MCA - 2010

1. The most appropriate meaning of Vehement is :
   - (a) Vehicle
   - (b) Violent
   - (c) Moving object
   - (d) None

2. Which of the following word has a meaning, "Right to enter"?
   - (a) Entry
   - (b) Entrée
   - (c) Entrance
   - (d) None

3. One who organizes a business undertaking, assuming the risk for the sake of the profit is termed as :
   - (a) Entrepreneur
   - (b) Enterpreneour
   - (c) Entreprenior
   - (d) None

4. The most appropriate meaning of Sluggish is :
   - (a) Fast moving
   - (b) Slow growth
   - (c) Dynamic
   - (d) None

5. Synopsis is a/an ?
   - (a) Thesis
   - (b) Brief review or summary
   - (c) Analysis
   - (d) None

6. The adjective of the word syntax is :
   - (a) Syntactical
   - (b) Syntaxtical
   - (c) Syntaxical
   - (d) None

7. MHz stands for :
   - (a) Mega house
   - (b) Mega hours
   - (c) Megahertz
   - (d) None

8. The noun of the word repent is:
   - (a) Repent
   - (b) Repentant
   - (c) Repentive
   - (d) None

9. Valiant means :
   - (a) The person who lives in a valley
   - (b) Very weak person
   - (c) Very strong person
   - (d) None

10. The cost of eight ball pens is equal to selling price of six ball pens. The gain percent is:

    (a) 33.33%   (b) 21.33%

    (c) 2.00%   (d) None

11. How many squared–shaped pieces of cloth of biggest possible size can be made out of 120 cm in length and 96 cm in breadth without wastage of any cloth ?

    (a) 12 square pieces   (b) 40 square pieces

    (c) 20 square pieces   (d) None

12. On a particular day from Jammu to New Delhi, buses ran at intervals of 40 minutes while from New Delhi to Jammu they ran at intervals of 45 minutes. At what earliest time would two buses coming from opposite ends passed a particular bridge if they pass the same bridge at 10.15 a.m. ?

    (a) 3.30 am   (b) 4.15 am

    (c) 6.15 am   (d) None

13. During one year the population of a city increased by 5% and during the next year it diminished by 5%. If at the end of 2nd year the population was 798000, what was it at the begining of the first year ?

    (a) 8,50,000   (b) 8,00,000

    (c) 9,00,000   (d) None

14. In what time will Rs. 4,000 amount to Rs. 4,600 at the rate of 5% per annum ?

    (a) 10 years   (b) 7 years

    (c) 3 years   (d) 4 years

15. A man earns Rs. 40 per day and a woman earns Rs. 30 per day. The man is working for x days in a month while a woman is working for y days in a month. They spend Rs. 30x and Rs. 25y respectively. What is their total salary if x=20 and y=10 ?

    (a) Rs. 250.00   (b) Rs. 500. 00

    (c) Rs. 100. 00   (d) None

16. Which of the following combination is valid to form a triangle ?

    (a) $70^{10}, 70^{10}, 70^{10}$ (b) $80^{10}, 70^{10}, 50^{10}$

    (c) $60^{10}, 70^{10}, 50^{10}$ (d) None

17. Which of the following will not be a member of the series 1, 8, 27, 125, ?

    (a) 256   (b) 512

    (c) 729   (d) 1000

18. One term of the number series 196, 169, 144, 121, 80 is wrong, find the wrong term :

    (a) 80   (b) 121

    (c) 169   (d) 196

19. If Delhi is coded as 73541 and CALCUTTA as 82589662, How can CALICUT be coded as ?

    (a) 5279431   (b) 5978213

    (c) 8251896   (d) 8543691

20. If it was Saturday on 17ᵗʰ December, 1982 what will be the day on 22nd December, 1984 ?

    (a) Monday   (b) Tuesday

    (c) Saturday   (d) Sunday

21. If the seventh day of a month is three days earlier than Friday, what day will be on the nineteenth day of the month ?

    (a) Sunday   (b) Monday

    (c) Wednesday   (d) Friday

22. If x stands for 'add', y stands for 'subtract', z stands for 'divide' and p stands for 'multiply', then what is the value of (7 p 3) y 6 x 5 ?

    (a) 5   (b) 10

    (c) 15   (d) 20

23. Arrange the following in a meaningful order, from particular to general :– 1. Family 2. Community 3. Member 4. Locality 5. Country . The correct arrangement is :

    (a) 3, 1, 2, 4, 5   (b) 3, 1, 2, 5, 4

    (c) 3, 1, 4, 2, 5   (d) None

24. In a group of cows and hens, the numbers of legs are 14 more than twice the number of heads. The number of cows is :

    (a) 5   (b) 7

    (c) 10   (d) None

25. The age of father is twice that of the elder son. Ten years hence the age of the father will be three times that of the younger son. If the difference of ages of the two sons is 15 years, the age of the father is :

    (a)   50 years   (b)   65 years

    (c)   60 years   (d)   70 years

26. Reena is twice as old as Sunita. Three years ago, she was three times as old as Sunita. How old is Reena now ?

    (a)   6 years   (b)   7 years

    (c)   8 years   (d)   12 years

27. Select the smallest memory size:

    (a)   Terabyte   (b)   Gigabyte

    (c)   Kilobyte   (d)   Megabyte

28. The secondary storage device that follows sequential mode of access :

    (a)   Optical Disk   (b)   Magnetic Disk

    (c)   Magnetic Tape   (d)   None

29. FPI stands for :

    (a)   Faults per inch   (b)   Frames per inch

    (c)   Figure per inch   (d)   Film per inch

30. The memory management scheme that permits the physical– address space of a process to be non–contiguous is :

    (a)   Paging   (b)   Spooling

    (c)   Swapping   (d)   None

31. Euler's method is used for :

    (a)   To solve ordinary differential equation

    (b)   Numerical Integration

    (c)   Roots of equation

    (d)   None

32. What does SRS stand for ?

    (a)   Software requirement system   (b)   Software resource specification

    (c)   Software requirement specification (d)   None of the above

33. What would be the output of the following segment of a C program
printf ("Result=%d\n", (5%7)) :
- (a) Result=2
- (b) Result=7
- (c) Result=5
- (d) None

34. The return data type of fopen ( ) in C is :
- (a) Int
- (b) Int *
- (c) FILE
- (d) FILE *

35. In C++, constructor is a :
- (a) Function that can not be invoked implicitly
- (b) Function that can not be invoked explicitly
- (c) Function that can be invoked implicitly as well as explicitly
- (d) None

36. Which of the following cables support the highest bandwidth and faster transmission rate ?
- (a) Twisted pair cable
- (b) Coaxial cable
- (c) UTP cable
- (d) Fibre Optic Cable

37. The network technology in which devices are not linked to each other and where hub acts as a central controller is :
- (a) Mesh Technology
- (b) Star Technology
- (c) Ring Technology
- (d) Tree Technology

38. Which SQL key word is used to sort the result ?
- (a) Sort
- (b) Order by
- (c) Organize
- (d) Arrange

39. Which of the following is an aggregate function in SQL ?
- (a) PLUS
- (b) ABS
- (c) MINIMUM
- (d) COUNT

40. Linux is a software of the type :
- (a) Shareware
- (b) Open Source
- (c) Commercial
- (d) Proprietary

41. Which of the following is/are sysem software ?

    (a) Microsoft Word   (b) Microsoft PowerPoint

    (c) Windows 98   (d) All of these

42. Pick the correct statement :

    (a) COBOL stands for Commonly Oriented Business Organization Language

    (b) Fortran is a general purpose programming Language

    (c) All the above statements are correct

    (d) None of the above statment is correct

43. Which one is not a command in UNIX ?

    (a) Mail   (b) Wall

    (c) del   (d) pwd

44. The area of triangle ABC using vector method, whose vertices are : $A(1, -1, 2)$, $B(2, 1, -1)$ and $C(3, -1, 2)$ is :

    (a) $\sqrt{13}$ (b) 4

    (c) 9   (d) None

45. Two vertices of a triangle ABC are $A(2, -4, 3)$ and $B(3, -1, -2)$ and its centroid is $(1,0,3)$. The third vertex of C is :

    (a) $(-2, -5, -8)$ (b) $(-2, 5, 8)$

    (c) $(-2, -5, 8)$ (d) None

46. The solution of the differential equation $\frac{dy}{dx} + 1 = e^{x-y}$ (Assume C is equal to constant) is :

    (a) $e^{y} = \frac{1}{2}e^{x} + ce^{-x}$ (b) $e^{y} = \frac{1}{2}e^{-x} + ce^{x}$

    (c) $e^{-y} = \frac{1}{2}e^{x} + ce^{-x}$ (d) None

47. The solution of the differential equation $\frac{dy}{dx} - y\tan x = y^{2}\sec x$ (Assume c is equal to constant) is:

    (a) $\operatorname{Sec} x = y + c$ (b) $\operatorname{Sec} x = y(\tan x + x \tan y) + c$

    (c) $\operatorname{Sec} x = y(\tan x - c)$ (d) None

48. The value of limits $\lim_{x \to \infty} \left(\dfrac{x - 2}{x + 2} \right)$ is :
    (a) 4
    (b) 0
    (c) 2
    (d) 1

49. The value of limits $\lim_{n \to \infty} \left(\dfrac{1}{3} + \dfrac{1}{3^2} + \dfrac{1}{3^3} + \dots + \dfrac{1}{3^n} \right)$ is :
    (a) 1
    (b) 0.5
    (c) 0.3333
    (d) None

50. The value of the integral $\int_0^1 \dfrac{dx}{\sqrt{1 - x}}$ is :
    (a) 1
    (b) 2
    (c) 3
    (d) None

51. The probability that A hits a target is 1/3 and the probability that B hits it is 2/5. What is the probability that the target will be hit, if each one A and B shoots at the target ?
    (a) 1/3
    (b) 2/10
    (c) 2/15
    (d) 3/5

52. If we differentiate log (log x) with respect to x, the result will be :
    (a) $\dfrac{1}{x \log x}$
    (b) $x \log x$
    (c) $1 - \log x$
    (d) None

53. If we differentiate log (sec x) with respect to x, the result will be :
    (a) Cot x
    (b) Sec x
    (c) Tan x
    (d) None

54. The coefficient of correlation between x and y for the following table :

X	20	25	30	35	40	45
Y	16	10	8	20	5	10

    will be :
    (a) 0.32
    (b) 0.03
    (c) − 0.32
    (d) None

55. The correlation coefficient between x and y, when the lines of regression are $2x - 9y + 6 = 0$ and $x - 2y + 1 = 0$ is :
    (a) 2/3
    (b) 3/2
    (c) 0.15
    (d) None

56. The value of the determinant $\begin{bmatrix} x+a & b & c \\ :a & x+b & b \\ a & b & x+c \end{bmatrix}$ is :

(a) 1
(b) Abc
(c) $A+b+c$
(d) 0

57. If $A = \begin{bmatrix} 2 & 1 \\ 3 & 2 \\ -1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 0 & 1 \\ -1 & 2 & 1 \end{bmatrix}$, what will be the value of AB :

(a) $\begin{bmatrix} 1 & 2 & 3 \\ 1 & 4 & 5 \\ -2 & 2 & 0 \end{bmatrix}$
(b) $\begin{bmatrix} 5 & 3 & 1 \\ 0 & 3 & 1 \\ 0 & 5... & 0 \end{bmatrix}$

(c) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{bmatrix}$
(d) None

58. Pick the correct statement :
   - (a) Correlation always lies between 0 and 1
   - (b) Correlation may be any finite number
   - (c) Correlation always lies between -1 and $+1$
   - (d) Correlation is not a deterministic entity.

59. Pick the correct statement :
   - (a) $f(x)=Sin\ x$ is odd function and $f(x)=Cos\ x$ is also an odd function
   - (b) $f(x)=Sin\ x$ is even function and $f(x)=Cos\ x$ is also an even function
   - (c) $f(x)=Sin\ x$ is odd function and $f(x)=Cos\ x$ is an even function
   - (d) $f(x)=Sin\ x$ is even function and $f(x)=Cos\ x$ is an odd function.

60. The roots of the equation $X^2 - 4X + 3$ are :
   - (a) 55 and 1
   - (b) 3 and 55
   - (c) 1 and 3
   - (d) None