(D)
53	The process of differentiating the same function again and again is called ………. A) successive integration B) differentiation C) successive differentiation D) integration	(C)
54	If $y = x^m$ then for $m > n, y_n = $ ………. A) $\frac{m!}{(m-n)!}x^{m-n}$ B) $n!$ C) 0 D) None of these	(A)
55	If $y = x^n$ then $y_n = $ ………. A) 0 B) n C) $n!$ D) nx^{n-1}	(C)
56	If $y = x^m$ then for $m < n, y_n = $ ……….	(B)

	A) m B) 0 C) n D) $n!$	
57	If $y = (ax+b)^m$ then for $m > n, y_n =$ .... A) $\frac{m!a^n}{(m-n)!}(ax+b)^{m-n}$ B) $n!\,a^n$ C) 0 D) None of these	(A)
58	If $y = (ax+b)^n$ then $y_n =$ .... A) n B) $n!\,a^n$ C) 0 D) None of these	(B)
59	If $y = (ax+b)^m$ then for $m < n, y_n =$ .... A) $\frac{m!a^n}{(m-n)!}(ax+b)^{m-n}$ B) $n!\,a^n$ C) 0 D) None of these	(C)
60	If $y = e^{ax}$ then $y_n =$ .... A) e^{ax} B) ae^{ax} C) $a^n e^{ax}$ D) $a^2 e^{ax}$	(C)
61	If $y = e^{5x}$ then $y_3 =$ .... A) $5e^{5x}$ B) $25e^{5x}$ C) $125e^{5x}$ D) e^{5x}	(C)
62	If $y = e^{ax+b}$ then $y_n =$ .... A) e^{ax+b} B) ae^{ax+b} C) e^{ax} D) $a^n e^{ax+b}$	(D)
63	If $y = \frac{1}{ax+b}$ then $y_n =$ .... A) $\frac{n!a^n}{(ax+b)^{n+1}}$ B) $\frac{(-1)^n n!a^n}{(ax+b)^n}$ C) $\frac{n!a^n}{(ax+b)^n}$ D) $\frac{(-1)^n n!a^n}{(ax+b)^{n+1}}$	(D)
64	If $y = \frac{1}{x+a}$ then $y_n =$ .... A) $\frac{(-1)^n n!}{(x+a)^{n+1}}$ B) $\frac{(-1)^n n!}{(x+a)^n}$ C) $\frac{(-1)^n n!}{(x+a)^{n-1}}$ D) None of these	(A)

65	If $y=\frac{1}{x-a}$ then $y_n=$ .... A) $\frac{(-1)^n n!}{(x-a)^{n+1}}$ B) $\frac{n!}{(x+a)^{n+1}}$ C) $\frac{1}{(x+a)^{n-1}}$ D) $\frac{-1}{(x-a)^2}$	(A)
66	If $\log(ax+b)$ then $y_n=$ .... A) $\frac{1}{(ax+b)^2}$ B) $\frac{(-1)^n}{(ax+b)^{n+1}}$ C) $\frac{(-1)^n n! a^n}{(ax+b)^{n+1}}$ D) $\frac{(-1)^{n-1}(n-1)! a^n}{(ax+b)^n}$	(D)
67	If $\log(x+5)$ then $y_n=$ .... A) $\frac{1}{x+5}$ B) $\frac{(-1)^{n-1}}{(x+5)^n}$ C) $\frac{(n-1)!}{(x+5)^n}$ D) $\frac{(-1)^{n-1}(n-1)!}{(x+5)^n}$	(D)
68	If $y=\sin(ax+b)$ then $y_n=$ .... A) $a^n\sin(ax+b+\frac{n\pi}{2})$ B) $a\sin(ax+b)$ C) $a^n\cos(ax+b+\frac{n\pi}{2})$ D) $a\cos(ax+b)$	(A)
69	If $y=\sin(3x)$ then $y_n=$ .... A) $3^n\sin(3x+\frac{n\pi}{2})$ B) $3\sin(3x)$ C) $3^n\cos(3x+\frac{n\pi}{2})$ D) $3\cos(3x)$	(A)
70	If $y=cos(ax+b)$ then $y_n=$ .... A) $a^n\cos(ax+b+\frac{n\pi}{2})$ B) $a\sin(ax+b)$ C) $a^n\sin(ax+b+\frac{n\pi}{2})$ D) $a\cos(ax+b)$	(A)
71	If $y=\cos(3x)$ then $y_2=$ .... A) $-3\sin 3x$ B) $-9\cos 3x$ C) $-\sin 3x$ D) $-\cos 3x$	(B)
72	If $y=e^{ax}\sin(bx+c)$ then $y_n=$ .... A) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\cos(bx+c)$ B) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\cos(bx+c+ntan^{-1}\frac{b}{a})$ C) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\sin(bx+c)$	(D)

	D) $\left(\sqrt{a^2+b^2}\right)^n e^{ax}\sin(bx+c+ntan^{-1}\frac{b}{a})$	
73	$1+x+\frac{x^2}{2!}+\frac{x^3}{3!}+\cdots\cdots\cdots+\frac{x^n}{n!}+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $\sin x$ B) e^x C) $\cos x$ D) $\frac{1}{1-x}$	(B)
74	$x-\frac{x^3}{3!}+\frac{x^5}{5!}-\frac{x^7}{7!}+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $\sin x$ B) e^x C) $\cos x$ D) $\frac{1}{1-x}$	(A)
75	$1-\frac{x^2}{2!}+\frac{x^4}{4!}-\frac{x^6}{6!}+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $\sin x$ B) e^x C) $\cos x$ D) $\frac{1}{1-x}$	(C)
76	$1+x+x^2+x^3+\cdots\cdots\cdots+x^n+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $\sin x$ B) e^x C) $\cos x$ D) $\frac{1}{1-x}$	(D)
77	$1-x+x^2-x^3+\cdots\cdots\cdots+(-1)^n x^n+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $\frac{1}{1+x}$ B) $\frac{1}{1-x}$ C) $\tan x$ D) $\sec x$	(A)
78	$1+x-\frac{x^3}{3}-\frac{x^4}{6}-\frac{x^5}{30}+\cdots\cdots$ is Maclaurin's series expansion of ……… A) $e^x\cos x$ B) $e^x\sin x$ C) $\tan x$ D) $\sec x$	(A)
79	By reduction formula $\int_0^{\frac{\pi}{2}} sin^n x\,dx=$ ………… A) $\int_0^{\frac{\pi}{2}} sin^{n-2}x\,dx$ B) $\int_0^{\frac{\pi}{2}} sin^{n-1}x\,dx$ C) $\frac{n-1}{n}\int_0^{\frac{\pi}{2}} sin^{n-2}x\,dx$ D) $\frac{n}{n-1}\int_0^{\frac{\pi}{2}} sin^{n-2}x\,dx$	(C)

80	$\int_0^{\frac{\pi}{2}} sin^5x\ dx =$ ……….. A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{8\pi}{15}$	(B)
81	$\int_0^{\frac{\pi}{2}} sin^6x\ dx =$ ……….. A) $\frac{5\pi}{32}$ B) $\frac{8\pi}{15}$ C) $\frac{5}{32}$ D) $\frac{8}{15}$	(A)
82	By reduction formula for $\int_0^{\frac{\pi}{2}} cos^nx\ dx =$ ……….. A) $\int_0^{\frac{\pi}{2}} cos^{n-2}x\ dx$ B) $\int_0^{\frac{\pi}{2}} cos^{n-1}x\ dx$ C) $\frac{n-1}{n}\int_0^{\frac{\pi}{2}} cos^{n-2}x\ dx$ D) $\frac{n}{n-1}\int_0^{\frac{\pi}{2}} cos^{n-2}x\ dx$	(C)
83	$\int_0^{\frac{\pi}{2}} cos^7x\ dx =$ ……….. A) $\frac{5\pi}{32}$ B) $\frac{8\pi}{15}$ C) $\frac{16}{35}$ D) $\frac{8}{15}$	(C)
84	$\int_0^{\frac{\pi}{2}} sin^8x\ dx =$ ……….. A) $\frac{35}{256}$ B) $\frac{8\pi}{15}$ C) $\frac{16}{35}$ D) $\frac{35}{256}$	(A)
85	$\int_0^{\frac{\pi}{2}} sin^9x\ dx =$ ……….. A) $\frac{35}{256}$ B) $\frac{128\pi}{315}$ C) $\frac{128}{315}$ D) $\frac{35}{256}$	(C)
86	$\int_0^{\frac{\pi}{2}} cos^{10}x\ dx =$ ……….. A) $\frac{63\pi}{512}$ B) $\frac{128\pi}{315}$	(A)

	C) $\frac{128}{315}$ D) $\frac{63}{512}$	
87	$\int_0^{\frac{\pi}{6}} sin^6 3x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{5\pi}{32}$ B) $\frac{5\pi}{96}$ C) $\frac{16}{35}$ D) $\frac{8}{15}$	(B)
88	$\int_0^{\pi} cos^7 \frac{x}{2}\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{5\pi}{32}$ B) $\frac{5\pi}{96}$ C) $\frac{32}{35}$ D) $\frac{8}{15}$	(C)
89	By reduction formula $\int_0^{\frac{\pi}{2}} sin^m x. cos^n x\ dx = \ldots\ldots\ldots\ldots$ A) $\int_0^{\frac{\pi}{2}} sin^m x. cos^{n-2} x\ dx$ B) $\frac{m-1}{m+n}\int_0^{\frac{\pi}{2}} sin^{m-2} cos^{n-1} x\ dx$ C) $\frac{m+1}{m+n}\int_0^{\frac{\pi}{2}} sin^{m-2} cos^n x\ dx$ D) $\frac{n+1}{m+n}\int_0^{\frac{\pi}{2}} sin^{m-2} cos^n x\ dx$	(B)
90	$\int_0^{\frac{\pi}{2}} sin^4 x. cos^6 x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{3\pi}{512}$ B) $\frac{5\pi}{496}$ C) $\frac{32}{512}$ D) $\frac{1}{256}$	(A)
91	$\int_0^{\frac{\pi}{2}} sin^3 x. cos^6 x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{3\pi}{512}$ B) $\frac{5\pi}{496}$ C) $\frac{2}{63}$ D) $\frac{1}{256}$	(C)
92	$\int_0^{\frac{\pi}{2}} sin^4 x. cos^5 x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{3\pi}{512}$ B) $\frac{8}{315}$ C) $\frac{2}{630}$ D) $\frac{1}{256}$	(B)

93	$\int_0^{\frac{\pi}{2}} cos^5x\ dx = \ldots\ldots\ldots\ldots$ A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{8\pi}{15}$	(B)
94	$\int_0^{\frac{\pi}{2}} cos^6x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{5\pi}{32}$ B) $\frac{8\pi}{15}$ C) $\frac{5}{32}$ D) $\frac{8}{15}$	(A)
95	$\int_0^{\frac{\pi}{2}} cos^4x\ dx = \ldots\ldots\ldots\ldots$ A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{3\pi}{16}$	(D)
96	$\int_0^{\frac{\pi}{2}} sin^4x\ dx = \ldots\ldots\ldots\ldots$ A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{3\pi}{16}$	(D)
97	$\int_0^{\frac{\pi}{2}} cos^4x.sin^6x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{3\pi}{512}$ B) $\frac{5\pi}{496}$ C) $\frac{32}{512}$ D) $\frac{1}{256}$	(A)
98	$\int_0^{\frac{\pi}{2}} cos^6x.sin^6x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{5\pi}{2048}$ B) $\frac{5\pi}{496}$ C) $\frac{32}{512}$ D) $\frac{1}{256}$	(A)
99	$\int_0^{\frac{\pi}{2}} cos^2x.sin^2x\ dx = \ldots\ldots\ldots\ldots$ A) $\frac{\pi}{16}$ B) $\frac{5\pi}{496}$ C) $\frac{32}{512}$ D) $\frac{1}{256}$	(A)

100	$\int_0^{\frac{\pi}{2}} cos^2x.sin^8x\,dx = ...$ A) $\frac{7\pi}{512}$ B) $\frac{5\pi}{496}$ C) $\frac{32}{512}$ D) $\frac{1}{256}$	(A)
101	$\int_0^{\frac{\pi}{2}} sin^5xcos^0x\,dx = ...$ A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{8\pi}{15}$	(B)
102	$\int_0^{\frac{\pi}{2}} sin^3x\,dx = ...$ A) 0 B) $\frac{8}{15}$ C) 5π D) $\frac{2}{3}$	(D)