

Bachelor in Computer Applications (BCA)

Entrance Exam

Model Set-5

Full Marks:100

Time:2hr

Group A[English]

Circle the correct answer from among the given options.

(Multiple Choice Questions):

1. Above Board
 - a) boasting person
 - b) honest and straightforward
 - c) a man with arrogance
 - d) a dishonest person
2. Call a spade a spade
 - a) to disrespect
 - b) to say in anger
 - c) to speak plainly
 - d) to manipulate
3. Roots and branch
 - a) entirely
 - b) step by step
 - c) part by part
 - d) bare truth
4. Broadly speaking letters may be said to Into two categories.
 - a) belong
 - b) fall
 - c) split
 - d) convert
5. The last decade has been.....for management education and development.
 - a) dogmatic
 - b) paradoxical
 - c) praiseworthy
 - d) outstanding
6. Bandy words
 - a) to argue
 - b) to request
 - c) to give respect
 - d) to be polite
7. Ever and Anon

Group-B[Mathematics]

41. The slope of the line passing through (a,b) and $(\frac{1}{a},b)$ is:
a) 0 b) 4 c) 3 d) 2
42. If $P(A \cup B) = 1$, two events a and b are
a) mutually exclusive
b) equally likely events
c) exhaustive events
d) dependent events
43. The set $\{x: x^2 + x + 1 = 0, x \in \mathbb{R}\}$ is:
a) $\{1, \sqrt{3}\}$ b) $\{-1, \sqrt{3}\}$ c) $\{\}$ d) $(-1, 0)$
44. Every rational number is also
a) natural number b) a whole number
c) an integer number d) areal number
45. If $f(u) = \frac{u}{u-1}$, then $\frac{f(a)}{f(a+1)}$ is:
a) $f(-a)$ b) $f(\frac{1}{a})$
c) $f(a^2)$ d) $f(\frac{-a}{a+1})$
46. If the first term of an AP is 2 and the common difference is 4. The sum of its 40 terms is:
a) 3200 b) 1600 c) 300 d) 1750
47. The value of $\cot 30^\circ$ is:
a) $\frac{1}{2}$ b) $\frac{2}{\sqrt{3}}$ c) $\sqrt{3}$ d) 1
48. If $AB=C$ exists, which of the following order of matrices is possible?
a) $A_{2 \times 3}, B_{3 \times 2}, C_{2 \times 3}$ b) $A_{3 \times 2}, B_{2 \times 3}, C_{3 \times 2}$
c) $A_{3 \times 2}, B_{2 \times 3}, C_{3 \times 3}$ d) $A_{3 \times 3}, B_{2 \times 3}, C_{3 \times 3}$
49. The area of 4 walls of square room is 120m^2 . If the height is 5m, the area of its floor is
a) 56m^2 b) 36m^2

c) $46m^2$

d) $26m^2$

50. one -third of a number is 20 more than one-fifth of that number. What is the number?

a) 30

b) 84

c) 102

d) 150

51. The value of $\begin{vmatrix} 48 & 1 & 6 \\ 32 & 5 & 4 \\ 16 & 3 & 2 \end{vmatrix}$ is :

a) 1

b) 2

c) 0

d) 4

52. Raman salary was decreased by 50% and subsequently increased by 50%. He has a loss of:

a) 0%

b) 25%

c) 0.25%

d) 2.5%

53. If $a=4b$, what percent of $2a$ is $2b$?

a) 10%

b) 20%

c) 25%

d) 26%

54. What percentage is 250 out of 1 kg?

a) 25%

b) 35%

c) 24%

d) 30%

55. The equation of the straight line passing through (2,4) and having slope -2 is:

a) $2x+y=8$

b) $2x-y=4$

c) $x+2y=8$

d) $x-2y=4$

56. A sum reckoned at 12% SI amounts to Rs.2409 in 4 years, the sum is:

a) 1625

b) 1635

c) 1640

d) 1652

57. Ram gains the cost price of 10 books by selling 50 books. His profit percentage is:

a) 30%

b) 25%

c) 20%

d) 16%

58. The cost price of 12 articles is equal to the selling price of 9 articles, the profit percent is

a) 33.33%

b) 40.5%

c) 45%

d) 49%

59. The area of a triangular field whose three sides are 300,400 and 500m (in m^2) is:

a) 6000

b) 5000

c) 400

d) 200

60. The number of bricks, each $4cm \times 3cm \times 2cm$ are required to construct a wall having the dimension $11cm \times 96cm \times 64cm$ is:

- a) 281500 b) 281600 c) 218500 d) 2185
61. The selling price of 20 articles is equal to the cost price of 20 articles. The gain percentage is
 a) 25% b) 50% c) 60% d) 70%
62. The value of $\sec 60^\circ$ is:
 a) $\frac{1}{2}$ b) $\frac{\sqrt{3}}{2}$
 c) 2 d) $\frac{1}{\sqrt{3}}$
63. The rate percent per annum that a sum of money trebles itself in 25 years is:
 a) 25% b) 10% c) 4% d) 8%
64. The present age of mother and her daughter are 30 years and 14 years respectively. The number of years ago that the product of their age was 192 is:
 a) 5 b) 6 c) 7 d) 9
65. If 5 is subtracted from the square of a number and the result is 20, the number is:
 a) ± 5 b) ± 6 c) ± 7 d) ± 9
66. A rope is 40 ft. long is cut into two pieces, if one piece is 18 ft. longer than the other. What is the length, in feet, of the shorter piece?
 a) 11 b) 12 c) 13 d) 14
67. If $M = \begin{pmatrix} 1 & 2 \\ 2 & 3 \end{pmatrix}$, $M^2 - nM - I = 0$, the value of n is:
 a) -2 b) -4 c) 4 d) 2
68. The inequality $-7 \leq 2x + 5 \leq 7$ is equivalent to:
 a) $-6 \leq x \leq 1$ b) $-6 < x < 1$
 c) $-7 \leq x \leq 5$ d) $-6 \leq x \leq 1$
69. If $f(x) = 3x + 5$, the value of $\frac{f(x+h) - f(x)}{h}$ is:
 a) 2 b) 3 c) 4 d) 5

70. The difference of two irrational numbers is:
- always an irrational number
 - always a rational number
 - always a real number
 - All of the above
71. If $p-q+r=4$ and $p+q+r=8$, the value of $p+r=$
- 2
 - 4
 - 6
 - 8
72. If $\frac{a}{4} = \frac{b}{5} = \frac{c}{9}$ then, $\frac{a+b+c}{c}$ is
- 4
 - 2
 - 7
 - none
73. If 60% of $450 = 15x$, the value of x is:
- 6
 - 18
 - 36
 - 72
74. The system of equation $-4x+6y+2z=8$ and $2x-3y-z=-14$ have:
- unique solution
 - no solution
 - infinitely many solutions
 - none of these
75. The area of rectangular field is 493m^2 and its perimeter is 92 meter. the length and breadth(in m) are:
- 7,4
 - 9,7
 - 29,17
 - 19,13
76. While solving the value of x is $x^3-3x^2+3x-1=0$
- 2
 - 1
 - both
 - none
77. The sides of a triangle are 3cm, 4cm and 5cm. it is:
- a right-angled triangle
 - an isosceles triangle
 - an equilateral triangle
 - none of these
78. Which of the following represents all solutions of the inequality $x^2 < 2x$?
- $-1 < x < 1$
 - $1 < x < 3$
 - $0 < x < 2$
 - $4 < x < 6$
79. If the terms $2x, x+10$ and $3x+2$ be in AP, the value of x is
- 7
 - 10
 - 6
 - 5
80. If $t_n = 3n-2$, the value of S_5 is:

- a) 35 b) 40 c) 45 d) 50
81. If $S_n = 1+2+3+\dots+n=20$ the sum of the series $S_n = 1^3+2^3+3^3+\dots+n^3$ is:
a) 400 b) 500 c) 450 d) 1000
82. While selling a pen for Rs.50, there is a loss of 5%, for what price should it be sold to gain 5%?
a) 55.26 b) 52.63 c) 55 d) 56.32
83. A man sold 250 chairs and had gain equal to the selling price of 50 chairs. His profit percent is:
a) 5% b) 10% c) 25% d) 50%
84. A watch is bought at Rs.250 and sold at Rs.300, the gain percentage is:
a) 25% b) 20% c) 50% d) none
85. The list price of an article is 25% above the selling price and cost price is 40% below the list price, then rate of discount is:
a) 15% b) 20% c) 25% d) 40%
86. If $A = \begin{pmatrix} n & 0 \\ 0 & 1 \end{pmatrix}$ and A^2 is identity matrix, the value of n is:
a) 1 b) 2 c) 0 d) 3
87. If $P = \begin{pmatrix} 1 & 2 \\ 3 & -4 \end{pmatrix}$, $Q = \begin{pmatrix} x & 3 \\ 2 & -1 \end{pmatrix}$, determinant of $2P - 3Q$ is -5, the value of x is equal to:
a) $-1/2$ b) $1/2$ c) $-1/3$ d) $-1/4$
88. The simple interest on Rs.1250 for 5 years at 8% p.a is:
a) 480 b) 1000 c) 500 d) 625
89. If a sum of money doubles itself in 8 years at simple interest, the rate percent per annum is:
a) 10.5% b) 11.5% c) 12.5% d) 13.5%
90. If two numbers are in the ratio 5:7 and their least common multiple is 315, their product is:
a) 2385 b) 2538 c) 2358 d) 2835

a) Iraq
c) Egypt

b) Iran
d) Italy

Answer Key:

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