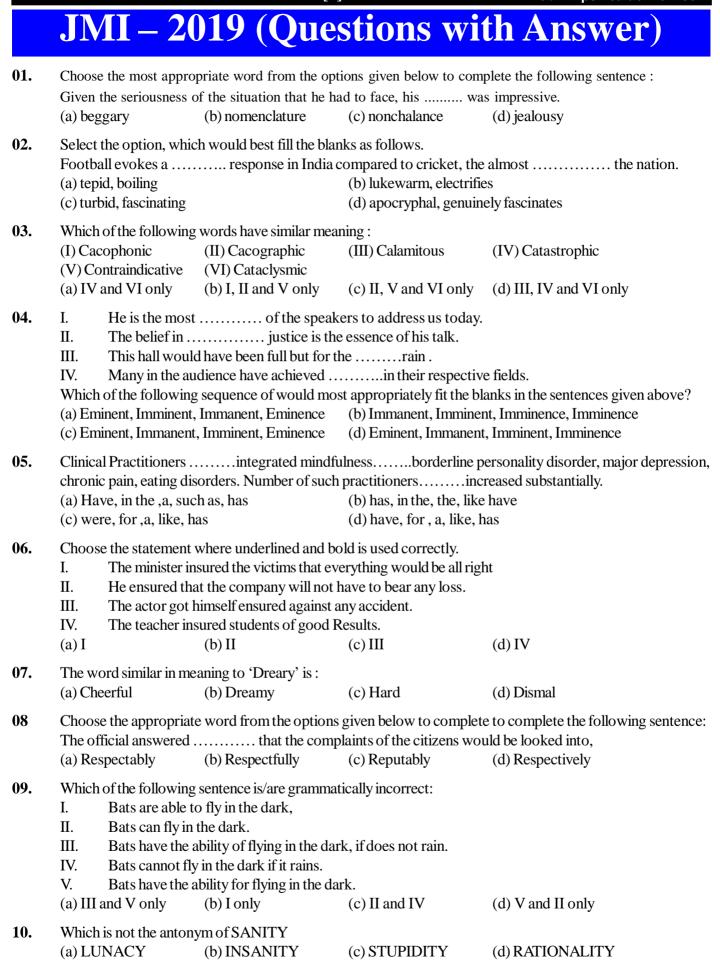
#### **INPS CLASSES**

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11.	-	g is not a Language proce		
	(a) Compiler	(b) Loader	(c) Interpreter	(d) Assembler
12.	If $(41)_6 = (121)_b$ then (a) 1	b is : (b) 2	(c) 3	(d) 4
12				(u) +
13.	$\frac{\mathbf{List} - \mathbf{I}}{\mathbf{List} - \mathbf{I}}$	– II and select correct g	List – II	
	P. RAM	1.	Hertz	
	Q. CPU Speed	2. 3.	MB Derton / Soc	
	R.MonitorS.CD-ROM Sp		Bytes / Sec Inch	
	(a) $(P-2)$ , $(Q-1)$ , $(R-4)$		(b) (P-1), (1-2),(R-3)	, (S-4)
	(c) (P-3), (Q-4), (R-2	l), (S-1)	(d) (P-4), (Q-3), (R-1	), (S-2)
<b>14.</b> Bitcoin uses which network technology for transaction and mining.				
	(a) Peer to Peer Netw		(b) Distributed	
	(c) Wide Are Network		(d) Intranet Network	
15.	The binary coding syst (a) BCD	tem that represents 256 ( (b) ASCII	different characters or bi (c) EBCDEIC	(d) Both b and c
1(				(d) Doth b and c
16.	(a) $(3B1)_{16}$	raction of $(256)_{16}$ from ( (b) $(331)_{16}$	$(c) (371)_{16}$	(d) (3D1) <sub>16</sub>
17.	10	sors is ideal for Mobile $r$	10	$(0)(021)_{16}$
17.	(a) CISC	(b) RISC	(c) VISC	(d) LISC
18.	RAID stands for			
10.	(a) Reproduce Array of Intelligent Disks (b) Reproduce Array of Inexpensive Disks			
	(c) Redundant Array o	f Inexpensive Drives	(d) Redundant Array of	of independent Disks
19.		out from the following :		
	(a) QWERTY	(b) SULTRY	(c) AZERTY	(d) CVORAK
20.		for in the operating syste		
	(a) Extra Power	(b) Extended Product	(c) Extra Performance	(d) Experience
21.	The range of 2's comp	lement representation of	0 0	
	(a) $-2^{n}$ to $2^{n}$	(b) $-(2^{n-1})to(2^{n-1})$	(c) $-2^{n-1}$ to $2^{n-1}$	(d) $-2^{n-1}$ to $2^{n-1}-1$
22.	Consider the following lists, and then select the correct option after matching them.			
	List - I			
		iented Language	P. COBOL	
	<ol> <li>Object Oriente</li> <li>Business Orien</li> </ol>		Q. HTML R. C++	
	4. Web Page	neu Language	S. Pascal	
23.	When a computer is sy	witched on, the BIOS is	loaded from:	
	(a) Hard Disk	(b) RAM	(c) ROM	(d) CD-ROM
24.	Which of the following	g is not a search engine:		
	(a) Zing	(b) Google	(c) Yahoo	(d) Bing
25.	8 GB is equal to :			
	(a) 230 bytes	(b) 233 bytes	(c) 220 bytes	(d) 223 bytes

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26.	$x = 0.125 E + 01$ , $x = (1.01)_2$ and $y = 0$		
	(a) x, y and z are equal (c) Only x and z are equal	(b) Only x and y are equal (d) All x, y and z are different	
27.	The product of two binary numbers 00(a) 11000011(b) 01100011	001101 and 00001111 is : (c) 00001101 (d) 000100010	
28.	<ul> <li>Which of the following group of stateme</li> <li>P. Mouse, Keyboard and plotter a</li> <li>Q. Unix, Windows and Linux are a</li> <li>R. Register, Cache and Hard-disk</li> <li>S. Monitor, Printer and Scanner ar</li> <li>(a) P, Q (b) P, S</li> </ul>	re all input devices. ll input devices. are all memory Modules.	
29.	Which one is the founder or inventor of (a) Satoshi Nakomoto (b) Peter Thiel	BITCOIN the famous crypto currency. (c) Warren Buffet (d) Bitcoin.org	
30.	Which of the following group consists of (a) RAM and Floppy Disk (c) RAM and Cache	f volatile memory: (b) Hard disk and ROM (d) Cache and ROM	
31.	A, B and C scored 681 runs such that fo C's run. Difference between A's and C's (a) 105 (b) 450	ur times A's run is equal to 5 times B's run which is equal to seven tin s run is : (c) 97 (d) 125	me
32.	When the price of computer was reductive revenue? (a) 30% (b) 28%	ed by 20% the sale increased by 60%. What was the increase in to (c) 55% (d) 40%	tal
33.	A watch ticks 90 times in 95 second and are started together, how many times the (a) 110 times (b) 101 times	l an another watch ticks 315 times in 323 seconds. If both the watch ey will tick together in the first hour? (c) 320 times (d) 210 times	ies
34.	minute. At the same time, Somaya gets	loor of a multi-storey building and rides up at the rate of 57 floors p another elevator at the $51^{\text{th}}$ floor of the same building and rides dow ey travel at these rates, at which floor they will cross each other? (c) 30 (d) 32	-
35.	If 7 parallel lines are intersected by anot (a) 441 (b) 400	her set of 7 parallel lines, the numbers of parallelograms formed is (c) 49 (d) 98	:
36.		The boy 'X' stood 5 <sup>th</sup> in the class. The girl was 8 <sup>th</sup> from the last. T and 'Y'. The total number of students in the class were: (c) 25 (d) 26	'he
37.	A is 30 days older to B and C is 50 wee (a) Tuesday (b) Thursday	eks older to A. If C was born on Tuesday, on which day was B bor (c) Wednesday (d) Monday	m?
38.	Branches of 5 nationalized banks A, B, A, B, C, D and E are in Lucknow and H A, B and E are in Kanpur and Allahaba B, C, and D are in Lucknow and Varan B, E and D are in Allahabad and sahara C, E and D are in Saharanpur and Mor Which bank has branches in all cities ex (a) A (b) B	d. asi. bpur. adabad?	

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39.	Select IDD O	NE OUT from the following	g pairs:		
	(a) May: Janu	(b) September : N	Vovember (c) (	October : April	(d) January : December
40.	$P \times Q - S$ mea	U I			B means A is the wife of B, then f Q (d) None of these
41	. ,				
41.	(a) 51	(b) 53	(c) 48	the flace $(d)^2$	of 50? 5, 16, 50, 158, 481, 49
42.		library has 510 visitors on S y in a 30 days month beginn (b) 276	•		ys. Then the average number of 280
43.	6 : 43 : : 5 : ?, (a) 63	then what number can be p (b) 52	ut at the place of " (c) 26	?". (d) 3	31
44.	Next term in t (a) 399	he following series is : 122, (b) 400	197, 290 (c) 401	(d) 4	402
45.	Selected the C (a) 2197	DDD number form given alte (b) 3375	ernatives. (c) 4099	(d) 2	2744
46.	5, 8, 9, 8, 7, 7	7, 8, 9			by '9' : 7, 8, 9, 9, 8, 5, 4, 3, 8, 9
	(a) One	(b) Two	(c) Three	(d) I	Four
47.		oortrait of a man, Sanjay said t whose portrait was Sanjay (b) His nephew			her's son. Brothers and sisters I His cousin
40	. ,	· · · <b>-</b>			
48.	(a) XUEGH	de LATE is written as PEX (b) XVFGI	(c) XVEGI		<b>KVELI</b>
49.	Statement :	S1: Some cats are rats S2: All tats are bats S3: Some bats are birds			
	<b>Conclusion:</b>				
		C1: Some birds are cats			
		C2: Some bats are cats C3: Some birds are tats			
		C3: Some birds are tats C4: No birds is a tat			
	Which of the c	conclusion(s) follows from t	he above statemen	t S1,S2 and S3:	
	(a) Only C3 fo			1 or C4 and C3	follows
50.	A liquid container is usually filled up in 8 hrs. Due to a leak since the beginning it took 2 hrs. more to fill up t container. The leak could empty the filled container in:			-	
	(a) 30 hrs.	(b) 40 hrs.	(c) 28 hrs.	(d) 2	34 hrs.
51.	having 3 or mo	ore elements is:			The number of subsets of $A \times B$
	(a) 256	(b) 220	(c) 219	(d) 2	211
	If A B and C a	rethree sets such that A	D A G and		
52.	II A,D and C a	are three sets such that $A \cap$	$B = A \cap C$ , and A	$A \cup B = A \cup C$	, then

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53.	The value of tan <sup>-1</sup>					
	(a) $\pi - 13$	(b) $\mathbf{A} = \mathbf{C}$	(c) $4\pi - 13$	(d) $-4\pi n + 13$		
54.	$(\cot x. \cot 2x - \cot 2x \cdot \cot 3x - \cot 3x \cdot \cot x)$ equals					
	(a) $(\cot x + \cot 2x + \cot 3x)$ (b) $(\cot x - \cot 2x - \cot 3x)$ (c) 1 (d) -1					
	$(\pi)$					
55.	Value of $\tan\left(\frac{\pi}{8}\right)$ is	5:				
	(a) $\sqrt{2} - 1$	(b) $1 - \sqrt{2}$	(c) $1 - \frac{1}{\sqrt{2}}$	(d) $1 + \frac{1}{\sqrt{2}}$		
			$\sqrt{2}$	$\sqrt{2}$		
56.		-	that $ Z-1  =  Z+1  =  Z-i $			
	(a) 1	(b) 2	(c) ∞	(d) 0		
57.	If $\omega$ is a cube roo (a) -1	t of unity and $(1 + \omega)^7$ (b) 0	= A + B equals (c) 2	(d) –2		
58.	If $x + y + z = 5$ and	nd $xy + yz + zx = 3$ , the	en the least and greatest va	alue of x are		
	(a) $\frac{10}{3}$ ,5	(b) $-1, \frac{13}{2}$	(c) $-\frac{17}{2}$ .7	(d) None		
	3	3	3			
59.	The sum of intege (a) 3000	ers from 1 to 100 that ar (b) 3050	re divisible by 2 or 5 is (c) 3600	(d) 3250		
60.	The remainder wh (a) 3	nen 27 <sup>40</sup> is divided by 12 (b) 7	2 is (c) 9	(d) 11		
				(4) 11		
61.	The sum of the ser	ries $1 + \frac{1}{4.2!} + \frac{1}{16.4!} + \frac{1}{6}$	$\frac{2}{54.6!} + \dots + \infty$ is			
	(a) $\frac{e-1}{\sqrt{e}}$	(b) $\frac{e+1}{\sqrt{e}}$	(c) $\frac{e-1}{2\sqrt{e}}$	(d) $\frac{e+1}{2\sqrt{e}}$		
	√e	√e	2√e	2√e		
62.	If the sum of two r	number is 6 time s their	mean, then the numbers ar	e in the ratio		
	(a) $\frac{3+\sqrt{2}}{\sqrt{2}}$	(b) $\frac{3+2\sqrt{2}}{2}$	(c) $\frac{3+\sqrt{3}}{3-\sqrt{3}}$	(d) $\frac{3+3\sqrt{3}}{2-2\sqrt{2}}$		
	$J = \sqrt{2}$	$J = 2 \sqrt{2}$	5 15	$3 - 3\sqrt{3}$		
63.	The orthocenter o	of triangle formed by $(0,$				
	(a) (2, 0)	(b) $\left(\frac{3}{2},2\right)$	$(c)\left(\frac{3}{4},3\right)$	$(d)\left(3,\frac{3}{4}\right)$		
64.	A ray of light passing through the point (1, 2) reflects on the X axis at point A and the reflected ray passes					
	through the point	(5, 3), the coordinates f	<i>.</i>			
	(a) (5, 0)	(b) (-5, 0)	$(c)\left(\frac{13}{5},0\right)$	$(d)\left(-\frac{13}{5},0\right)$		
65.	From a point on th	the circle $x^2 + y^2 = a^a$ ,	tangents are drawn to the	circle $x^2 + y^2 = b^2$ , the chord of contact		
	of these tangents i		$c^2$ , then a, b and c, are in			
	(a) A. P.	(b) G. P.	(c) H. P.	(d) None		
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**INPS CLASSES** [6] web. : inpsmcalucknow.com If the chord of contact of tangents from a point P to the parabola  $y^2 = 4ax$  touches the parabola  $x^2 = 4by$ , 66. the locus of P is (c) Ellipse (a) Circle (b) parabola (d) Hyperbola 67. A man running around a race course notes that the sum of the distance from two flag posts from him is always 10m and the distance between the flag posts is 8m. The equation of path traced by man is (a)  $\frac{x^{25}}{25} + \frac{y^2}{9} = 1$  (b)  $\frac{x^2}{9} + \frac{y^2}{25} = 1$  (c)  $\frac{x^2}{9} - \frac{y^2}{25} = 1$  (d)  $\frac{x^2}{9} + \frac{y^2}{25} = 1$ **68**. The vertices of a parallelogram ABCD are A(3, -1, 2), B(1, 2, -4) and C(-1, 1, 2). The fourth vertex D is (b) (1, -2, 8) (d)(-2, 1, 8)(c)(-2, 1, 8)(a)(1, 2, 8)**69**. If all the words with or without meaning, formed using all the letters of the word JAMIA are arranged in a dictionary, then what will be the 50<sup>th</sup> word. (a) AAJMI (b) A A M I J (c) JAAMI (d) MAAJI Evaluate  $\lim_{x \to 0} \left| \frac{\sin x}{x} \right|$ , where [] denotes the greatest integer function 70. (a) 0 (b) 1 (c) - 1(d) does not exist Evaluate  $\lim_{x\to 0} \frac{\sqrt{1-\cos 2x}}{x}$ 71. (b)  $-\sqrt{2}$ (a)  $\sqrt{2}$ (c) 1 (d) none 72. The mean of 5 observations is 4.4 and their variance is 8.24. If three of the observations are 1, 2 and 6, the other two observations are : (a) 4 and 5 (b) 5 and 9 (c) 4 and 9 (d) 5 and 8 73. Three letters are dictated to three persons and an envelope is addressed to each of them, the letters are inserted into the envelope at random so that each envelope contains exactly one letter. What is the probability that at least one letter is in it's proper envelope (a) 1/3(b) 2/3(c) 2/5(d)1/5A tourist visits four cities A, B, C and D in a random order. What is the probability that he visits A before B. 74. (a) 1/2(b) 1/3(c) 1/4(d) 1/5The function  $f:[0,3] \rightarrow [1,29]$  defined by  $f(x) = 2x^3 - 15x^2 + 36x + 1$  is 75. (a) one one and onto (b) onto but not one - one (c) one - one but not onto (d) neither one - one nor onto If  $f: R \to R$  be given by  $f(x) = (3-x^3)^{\frac{1}{3}}$ , then f(f(f(x))) is 76. (a)  $x^{\frac{1}{3}}$ (b)  $x^{3}$ (d)  $3 - x^3$ (c) x77. If the matrix A is both symmetric and skew – symmetric, then (a) A is diagonal matrix (b) a is a null matrix (c) a is a square matrix (d) none If  $A = \begin{pmatrix} 2 & -3 \\ -4 & 1 \end{pmatrix}$ , then  $adj(3A^2 + 12A)$  is equal to 78. (a)  $\begin{pmatrix} 72 & -84 \\ -63 & 51 \end{pmatrix}$  (b)  $\begin{pmatrix} 51 & 84 \\ 63 & 72 \end{pmatrix}$  (c)  $\begin{pmatrix} 72 & -63 \\ -84 & 51 \end{pmatrix}$  (d) None of these Hazratgani, Lucknow Ph.: 9838162263, 9125777999, e-mail. id: inpsclasses@gmail.com

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79.	If a, b, c are in A.P, the	en value of determinant	$\begin{vmatrix} x+2 & x+3 & x+2a \\ x+3 & x+4 & x+2b \\ x+4 & x+5 & x+2c \end{vmatrix}$	is	
	(a) 0	(b) 1	(c) x	(d) 2x	
80.	If a determinant of ord $(a) -2$	ler $3 \times 3$ is formed using (b) $-4$	the numbers 1 or -1, the (c) 0	n the minimum value of determinant is: (d) -8	
81.	Number of points at w	which the function $f(x) =$	$= \min( x ,  x+1 ,  x-2 )$	4  ) is not differentiable :	
	(a) 3	(b) 4	(c) 5	(d) 6	
82.	Consider two functions $f(x)$ and $g(x)$ such that $f(x) =  x  + [x]$ and $g(x) =  x  \times [x]$ , where [x] denotes the greatest integer function (a) $f(x)$ is continuous at $x = 1$ , $g(x)$ is continuous at $x = 1$ (b) $f(x)$ is continuous at $x = 1$ , $g(x)$ is discontinuous at $x = 1$ (c) $f(x)$ is discontinuous at $x = 1$ , $g(x)$ is continuous at $x = 1$ (d) $f(x)$ is discontinuous at $x = 1$ , $g(x)$ is continuous at $x = 1$				
83.	If $\lim_{x \to 0} \left( 1 + \frac{a}{x} + \frac{b}{x^2} \right)$	$= e^2$ , then values of a an	nd b are		
	(a) $a \in \mathbf{R}, b \in \mathbf{R}$	(b) $a = 1, b \in \mathbb{R}$	(c) $a \in R$ , $b = 2$	(d) $a = 1, b = 2.$	
84.	If m is the slope of tan	gent at any point on the	curve $e^y = 1 + x^2$ , then		
	(a)  m  > 1	(b)   m  ≤1	(c) $ m  < 2$	$(d) \mid m \mid \geq 2$	
85.	Let $f(x) = (x^3 + ax^2)^{-1}$	$+bx+5\sin^2 x$ ) be increased	easing for all $x \in R$ , the	en a and b satisfy	
	(a) $a^3 - 3b - 15 > 0$	(b) $a^3 - 3b + 15 > 0$	(c) $a^3 - 3b + 15 \le 0$	(d) $a^3 - 3b - 15 < 0$	
86.	The points of extremu	m of the function $f(x) =$	$=\int_{1}^{x} e^{-\frac{t^{2}}{2}} (1-t^{2}) dt$ are		
	(a) ±1	(b) 0	(c) $\pm 12$	(d) ±2	
87.	Value of $\int_{1}^{2} e^{2x} \left(\frac{1}{x} - \frac{1}{2}\right)$	$\left(\frac{1}{\mathbf{x}^2}\right)$ is			
	(a) $\frac{e^2(e^2-4)}{4}$	(b) $\frac{e^2(e^2-2)}{4}$	(c) $\frac{e^2(e^2+2)}{2}$	(d) $\frac{e^2(e^2-2)}{2}$	
88.	Value of $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} (x^3 + x \cdot c)$	$\cos x + \tan^3 x + 1$ ) dx is			
	(a) 0	(b) π	(c) 2π	(d) 3π	
89.	$\int \frac{d\theta}{1-\tan\theta} \text{ equal to :}$				
	(a) $\frac{\theta}{2} - \frac{1}{2}\log \cos\theta - \sin\theta  + c$ (b) $\frac{\theta}{2} + \frac{1}{2}\log \cos\theta - \sin\theta  + c$				
	(c) $\frac{\theta}{3} - \frac{1}{3}\log \cos\theta - \sin\theta  + c$ (d) $\frac{\theta}{3} + \frac{1}{3}\log \cos\theta - \sin\theta  + c$				
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90.	If $ \vec{a} + \vec{b}  =  \vec{a} - \vec{b} $ , then						
	(a) $\vec{a}$ is parallel to $\vec{b}$	(b) $\vec{a}$ is perpendicular	to to $\vec{b}$ (c) $\vec{a} = \vec{b}$	(d) none			
91.	Distance between the	two planes $2x + y + 2z$	= 8 and $4x + 2y + 4z +$	-5 = 0 is			
	(a) 32 units	(b) 52 units	(c) 72 units	(d) 92 units			
92.	A man is known to spe it is actually a six is :	A man is known to speak truth 3 out of 4 times. He throws a die and reports that it is a six. The probability that it is actually a six is :					
	(a) 1/8	(b) 5/8	(c) 7/8	(d) 3/8			
93.		oter hitting a target is 3/ ne target at least once is 1		er of times that he must fire so that the			
	(a) 2	(b) 3	(c) 4	(d) 5			
94.	If A and B are two inde (a) 0.28	ependent event such tha (b) 0.30	at $P(A) = 0.3$ , $P(B) = 0.6$ (c) 0.32	5, then P (neither A nor B) is (d) 0.18			
95.	Period of the function	$f(x) = \cos\left(\frac{2x}{3}\right) - \sin\left(\frac{2x}{3}\right) - \sin\left($	$\left(\frac{4x}{5}\right)$ is				
	(a) 5π	(b) 10π	(c) 15π	(d) 20π			
96.	Which of the following	s is not an indeterminate f	form:				
	(a) 0°	(b) $0^{\infty}$	(c) $\infty^0$	(d) $1^{\infty}$			
97.	The area of the region	described by $A = \{(x, $	y): $x^2 + y^2 \le 1$ and $y^2$	$\leq 1-x$ is			
	(a) $\frac{\pi}{2} + \frac{4}{3}$	(b) $\frac{\pi}{2} - \frac{4}{3}$	(c) $\frac{\pi}{2} - \frac{2}{3}$	(d) $\frac{\pi}{2} + \frac{2}{3}$			
98.	A curve passes through the point $\left(1, \frac{\pi}{6}\right)$ . Let the slope of the curve at each point $(x, y)$ be $\frac{y}{x} + \sec\left(\frac{y}{x}\right)$ , $x > 0$ .						
	Then the equation of the curve is :						
	(a) $\sin\left(\frac{y}{x}\right) = \log x + \frac{y}{x}$	$\frac{1}{2}$ (b) $\cos\left(\frac{2y}{x}\right) = \log x$	$x+2$ (c) $\sec\left(\frac{2y}{x}\right) = \log\left(\frac{2y}{x}\right)$	$gx+2$ (d) $\cos\left(\frac{2y}{x}\right) = \log x + \frac{1}{2}$			
99.	Let = $\begin{bmatrix} 0 & \omega \\ \omega & 0 \end{bmatrix}$ , where $\omega$ is a cube root of unity. then P <sup>24</sup> is :						
	(a) P <sup>2</sup>	(b) P	(c) Identity Matrix	(d) null Matrix			
100.	The area bounded by (a) 1/3	the curve $y^2 = x$ and $x^2 =$ (b) 2/3	y is : (c) 4/3	(d) 5/3			

### [9]

# Answer Kye

01. (c) 02. (b) 03. (d) 04. (c) 05. (a) 06. (b) 07. (d) 08. (b) 09. (a) 10. (d) 11. (b) 12. (d) 13. (a) 14. (a) 15. (b) 16. (d) 17. (b) 18. (b) 19. (b) 20. (d) 21. (d) 22. \* 23. (c) 24. (a) 25. (a) 26. (a) 27. (a) 28. (d) 29. (a) 30. (c) 31. (d) 32. (b) 33. (b) 34. (c) 35. (a) 36. (a) 37. (c) 38. (a) 39. (d) 40. (a) 41. (d) 42. (a) 43. (c) 44. (c) 45. (d) 46. (d) 47. (a) 48. (c) 49. (c) 50. (b) 51. (c) 52. (b) 53. (b) 54. (c) 55. (a) 56. (d) 57. (c) 58. (b) 59. (b) 60. (c) 61. (d) 62. (b) 63. (d) 64. (c) 65. (b) 66. (d) 67. (a) 68. (b) 69. (d) 70. (b) 71. (d) 72. (c) 73. (b) 74. (a) 75. (d) 76. (c) 77. (b) 78. (b) 79. (a) 80. (a) 81. (a) 82. (a) 83. (b) 84. (b) 85. (c) 86. (b) 87. (d) 88. (b) 89. (b) 90. (b) 91. (c) 92. (d) 93. (c) 94. (a) 95. (a) 96. (d) 97. (c) 98. (c) 99. (c) 100. (a)