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ARYA NAGAR INTER COLLEGE
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KHALSA GIRLS INTER COLLEGE
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MP MCA - 1998

1. *If coefficient of x^r in expansion of $(1 + x)^{20}$ is C_r. Then coefficient of x^6 in $(1 + x^2 + x^4 + x^6)^{20}$ is :*
   (a) $C_1^2 + C_0$ (b) $C_0C_3 + C_1^2$
   (c) $C_0C_3 + C_1C_4$ (d) none of these

2. *The coefficient of x in expansion of* $\log \frac{1}{1 - x - x^2 + x^3}$ *is :*
   (a) 1 (b) -1
   (c) 1/2 (d) 0

3. *The value of determinant* $\begin{vmatrix} 0 & a & -b \\ -a & 0 & c \\ b & -c & 0 \end{vmatrix}$ *is :*
   (a) -2abc (b) -bca
   (c) 0 (d) $a^2 + b^2 + c^2$

4. *Value of determinant* $\begin{vmatrix} b+c & c & a \\ b & c+a & b \\ c & c & a+b \end{vmatrix}$ *is :*
   (a) 0 (b) 4abc
   (c) $1 + \frac{1}{a} + \frac{1}{b} + \frac{1}{c}$ (d) none of these

5. *The value of* $\begin{vmatrix} x+y+2z & x & y \\ z & 2x+y+x & y \\ z & x & x+2y+z \end{vmatrix}$ *is*
   (a) $2(x + y + z)^2$ (b) $2(x + y + z)^3$
   (c) $3(x + y + z)$ (d) none of these

6. *If A is square matrix of order 3, then which of the following is correct :*
   (a) det (-A) = det A (b) det 2A = 2 det A
   (c) det (-A) = -det A (d) det (A + I) = I + detA

7. *If A be a matrix of order 3 × 3 and |A| = D, then |nA| is :*
   (a) nD (b) n^2D
   (c) n^3D (d) 3nD

8. *If* $A = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$, $B = [8 \quad 4 \quad 6]$ *then AB is :*
   (a) [8 8 18] (b) $\begin{bmatrix} 8 \\ 8 \\ 18 \end{bmatrix}$
   (c) $\begin{bmatrix} 8 & 4 & 6 \\ 16 & 8 & 12 \\ 24 & 12 & 18 \end{bmatrix}$ (d) none of these

9. *Matrix* $\begin{bmatrix} 4i & 2+i & 5 \\ -2+i & 0 & 4 \\ -5 & -4 & -3i \end{bmatrix}$ *is :*
   (a) Hermitian (b) skew Hermitian
   (c) Symmetric (d) Singular

10. *If every element of a third order square matrix with determinant value D is multiplied by -2, then determinant of new matrix is :*
    (a) 8D (b) -8D
    (c) -2D (d) 2D

11. *Eigen vector for* $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ *is :*
    (a) $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$ (b) $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$
    (c) $\begin{bmatrix} 0 \\ 1 \end{bmatrix}$ (d) $\begin{bmatrix} 1 \\ 0 \end{bmatrix} \& \begin{bmatrix} 0 \\ 1 \end{bmatrix}$

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12. Rank of the matrix

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

(a) 1 (b) 7
(c) 3 (d) none of these

13. (-2, 3) lies in quadrant :
(a) 1st (b) 2nd
(c) 3rd (d) 4th

14. At which point on y-axis is the line $x = 0$ is a tangent to circle $x^2 + y^2 - 2x - 6y + 9 = 0$:
(a) (0, 1) (b) (0, 3)
(c) (2, 3) (d) (0, 4)

15. If circles $x^2 + y^2 + 2x - 4y + 3 = 0$ and $x^2 + y^2 - 6x + 4y - k = 0$ intersect orthogonally then k is :
(a) 15 (b) 17
(c) -17 (d) -13

16. One of the limit point of the coaxial system of circles containing $x^2 + y^2 - 6x - 6y + 4 = 0$ and $x^2 + y^2 - 2x - 4y + 3 = 0$ is :
(a) (-1, 1) (b) (-1, 2)
(c) (-2, 1) (d) (-2, 2)

17. The centre of the ellipse $8x^2 + 6y^2 - 16x + 12y + 13 = 0$ is at :
(a) (1, -1) (b) (-1, 1)
(c) (1, 1) (d) (-1, -1)

18. Equations of the tangents to the hyperbola $2x^2 - 3y^2 = 6$, which is parallel to the line $y = 3x + 4$ is/are :
(a) $y = 3x + 2$ (b) $y = 3x - 2$
(c) $y = 3x + 5$ and $y = 3x - 5$
(d) none of these

19. The equation of tangents to hyperbola $4x^2 - 9y^2 = 1$ which are parallel to $4x - 5y = 7$ are :
(a) $4x - 7y \pm \sqrt{11/3} = 0$ (b) $4x - 5y \pm \sqrt{17/3} = 0$
(c) $4x - 5y \pm 4 = 0$ (d) none of these

20. If the normal at t_1 of hyperbola $xy = c^2$ intersects again at t_2 then
(a) $t_1 t_2 + 1 = 0$ (b) $t_1^2 + t_2 = 0$
(c) $t_1^3 t_2 + 1 = 0$ (d) none of these

21. If $y = \sin^{-1}\frac{2x}{1+x^2} + \sec^{-1}\frac{1+x^2}{1-x^2}$, then $\frac{dy}{dx}$ is :
(a) $-\frac{4}{1+x^2}$ (b) $\frac{4}{1-x^2}$
(c) $\frac{4}{1+x^2}$ (d) $1 - x^2$

22. If $y = \sqrt{[\log x + \sqrt{\{\log x + \sqrt{(\log x + \ldots\ldots)}\}}]}$, then dy/dx is :
(a) $\frac{x}{2y-1}$ (b) $\frac{x}{2y+1}$
(c) $\frac{1}{x(2y-1)}$ (d) none of these

23. If $y = \log\left[\frac{1+\sqrt{x}}{1-\sqrt{x}}\right]$, then $\frac{dy}{dx}$ is :
(a) $\frac{1}{\sqrt{x}(1-x)}$ (b) $\frac{1}{\sqrt{x}(1+x)}$
(c) $\frac{\sqrt{x}}{(1-x)}$ (d) $\frac{\sqrt{x}}{(1+x)}$

24. The sixth derivative of $x\log(1+x)$ is :
(a) $\frac{(6-120x)}{(1+x)^6}$ (b) $\frac{24(6+x)}{(1+x)^6}$
(c) $\frac{12(6+x)}{(1+x)^5}$ (d) $\frac{12(5+x)}{(1+x)^5}$

25. If $y = e^{\tan^{-1}x}$, then $(1+x^2)\frac{d^2y}{dx^2}$ is :
(a) $(1-2x)y'$ (b) $-2xy'$
(c) $-xy'$ (d) $x + xy'$

26. If $y_1 = \frac{x_2 x_3}{x_1}$, $y_2 = \frac{x_3 x_1}{x_2}$, $y_3 = \frac{x_1 x_2}{x_3}$, then $\frac{\partial(y_1, y_2, y_3)}{\partial(x_1, x_2, x_3)} =$
(a) 3 (b) 1
(c) 2 (d) 4

27. If $u = f(x-y, y-z, z-x)$, then $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z}$ is equal to :
(a) 0 (b) 1
(c) -1 (d) none of these

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28. If $u=\sqrt{x^2+y^2+z^2}$, then

$$\left(\frac{\partial u}{\partial x}\right)^2+\left(\frac{\partial u}{\partial y}\right)^2+\left(\frac{\partial u}{\partial z}\right)^2 \text{ is :}$$

(a) $x^2+y^2+z^2$ (b) $(x^2+y^2+z^2)^{-1}$
(c) 0 (d) 1

29. The maximum value of $f(x)=x^5-5x^4+5x^3+10$ is :
(a) 1 (b) -2
(c) 11 (d) 9

30. The two parts of 100 for which the sum of double of first and square of second is minimum is :
(a) (50, 50) (b) (99, 1)
(c) (98, 2) (d) none of these

31. Value of $\int\left(\frac{\cos 2x-1}{\cos 2x+1}\right)dx$ is :

(a) $x-\tan x+c$ (b) $x-\cot x+c$
(c) $\sec^2 x+1$ (d) $\tan x-x+c$

32. Value of $\int \tan^{-1}x\,dx$ is :

(a) $x\tan^{-1}x-\frac{1}{2}\log(1+x^2)$

(b) $x\tan^{-1}x+\frac{1}{2}\log(1+x^2)$

(c) $\tan^{-1}x-\log(1+x^2)$
(d) none of these

33. Value of $\int\frac{\sin^4 x+\cos^4 x}{\sin^2 x+\cos^2 x}$ is :

(a) $\tan x-\cot x+2x+c$ (b) $\tan x-\cot x-2x+c$
(c) $\tan x+\cot x+c$
(d) $\sec x-\operatorname{cosec} x-2x+c$

34. Value of $\int e^{\sqrt{t}}\,dt$ is :

(a) $2(\sqrt{t}-1)e^{\sqrt{t}}$ (b) $2(\sqrt{t}+1)e^{\sqrt{t}}$

(c) $\sqrt{t}\,e^{\sqrt{t}}$ (d) $(\sqrt{t}-1)e^{t}$

35. Value of $\int\frac{dx}{x^2+2x+2}$ is :

(a) $\tan\frac{x-1}{x+1}+c$ (b) $\log\frac{x+1}{x-1}+c$

(c) $\tan^{-1}(x+1)+c$ (d) $\sec^{-1}(x+1)+c$

36. $\int_{-1}^{2}\frac{|x|}{x}dx$ is equal to :
(a) 1 (b) 3
(c) does not exist (d) none of these

37. Value of $\int_0^{\pi}\sin^n x\cos^m x\,dx$ is equal to zero, if :
(a) m is even (b) n is even
(c) m is odd (d) n is odd

38. The value of $\int_0^{\pi/2}\frac{\sqrt{\cot x}}{\sqrt{\tan x}+\sqrt{\cot x}}dx$ is :
(a) $\pi/4$ (b) $\pi/2$
(c) π (d) none of these

39. Using simpson's one third rule of integration for $\int_0^1\frac{dx}{1+x^2}$ the value of π was found to be 3.14159. Then n used was given by :
(a) 5 (b) 9
(c) 16 (d) 11

40. The value of $\int_0^2\frac{dx}{x}$ by Trapezoidal rule when n = 4 is :
(a) .679 (b) .673
(c) .697 (d) none of these

41. Area bounded by the curves $y=x^3$, the x-axis and ordinates x = -2 and x = 1 is :
(a) -9 (b) -15/4
(c) 15/4 (d) 17/4

42. The common area between two curves $y^2+4ax=0$ and $x^2=4ay$ lies in the :
(a) First quadrant (b) Second quadrant
(c) Fourth quadrant (d) Third quadrant

43. The area of surface generated when $3ay^2=x(x-a)^2$ is revolved about x-axis is :
(a) $\pi a/3$ (b) $\pi a^2/3$
(c) $\pi^2 a/3$ (d) $\pi^2 a/9$

44. The area of surface of solid generated by rotating the curve $r=2(1+\cos\theta)$ about its line of symmetry is :
(a) $128\pi/5$ (b) $32\pi/5$
(c) $64\pi/5$ (d) $16\pi/5$

45. The differential equation of the family of curves $y=e^x(A\cos x+B\sin x)$, A and B are constant is :

(a) $y''-2y'+2y=0$ (b) $y''+2y'+2y=0$

(c) $y''+(y')^2+y=0$ (d) $y''-7y'+2y=0$

46. The solution of equation $(y\cos x+1)dx+\sin x\,dy=0$ is :

(a) $x-y\sin x=cx$ (b) $y+x\sin x=c$

(c) $y-x\sin x=c$ (d) $x+y\sin x=c$

47. The solution of $3e^x\tan y\,dx+(1-e^x)\sec^2 y\,dy=0$ is :

(a) $e^x\cos 2y=c$ (b) $(1-e^x)\tan^3 y=c$

(c) $(1-e^x)^2\tan y=c$ (d) $\tan y=c(1-e^x)^3$

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48. The directional derivative of the function $\phi = xyz^2$ in the direction of the vector $2i + j - k$ at the point (2, 3, 1) :

(a) $-\frac{2\sqrt{6}}{3}$ (b) $-\left(\frac{\sqrt{6}}{3}\right)$

(c) $-\left(\frac{1}{\sqrt{3}}\right)$ (d) none of these

49. A unit vector in xy-plane that makes an angle of 45^0 with the vector $(\hat{i} + \hat{j})$ and an angle of 60^0 with the vector $(3\hat{i} - 4\hat{j})$ is :

(a) $\hat{i}$ (b) $\frac{1}{\sqrt{2}}(\hat{i} - \hat{j})$

(c) $\frac{1}{\sqrt{2}}(\hat{i} + \hat{j})$ (d) none of these

50. While dividing each entry in a data by a non-zero number a, the arithmetic mean of new data :
(a) is multiplied by a (b) does not change
(c) is divided by a (d) is diminished by a

51. If G_1 and G_2 are geometric means of two series and G is G.M. of the ratio of corresponding series, then G is :
(a) G_1/G_2 (b) $\log G_1 - \log G_2$
(c) $\log G_1 + \log G_2$ (d) none of these

52. One set containing five members has mean 8 variance 18 and the second set containing three members has mean 8 and variance 24. The variance of combined set of numbers is :
(a) 24 (b) 20.25
(c) 22.25 (d) none of these

53. If 25% of items are less than 10 and 25% are more than 40, the coefficient of quartile deviation is :
(a) 4/5 (b) 5/3
(c) 1/3 (d) 3/5

54. In a positively skewed distribution, which is true :
(a) M < Me < Mo (b) Me > M > Mo
(c) Mo > M > Me (d) M > Me > Mo

55. The rainfall around Bhopal in least week of June was

Days:	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Rainfall:	150	167	135	148	127	108	132

The coefficient of the dispersion is :
(a) 5.9 (b) 0.126
(c) 59/275 (d) none of these

56. An addition observation 15 in include in a series of 11 observations and its means remains unaffected, the mean of series was :
(a) 12 (b) 15
(c) 20 (d) none of these

57. The variance of 15 observations was found to be 8. If each observations is multiplied by 4, the new variance of the series is :
(a) 32 (b) 24
(c) 8 (d) 128

58. Suppose straight line of form y = 1 + bx is fitted to four points (0, 2), (1, 2), (2, 0) and (3, –1) by method of least square then value of b is :
(a) –1/4 (c) –1/2
(c) –5/4 (d) –1

59. The coefficient of correlation from the folling data' s

x	–2	–1	0	1	2
y	–1	0	–1	2	1

is :
(a) 3.6 (b) –4.5
(c) –.35 (d) none of these

60. If x and y are respectively heights of fathers and sons and $\sigma_x = 2.49$, $\sigma_y = 2.23$, r = 0.47, $M_x = 68.25$ inches, $M_y = 68.5$ inches, then which of following is height of son when height of father is 67.5 inches.
(a) 68.19 (b) 68.81
(c) 65.66 (d) 72.02

61. The two line of regression are 8x – 10y = 66 and 40x – 18y = 214 and variance of x is 9. The standard deviation of y series is :
(a) 8 (b) 6
(c) 4 (d) 3

62. If cov (x, y) = –10, var(x) = 2.89, var(y) = 100. The coefficient of correlation is :
(a) –0.97 (b) –0.87
(c) 0.97 (d) none of these

63. Out of two lines of regression given by x + 2y = 4 and 2x + 3y – 5 = 0, the regression line of x on y is
(a) x + 2y = 4 (b) 2x + 3y – 5 = 0
(c) They are not lines of regression
(d) none of these

64. In a question on correlation the value of r was 0.917 and its probable error was 0.034. The number of pair of observations was :
(a) 8.5 (b) 12.02
(c) 10 (d) 10.627

65. A bag contains 4 white and 3 black balls, another contains 5 white and 3 black balls, if a bag is chosen at random and a ball is drawn from it, the probability, that it is white is :
(a) 65/112 (b) 67/112
(c) 69/112 (d) none of these

66. In a throw of two dice what is the prob. of sum is 6 occuring :
(a) 5/36 (b) 7/36
(c) 1/6 (d) none of these

67. A and B take alternate turns in throwing a coin, the first to throw head wins a prize. If A has the first throw, then their chances of winning are in the ratio :
(a) 3 : 2 (b) 2 : 1
(c) 1 : 2 (d) 2 : 3

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68. Eight coins are toosed simultaneously. The probability of getting at least 6 heads are :
(a) 7/64 (b) 37/256
(c) 57/64 (d) 249/256

69. A bag contains 6 brown socks and 4 black socks. If two socks are drawn, probability that they are of same pair is :
(a) 6/45 (b) 7/15
(c) 3/13 (d) none of these

70. Two dice are tossed. The probability that the total score is a prime number, is :
(a) 1/6 (b) 5/12
(c) 7/12 (d) 1/12

71. If $f(x) = e^x$, $0 < x < \infty$ then variance is :
(a) 3 (b) 2
(c) 1 (d) 2/3

72. A continuous variable having values between 0 and 4 has distribution function $P(x) = \frac{1}{2} - ax$. If it is to be probability density function then a is :
(a) 1/4 (b) 2/7
(c) 1/8 (d) 1/2

73. The value of c for which function

$$f(x) = \begin{cases} c/\sqrt{x}, & 0 < x < 4 \\ 0, & \text{elsewhere} \end{cases}$$

is a p.d.f. Also find P(x > 1)
(a) 1/4, 0 (b) -1/4, 1/2
(c) 1/4, 1/2 (d) 1/2, 1

74. In a factory producing ball point pens, it is found that one out of 50 pens is defective. The pen are placed in packets of 10 each, use Poisson distribution to find number oif packets containing more than 2 defective in consignment 10000 packets.
(a) 16 (b) 10
(c) 11 (d) 12

75. In a Poisson' s distribution P(x) for x = 0 is 10%. The mean of distribution is :
(a) 2.32026 (b) 3.308
(c) 1.875 (d) none of these

76. In a binomial distribution, the mean is 4 and variance is 3. Then, its mode is :
(a) 5 (b) 6
(c) 4 (d) none of these

77. Using price relative formula of index number, its value with 1980 as base is, when given :

Comm :	A	B	C	D	E	F
Price 80	45	60	20	50	85	120
Price 85	55	70	30	70	90	130

(a) 118.2 (b) 112.9
(c) 100.8 (d) 123.8

78. Given exponential trend equation $y = 25(2.5)^x$ with 1981 as origin and x unit as one year and y unit as annual profit. The trend equation with 1983 as origin is :
(a) $y = 125.25\ (2.5)^x$ (b) $y = 156.25\ (2.5)^x$
(c) $y = 196.05\ (2.5)^x$ (d) $y = 206.05\ (2.5)^x$

79. The trend annual sales of a company is y = 148 + 24.4x, where origin is 1990, x unit = 1 year and y unit = annual sales the monthly sales trend is :
(a) y = 12.33 + 0.54 x (b) y = 12.33 + 0.17 x
(c) y = 26 + 5.2 x (d) y = 13 + 0.8 x

80. From the given values estimate y at x = 0.5 :

x	0.1	0.2	0.3	0.4	0.5
y	2.68	3.04	3.38	3.68	4.21

(a) 3.82 (b) 3.89
(c) 3.95 (d) 4.02

81. In Lagrange' s interpolation, if f(x) is given for x = 1, 2, 3, 4. Then total algebraic calculations is
(a) 1 (b) 2
(c) 3 (d) none of these

82. The solution of $y_{x+1} - b_{yx} = bc\,a^x$, c being periodic of period 1 and b = a :
(a) $y_x = bca^x$ (b) $y_{x+1} = xa^x bc$
(c) $y_x = ba^x$ (d) none of these

83. The particular integral of $5y_{n+1} - 3y_n = n + 3^n$ is :
(a) $\frac{3^n}{4} + n$ (b) $\frac{3^{n-1}}{4} - \frac{n}{2}$
(c) $\frac{3^{n-1}}{4} + \frac{n}{2}$ (D) none of these

84. The solution of $y_{n+2} - 4y_n = 2^n$ is :
(a) $c_1 2^n + c_2(-2)^n + n2^{n-2}$
(b) $c_1 2^n + c_2(-2)^n - n2^{n-1}$
(c) $(c_1 + c_2 x)2^n + n2^n$
(d) none of these

85. The solution of $y_{x+2} - y_x = 5.3^x$ is :
(a) $C2^x + 3^x$ (b) $C_1 + C_2 + \frac{5}{8}3^x$
(c) $2^x + 3^x$ (d) $C_1 + (-1)^x C_2 + \frac{5}{8}3^x$

86. The binary equivalent of $(21)_{10}$ is :
(a) 10100 (b) 11010
(c) 10101 (d) 10111

87. The binary equivalent of $(536)_8$ is :
(a) 101011110 (b) 1101110
(c) 1010111101 (d) none of these

88. In binary system, the product of 101.11 and 11.01 is
(a) 10101.1011 (b) 11101.1011
(c) 10010.1001 (d) none

89. A half byte is known as :
(a) Bit (b) Nibble
(c) Megabyte (d) Kilobyte

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90. *BITS stands for*
(a) *A programming language*
(b) *Binary digits*
(c) *A computer*
(d) *none of these*

91. *If a personal computer has a memory of 256 KB then number of characters it can be store is :*
(a) $256 \times 1024 \times 8$ (b) 256×1024
(c) $256 \times 1024 \times 4$ (d) *none of these*

92. *Which is correct basic expression for* $\cos^2 \omega t$ *:*
(a) COS * * (2W * T) (b) COS (W * T) ** 2
(c) COS (WT) ** 2 (d) (COS WT) ** 2

93. *The value of N printed, when the following program is executed is :*

```
10 LET N = 0
20 FOR J = 1 TO 10
30 LET N = N + J
40 NEXT J
50 PRINT N
60 END
```

(a) 55 (b) 50
(c) 110 (d) 60

94. *The radius of a circle is decreased by 10%. The decrease percent in area is :*
(a) 1.99% (b) 3%
(c) 10% (d) 5%

95. *In an examination 42% students failed in Hindi and 52% failed in English. If 17% failed in both the subjects, the percentage of students who passed in both is :*
(a) 23% (b) 27%
(c) 34% (d) 40%

96. *Missing term is series 7, 14, 23, 34, 47,..... is :*
(a) 58 (b) 65
(c) 62 (d) 56

97. *Find (?) is given data' s 7 : 11 : 31 : ?*
(a) 55 (b) 56
(c) 57 (d) *none of these*

98. *Square root of .9 is :*
(a) .3 (b) .03
(c) 3 (d) *none of these*

99. *A man distributed Rs. 100 equally among his friends. If there had been five more friends, each would have received one rupee less. How many friends has he ?*
(a) 20 (b) 25
(c) 30 (d) 35

100. *If A' s height is 25% less than B, how much percent is B' s height more than that of A ?*
(a) 25% (b) $33\frac{1}{3}\%$
(c) $27\frac{1}{2}\%$ (d) 75%

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ANSWERS

1. b	2. a	3. c	4. b	5. b	6. c	7. c	8. c	9. b
10. b	11. b	12. c	13. b	14. b	15. b	16. a	17. c	18. c
19. a	20. c	21. c	22. c	23. b	24. b	25. a	26. d	27. a
28. d	29. c	30. b	31. a	32. a	33. b	34. a	35. c	36. a
37. c	38. a	39. c	40. c	41. d	42. b	43. b	44. a	45. a
46. d	47. d	48. a	49. d	50. c	51. a	52. b	53. d	54. b
55. b	56. b	57. d	58. b	59. d	60. a	61. c	62. a	63. c
64. c	65. b	66. a	67. b	68. b	69. b	70. b	71. c	72. c
73. c	74. c	75. a	76. c	77. d	78. b	79. b	80. c	81. d
82. a	83. c	84. a	85. b	86. c	87. a	88. d	89. b	90. b
91. b	92. b	93. a	94. b	95. a	96. c	97. d	98. d	99. c
100. b								

MCA Entrance by RAM GOPAL SINGH