Date of Examination

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GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

SELECTION TEST FOR THE ENROLLMENT OF DAY SCHOLARS –INTAKE 39

BSC. IN DATA SCIENCE AND BUSINESS ANALYTICS DEGREE PROGRAMME

SUBJECT KNOWLEDGE

Call up No./Reference No.: ..... NIC No: .....

Instructions: **Duration: 30** minutes

Answer **all questions.**

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1) In which of the following form, data is stored in computer?
    a) Decimal
    b) Binary
    c) Hexa Decimal
    d) Octal

2) Which one of the following is not an input device?
    a) Keyboard
    b) Joystick
    c) Printer
    d) Optical Character Reader

3) When an input electrical signal A=10110 is applied to a NOT gate, its output signal is
    a) 01001
    b) 10001
    c) 10101
    d) 00101

4) Once you load the suitable program and provide required data, computer does not need human intervention. This feature is known as,
    a) Accuracy
    b) Reliability
    c) Versatility
    d) Automatic

5) A collection of related instructions organized for a common purpose is referred to as
    a) File
    b) Database
    c) Program
    d) None of above

6) What are the next quantities in each sequence?

25, 24, 22, 19, 15, …

2, 5, 10, 17, 26, …

a) 12 and 32
b) 10 and 37
c) 10 and 32
d) 12 and 37

7) 10 is 5% of a, and 5 is 15% of b. Given that c equals $\frac{b}{a}$. What is the value of c?
   a) 1
   b) 1/6
   c) 2
   d) 1/2

8) $\frac{216\times3}{12} = \sqrt{36} \times ?$
   Complete the equation by correctly identifying the missing part of the calculation from the list of options below.
   a) 4.5×4
   b) $\sqrt{16}$
   c) $\frac{276}{92}$
   d) $\frac{42-15}{3}$

9) If x, y and z are three consecutive positive integers such that $x < y < z$ and $x + y + z = 27$ then what is the value of z?
   a) 10
   b) 9
   c) 8
   d) 7

10) If $4 < x < 5$ and $1 < y < 5$, which of the following best describes $x - y$?
   a) $1 < x - y < 3$
   b) $-1 < x - y < 4$
   c) $4 < x - y < 5$
   d) $3 < x - y < 5$

11) The slope of the line $2x + y = 5$ is NOT the same as the slope of which one of the following lines?

a) $x = -\frac{y}{2}$
b) $y = -2x + 8$
c) $6y = 15 - 3x$
d) $4y + 8x = 1$

12) If $15x + 16 = 0$, then $15|x|$ equals which one of the following?

a) -16
b) $-16x$
c) 16
d) $16x$

13) If n is a positive integer, which one of the following numbers must have a remainder of 3 when divided by any of the numbers 4, 5, and 6?

a) $12n + 3$
b) $24n + 3$
c) $90n + 3$
d) $120n + 3$

14) Which one of the following numbers can be removed from the set $S = \{0, 2, 4, 6, 8\}$ without changing the average of set S?

a) 0
b) 4
c) 2
d) 5

15) A boy is 12 years old and his sister is 8 years old. How old was the boy when he was twice as old as his sister?

a) 5 years
b) 6 years
c) 8 years
d) 10 years

16) If $p + q = 12$ and $pq = 36$, then $\frac{1}{p} + \frac{1}{q}$

a) $\frac{1}{2}$
b) $\frac{1}{3}$
c) 3
d) 4

17) The remainder is 75 when a number is divided by 10,000. What is the remainder when the same number is divided by 1,000?
    a) 5
    b) 7
    c) 75
    d) 750

18) A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?
    a) 10/21
    b) 11/21
    c) 2/7
    d) 5/7

19) The difference between two angles of a triangle is 16°. The average of the same two angles is 52°. Which one of the following is the value of the greatest angle of the triangle?
    a) 60°
    b) 68°
    c) 76°
    d) 78°

20) The remainder when the positive integer m is divided by n is r. What is the remainder when $3m$ is divided by $3n$?
    a) $3n$
    b) $3r$
    c) $m - nr$
    d) $3(m - nr)$

21) A man is required to take a tablet once every 6 hours, a capsule once every 8 hours and a syrup once every 12 hours. If he takes all three together at 6.00 p.m. on a Tuesday evening, when will he take all three together again?
    a) Wednesday 6.00 a.m.
    b) Thursday 6.00 a.m.
    c) Wednesday 6.00 p.m.
    d) Thursday 6.00 p.m.

22) A number equals half of another number. The sum of the two numbers is 27. What are the two numbers?
    a) 3 and 6
    b) 9 and 18
    c) 2 and 4
    d) 12 and 15

23) Which one of the following is divisible by both 2 and 3?
    a) 1351
    b) 1005
    c) 1896
    d) 1406

24) Kamala has Rs. 2, Rs. 5 and Rs. 10 coins in her purse. The total number of coins in the purse is 15 and the total value of the coins is Rs. 70. If the number of Rs 5 coins in the purse is four times the number of Rs. 10 coins in the purse, then the number of Rs. 2 coins in the purse is
    a) 4
    b) 5
    c) 8
    d) 9

25) A train runs at the speed of 72 kmph and crosses a 250 m long platform in 26 seconds. What is the length of the train?
    a) 230 meters
    b) 240 meters
    c) 264 meters
    d) 270 meters

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