MASTER OF COMPUTER APPLICATION (M.C.A.)

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ENTRANCE EXAMINATION 2018

1. A shepherd has 27 sheep. All but 10 died. How many he left with?

(a) 17 (b) 27

(c) 10 (d) Zero

2. A is three times as old as B. C was twice-as old as A four years ago. In four years' time, A will be 31. What are the present ages of B and C

(a) 9, 50 (b) 9, 46

(c) 10, 46 (d) 10, 50

3. In a group of 15 people, 7 read French, 8 read English while 3 of the read none of these two.

How many of them read French and English both?

A. 15 B. 12

C. 18 D. 20

4. Find the least number which leaves a remainder of 3 when divided by 5, 6, 7 and 8, but leaves no remainder when divided by 9?

A. 1458 B. 1683

C. 1692 D. 1598

5. Find out the wrong number in the given sequence of numbers.

22, 33, 66, 99, 121, 279, 594

A. 33 B. 121

C. 279 D. 594

6. Find out the wrong number in the given sequence of numbers.

6, 13, 18, 25, 30, 37, 40

A. 37 B. 30

C. 40 D. 25

7. Insert the missing number

8, 7, 11, 12, 14, 17, 17, 22, (…)

A. 24 B. 27

C. 20 D. 22

8. Insert the missing number

16, 33, 65, 131, 261, (…)

A. 523 B. 613

C. 521 D. 721

9. If COMPLETE is coded as MOCELPDET, then DIRECTION will be coded as:

A. RIDTCENOJ B. SIDTCENOI

C. RIDTCENOI D. RIETCENOI

10. In a coded language COMPUTER is written as RETUPMOC. How is MACHINE written in the same code

A. DHFTCHS B. HGTIRDM

C. ENIHCAM D. HGRMSCH

11. If COOL is coded as DORP, then write the code for HOT

A. JQW B. IQW

C. IQX D. IPW

12. Pointing to a girl in photograph, Amar said, "Her mother's brother is the only son of my mother's father." How the girl's mother related to Amar?

A. Mother B. Sister

C. Aunt D. Grandmother

13. A is the son of B, C, B's sister has a son D and a daughter E. F is the maternal uncle of D.

How is E related to F?

A. Sister B. Mother

C. Cousin D. Niece

14. The question given below has a set of three or four statements. Each set of statements is further divided into three segments. Choose the alternative where the third segment in the statement can be logically deduced using both the preceding two, but not just from one of them.

Statement – I. All paper are books

II. All bags are books

III. Some purses are bags

Conclusion – I. Some papers are bags

II. Some books are purses

A. Only I follows B. Only II follows

C. Only I and II follows D. Both II and III follow

15. Study the information given below carefully, and answer the questions that follow:

On a stage, D, N, A and P are standing as described below facing North.

1) N is 2.5 m to the west of A.

2) K is 4 m to the right of A.

3) D is 6 m to the south of K.

4) P is 9 m to the north of D.

If a boy walks from N, meets A followed by K, D and then P, how many metres has he walked if he has travelled the straight distance all thorugh?

A. 15 m B. 18 m

C. 21.5 m D. 22.5 m

16. Synonym of ACQUAINT

A. Withhold B. Conceal

C. Familiarise D. Risky

17. Synonym of AGGRAVATE

A. Decline B. Acquire

C. Excited D. Irritate

18. A remedy for all disease is

A. Medicine B. Panacea

C. Medical D. Medica

19. The mistake of placing something in the wrong period of time:

A. Misdate B. Anachronism

C. Misplacement D. Prolepsis

20. Find the most opposite meaning of SUBVERSION

A. Destabilisation B. Clarity

C. Compliance D. Sanity

21. Find the word just opposite of PROVOKE

A. Insult B. Anger

C. Encourage D. Soothe

22. Choose the grammatically correct sentence out of the given options

A. He parked the car in front of the bakery.

B. He parked an car in front of the bakery.

C. He park the car in front of the bakery.

D. He parked car in front of the bakery.

23. Which word of the following means 'extremely or unusually small'?

A. Webbed B. Diminutive

C. Awkward D. Farthest

24. What is the meaning of the world 'gait'?

A. Threshold B. Entrance

C. Manner of walking D. Speed

25. Fill in the blank with the correct prepositions. We will be staying ____ Kolkata ____ next Saturday.

A. on, from

B. for, from

C. by, by

D. in, till

26. A box has 5 black and 3 green shirts. One shirt is picked randomly and put in another box. The second box has 3 black and 5 green shirts. Now a shirt is picked from second box. What is the probability of it being a black shirt?

A. 4/9

B. 29/72

C. 8/72

D. 3/16

27. What is the probability of getting a sum 9 from two throws of dice?

A. 1/3

B. 1/9

C. 1/12

D. 2/9

28. The predicted rate of response of the dependent variable to changes variable is called:

A. Slope

B. Intercept

C. Error

D. Regression equation

29. If the value of any regression coefficient is zero, then two variables are:

A. Qualitative

B. Correlation

C. Dependent

D. Independent

30. If means is 11 and median is 13 then value of mode is

A. 15

B. 13

C. 11

D. 17

31. Which term of A.P. 92, 88, 84, 80, …. is 0?

A. 22

B. 23

C. 24

D. 32

32. (1) + (1 + 1) + (1 + 1 + 1) + … + (1 + 1 + 1 + … n – 1 times) = ?

A. n(n + 1)/2

B. (n – 1)n/2

C. n^2 D. n

33. If roots of $x^2 - 5x + a = 0$ are equal, then a = ?

A. $25/5$ B. $\pm 25/4$

C. $25/4$ D. None of Above

34. Given that limit exists find

A. 1 B. $3/5$

C. ½ D. 0

35. Two men on a 3-D surface want to meet each other. The surface is given by $f(x, y) = \frac{x^{-6}.y^7}{x+y}$

They make their move horizontally or vertically with the X-Y plane as their reference. It was observed that one man was initially at (200, 400) and the other at (100, 100). Their meet point is decided as (0, 0). Given that they travel in straight lines, will they meet?

A. They will meet B. They will not meet

C. They meet with probability D. None

36. The graph of the function $y = f(x)$ is symmetrical about the line $x = 2$, then

A. $f(x + 2) = f(x - 2)$ B. $f(2 + x) = f(2 - x)$

C. $f(x) = f(-x)$ D. $f(x) = -f(x)$

37. $Cos^2 2\theta$ =?

A. $1 - \sin^2 \theta$ B. $1 + \sin^2 \theta$

C. $1 - \sin^2 2\theta$ D. $1 - sin\theta$

38. Considering Cosine Rule of any triangle ABC, possible measures of angle A includes

A. angle A is obtuse B. angle A is acute

C. angle A is right-angle D. all of above

39. For a skew symmetric even ordered matrix A of integers, which of the following will not hold true?

A. det(A) = 9 B. det(A) = 81

C. det(A) = 7 D. d) det(A) = 4

40. Which of the following property of matrix multiplication is correct?

A. Multiplication is not commutative in general

B. Multiplication is associative

C. Multiplication is distributive over addition

D. All of the mentioned

41. The area enclosed by $3|x| + 4|y| <= 12$ is

A. 6 square units

B. 12 square units

C. 24 square units

D. 36 square units

42. Power set of empty set has exactly _____ subset.

A. One

B. Two

C. Zero

D. Three

43. Transpose of a column matrix is

A. zero matrix

B. diagonal matrix

C. column matrix

D. row matrix

44. Constant zero solution of linear ordinary differential equation is called

A. trivial equation

B. bypass equation

C. logical equation

D. singular equation

45. Dot product of two vectors a and b is termed as

A. outer product

B. inner product

C. Cartesian product

D. vector product

46. IF $f(x) = \max\{x, x^2\}$, then the number of points where f(x) is not differentiable, are

A. 1

B. 2

C. 3

D. 4

47. If $y = a\log|x| + bx^2 + x$ has its extreme value at $x = -1$ and $x = 2$, then

A. a = 2, b = -1

B. a = 2, b = -1/2

C. a = -1/2, b = ½

D. None

48. If A and Bare coefficient of x^n in the expression of $(1 + x)^{2n}$ and $(1 + x)^{2n-1}$ respectively, then A/B equals

A. 1

B. 2

C. ½

D. 1/n

49. What is the Cardinality of the Power set of the set {0, 1, 2}.

A. 8

B. 6

C. 7

D. 9

50. Consider a line passing through (1, 2) and (4, 8), gradient of this line is equal to:

A. ½

B. -1/2

C. 2

D. -2

51. If w is an imaginary cube root of unity, then $(1 + w - w^2)^7$ is equal to

A. 128w

B. -128w

C. $128w^2$

D. $-128w^2$

52. The complex number $(\sin x + i\cos 2x)$ and $(\cos x - i \sin 2x)$ are conjugate to each other, for

A. $x = n\pi$

B. x = 0

C. $x = (n + 1/2)\pi$

D. No value of x

53. The points z1, z2, z3, z4 in the complex plane are the vertices of a parallelogram taken in order, if and if

A. z1 + z4 = z2 + z3

B. z1 + z3 = z2 + z4

C. z1 + z2 = z3 + z4

D. None of these

54. Linear programming model which involves funds allocation of limited investment is classified as

A. ordination budgeting model

B. capital budgeting models

C. funds investment models

D. funds origin models

55. According to system of constraints, solution set graphical representation is classified as

A. region of ordinate solutions

B. region of intercept solution

C. region of vertex solution

D. region of feasible solutions

56. Points within set are connected by line segment must follows condition that points must be

A. included in set

B. not included in set

C. included in function

D. included in objective

57. In mathematical programming, goals represented by objective functions include.

A. profit level

B. total cost and revenue

C. percent rate on investment

D. all of above

58. Coordinates of midpoints of line joining two points (16, 4) and (36, 6) are :

A. (26, 5) B. (5, 26)

C. (10, 1) D. (1, 10)

59. In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?

A. 63 B. 93

C. 126 D. None

60. For individual observations, reciprocal of arithmetic mean is called

A. geometric mean

B. harmonic mean

C. deviation square mean

D. paired mean

61. A. P. whose nth term is 2n-1 is

A. 1, 3, 5, …

B. 2, 3, 5, ….

C. 1, 3, 5, …

D. 5, 3, 1, ….

62. The equation of the straight line passing through the point (3, 2) and perpendicular to the line y = x is

A. X - Y = 5

B. X + Y = 5

C. X + Y = 1

D. X – Y = 1

63. Specifying a straight line, how many geometrical parameters should be known?

A. 1

B. 2

C. 3

D. 4

64. A point equidistant from the line $4x + 3y + 10 = 0,\ 5x - 12y + 26 = 0$ and

$7x + 24y - 50 = 0$ is

A. (1, -1)

B. (1, 1)

C. (0, 0)

D. (0, 1)

65. One vertex of the equilateral triangle with centroid at origin and one side as $x + y - 2 = 0$ is

A. (-1, -1)

B. (2, 2)

C. (-2, -2)

D. (2, -2)

66. Two bus tickets from city A to B and three tickets from A to C cost Rs. 77 but three tickets from city A to B and two tickets from city A to C cost Rs. 73. what are the fares for cities B and C from A?

A. Rs. 17, Rs. 13

B. Rs. 4, Rs. 23

C. Rs. 13, Rs. 17

D. Rs. 15, Rs. 14

67. In the group G = {2, 4, 6, 8} under multiplication module 10, the identity element is

A. 6 B. 8

C. 4 D. 2

68. A partition of {1, 2, 3, 4, 5} is the family

A. {(1, 2), (3, 4), (3, 5)}

B. {φ(1, 2), (3, 4), (5)}

C. {(1, 2, 3), (5)}

D. {(1, 2,)(3, 4, 5)}

69. Let P(S) denote the power set of S. Which of the following is always TRUE?

A. P(P(S)) = P(S)

B. P(S) ∩ S = P(S)

C. P(S) ∩ P(P(S)) = [φ]

D. $S \in P(S)$

70. Find the remainder when 67^{999} is divided by 7.

A. 4 B. 6

C. 1 D. 2

71. G(e, a, b, c) is an abelian group with 'e' as identity element.

A. 2, 2, 3 B. 3, 3, 3

C. 2, 2, 4 D. 2, 3, 4

72. Period of 3secx/3 is

A. π B. 2π

C. 3π D. 6π

73. The principal value of $\cos^{-1}(\cos 5)$

A. 5 B. $\pi - 5$

C. $5 - \pi$ D. $2\pi - 5$

74. If sin t = 1/5 and 0 < t < π / 2, then cos(4, t) = ?

A. 0.3464 B. 0.8

C. 0.6928 D. – 0.6928

75. Find the value of

A. $1/8 \ \sin^{(-1)} \ (x + 1/2)$

B. ¼ $\tan^{(-1)}(x + 1/2)$

C. $1/8 \sec^{(-1)}(x + 1/2)$

D. ¼ $\cos^{(-1)}(x + 1/2)$

76. A computer-controlled device for training exercise that duplicates the work environment is a:

A. Simulator B. Duplicator

C. Trainer D. None

77. Multi user systems provided cost savings for small business they use a single processing unit to link several

A. Personal computers

B. Workstations

C. Dumb terminals

D. Mainframes

78. Which part of the computer is used for calculating and comparing?

A. Disk unit B. Control unit

C. ALU D. Modem

79. Which of the following memories need refresh?

A. SRAM B. DRAM

C. ROM D. All of the above

80. The ALU of a computer normally contains a number of high speed storage element called

A. Semiconductor memory B. Registers

C. Hard disk D. Magnetic disk

81. The representation of decimal number 532.86 in the form of decimal is

A. 532.65 B. 532.68

C. 531.67 D. 531.68

82. The quantity of double word is

A. 8 bits B. 16 bits

C. 32 bits D. 64 bits

83. Which protocol provides e-mail facility among different hosts?

A. FTP B. SMTP

C. TELNE D. SNMP

84. COBOL is an acronym for

A. Common Basic Oriented Language

B. Common Oriented Business Language

C. Common Business Oriented Language

D. None

85. Which of following are real time systems?

A. an on-line real reservation system

B. a process control system

C. Aircraft control system

D. Payroll processing system

86. Which one of the following input device is user-programmable ?

A. Dumb terminal

B. Smart terminal

C. VDT

D. Intelligent terminal

87. A name or number used to identify a storage location is called

A. A byte

B. A record

C. An address

D. All of above

88. Full form of URL is?

A. Uniform Resource Locator

B. Uniform Resource Link

C. Uniform Registered Link

D. Unified Resource Link

89. Second generation of computers consist of which of following?

A. Vacuum Tubes

B. Diodes

C. VLSI Microprocessor

D. Transistor

90. MPG is an extension of which type of files?

A. Audio

B. Image

C. Video

D. Flash

91. Which is odd one?

A. Inkjet printers

B. CRT

C. Laser Printers

D. Dot Matrix Printers

92. Which type of switching is used in internet?

A. Packet

B. Telephone

C. Circuit

D. Telex

93. What is the meaning of OSI, in terms of computers?

A. Open Software Interrelation

B. Open System Interrelation

C. Open Software Interconnection

D. Open System Interconnection

94. What is meaning of EEPROM?

A. Electronically Erasable Programmable Read only Memory

B. Electrically Erasable Programmable Read only Memory

C. Electronically Erasable Programmable Reach only Memory

D. Electrically Erasable Programmable Reach only Memory

95. Which among the following is responsible for finding and loading system into RAM?

A. Bootstrap Loader B. CMOS

C. BIOS D. DMOS

96. Three persons A, B and C are standing in a queue. There are five persons between A and B and eight persons between B and C. If there be three persons ahead of C and 21 persons behind A, what could be the minimum number of persons in the queue?

A. 40 B. 27

C. 41 D. 28

97. A class of boys stands in a single line; one boy is 19th in order from both the ends, How many boys are there in the class?

A. 39 B. 37

C. 27 D. 38

98. 517 325 639 841 792

What will be the first digit of the second highest number after the position of only the 2nd, 3rd digits within each number are interchanged?

A. 7 B. 8

C. 9 D. 2

99. What should come next in the following number series?

9 8 7 6 5 4 3 2 1 8 7 6 5 4 3 2 1 7 6 5 4 3 2 1

A. 9 B. 8

C. 6 D. 7

100. P, Q, R, S, T, U, V and W are sitting round the circle and are facing the centre:

P is second to the right of T who is the neighbour of R and V.

S is not the neighbour of P.

V is the neighbour of U.

Q is not between S and W. W is not between U and S.

Then who is sitting opposite to U?

A. Q B. R

C. P D. W

AnswerKey

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