

**FAR WESTERN UNIVERSITY**  
**Faculty of Science and Technology**  
**Department of Computer Science and Information Technology**  
**Second Entrance Examination BIT 2082**  
**Time: 2Hrs**

Attempt all the questions.

1×100=100

**Mathematics**

1. What is the 10th term of the sequence 1, 5, 9, 11,.....  
a. 20                      b. 30                      c. 37                      d. 41
2. If x denotes 10, what does M denote in roman script ?  
a. 200                      b. 100                      c. 50                      d. 1000
3. Find the discount percent of a machine whose marked price is Rs. 4200 is sold for Rs. 3822.  
a. 10%                      b. 6%                      c. 9%                      d. 8%
4. If S.P.= Rs. 575, profit percent = 15% find C.P.  
a. Rs. 550                      b. Rs. 500                      c. Rs. 525                      d. Rs. 530
5. Original price of a machine was Rs. 2,000 and its value after 2 years becomes Rs. 1805. What is the rate of depreciation?  
a. 5%                      b. 6%                      c. 7%                      d. 8%
6. If  $A = \{1, 3, 5, 7, \}$  and  $B = \{2, 4, 6, 8\}$  find  $n(A - B)$   
a. 5                      b. 4                      c. 2                      d. 6
7. If  $n(A) = 6$   $n(B) = 4$ , what is  $n(A \cup B)$ , If A and B are disjoint.  
a. 16                      b. 10                      c. 14                      d. 12
8. If  $U = \{1, 2, 3, 4, 5, \dots\}$  and  $A = \{2, 4, 6, 8, \dots\}$  what is  $\bar{A}$   
a.  $\{ \}$                       b.  $\{1, 3, 5, 7, \dots\}$                       c.  $\{2, 4, 6, 8, \dots\}$                       d.  $\{1, 2, 3, 4, 5, \dots\}$
9. If  $U = \{1, 2, 3, \dots, 10\}$ ,  $A = \{1, 3, 5\}$   $B = \{2, 4, 6, 8\}$ , find  $\overline{(A \cup B)}$   
a.  $\{1, 3, 5, 7, 9, 10\}$                       b.  $\{2, 4, 6, 8\}$                       c.  $\{1, 3, 5\}$                       d.  $\{7, 9, 10\}$
10. If  $n(A) = 30$ ,  $n(B) = 20$  and  $n(A \cap B) = 10$  Find the value of  $n(A \cup B)$ .  
a. 90                      b. 50                      c. 40                      d. 70
11. What is the sum of an infinite geometric series  $1 + 1/2 + 1/4 + \dots$   
a. 1                      b. 2                      c. 4                      d. does not exist
12. What is the first term of the geometric series whose common ratio is 2 and seventh term is 128  
a. 1                      b. 2                      c. 3                      d. 4
13. The roots of the quadratic equation  $x^2 - 5x + 6 = 0$  are  
a. 2 and 3                      b. 2 and 1                      c. 1 and 3                      d. 2 and 0
14. How many subsets can be made of set  $A = \{1, 2, 3\}$ ?  
a. 4                      b. 6                      c. 8                      d. 10
15. Which of the following is the factor of  $a^2 - 8a + 16$ ?  
a.  $a - 2$                       b.  $a - 3$                       c.  $a - 4$                       d.  $a - 6$

16. What is the order of the matrix which has two rows and three columns?  
 a.  $2 \times 3$                       b.  $3 \times 2$                       c. 6                      d. none of the above
17. What is the sum of the first  $n$  natural numbers?  
 a.  $n$                       b.  $2n$                       c.  $n(n+1)$                       d.  $n(n+1)/2$
18. The cost price of an article was Rs4000. Find the marked price of the article so that there will be a profit of 20% after allowing a discount of 20%.  
 a. Rs 4000                      b. Rs 5000                      c. Rs 6000                      d. Rs 6500
19. If certain sum of money treble itself in 15 years what is the rate of simple interest?  
 a.  $6\frac{1}{2}$                       b.  $13\frac{1}{3}$                       c. 10%                      d. 20%
20. Which one of the following relation is true?  
 a.  $I = \frac{100R}{PT}$                       b.  $R = \frac{100I}{PT}$                       c. Both are true                      d. none
21. If  $\frac{4}{5}$  quintal rice's cost is Rs. 280, then  $\frac{5}{7}$  quintal rice cost is ...  
 a. Rs. 320                      b. 200                      c. 160                      d. 250
22. The market price of a radio is Rs. 4000. If 15% discount is allowed and then VAT is added by 15% what will be the price of radio?  
 a. 4000                      b. 3910                      c. 4300                      d. 3700
23. The area of an isosceles triangle is  $60\text{cm}^2$  and the length of one of its equal side is 13cm. Find the length of the third side.  
 a. 10                      b. 5                      c. 15                      d. 20
24. The surface area of an orange having spherical shape is  $36\pi \text{ cm}^2$ . What is its radius?  
 a. 1 cm                      b. 2 cm                      c. 3 cm                      d. 4cm
25. How many odd prime numbers are there?  
 a. 1                      b. 2                      c. 3                      d. infinite
26. The set  $\{0,1,2,3,\dots\}$  is called the set of  
 a. natural number                      b. whole number                      c. irrational number                      d. integers
27. The number  $\sqrt{-3}$  is .....  
 a. an integer                      b. a rational number                      c. a real number                      d. an imaginary number
28. The volume of the cone is  
 a.  $\pi r^2 h$                       b.  $2\pi r^2 h$                       c.  $\frac{1}{2}\pi r^2 h$                       d.  $\frac{1}{3}\pi r^2 h$
29. The number  $\log 7$  is  
 a. an integer                      b. a rational number                      c. a prime number                      d. an irrational number
30. The value of the determinant  $\begin{vmatrix} 4 & 6 \\ 1 & 8 \end{vmatrix}$  is  
 a. 2                      b. 24                      c. 26                      d. 28

**General Knowledge**

31. Find the odd one out from the given set of numbers. 14, 28, 35, 46, 56, 84

- a) 56                      b) 84                      c) 35                      d) 46

32. In a certain code “CODE” is written as “DPEF”. How is “DEFENCE” is written in that code?

- a) KWMCJFL              b) ELDFSAP              c) EFGFODF              d) HRAOSCV

33. If ‘white’ is called ‘yellow’, ‘yellow’ is called ‘blue’, ‘blue’ is called ‘red’, ‘red’ is called ‘black’, ‘black’ is called ‘violet’ and ‘violet’ is called ‘green’, then what would be the colour of light emitting from bulb?

- a) Blue                      b) Red                      c) Yellow                      d) Black

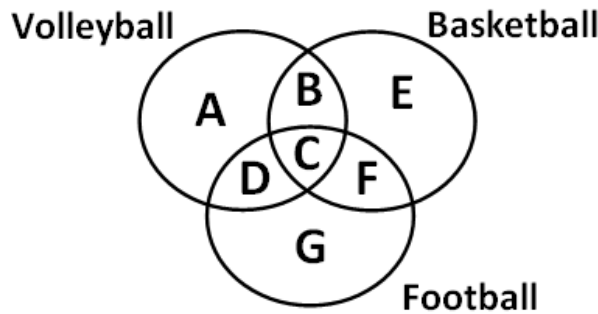
34. Kalyan is brother of Salman. Dhriti is sister of Atharv and daughter of Suchitra. Saloni is wife of Kalyan and is sister of Suchitra. How is Saloni related to Atharv?

- a) Aunt                      b) Grandmother              c) Mother                      d) Daughter

35. BFNM : EIQP :: RBGJ : ?

- a) GHJK                      b) WXYZ                      c) UEJM                      d) ABCD

36. Which of the region in the following figure represents students who play Volleyball or Football or both but not Basketball?



- a) A + D + G              b) A + G – D              c) C + D                      d) D

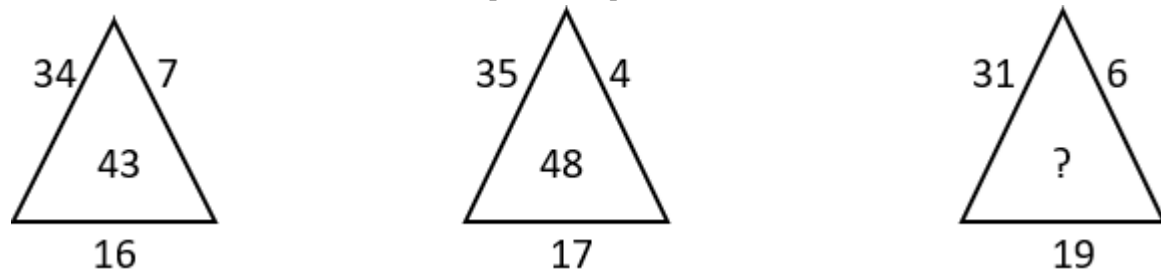
37. In a row of persons, the position of Sakshi from the left side of the row is 26th and position of Sakshi from the right side of the row is 35th. Find the total number of students in the row?

- a) 67                      b) 60                      c) 46                      d) 35

38. Find the next number in the series : 61, 52, 63, 94, 46, .... ?

- a) 81                      b) 18                      c) 49                      d) 35

39. Find the correct alternative which will replace the question mark?



- a) 49                      b) 33                      c) 27                      d) 44

40. Deepa’s younger brother Bobby is older than Hitika. Shweta is younger than Nilesh but elder than Deepa. If Nilesh is younger than Shyam then who is the youngest?

- a) Shyam                      b) Nilesh                      c) Bobby                      d) Hitika

41. According to the Constitution of Nepal, every citizen has the right to receive school education from the state at the basic level ....

- a. Compulsory  
c. Free and qualitative
- b. Compulsory and free  
d. Universal and compulsory
42. Which is Nepal's first highway?  
a. Tribhuvan highway  
c. Mahendra highway
- b. Prithivi highway  
d. BP highway
43. Which is the longest river in Nepal?  
a) Gandaki River    b) Karnali River    c) Koshi River    d) Bagmati River
44. Which of the following is a non metal that remains liquid at room temperature?  
a) Phosphorous    b) Bromine    c) Chlorine    d) Helium
45. Which of the following is used in pencils?  
a) Graphite    b) Silicon    c) Charcoal    d) Phosphorous
46. What is the largest lake in the world?  
a. Caspian Sea    b. Baikal    c. Lake Superior    d. Ontario
47. Which planet in the solar system is known as the "Red Planet"?  
a. Venus    b. Earth    c. Mars    d. Jupiter
48. Which one is the hottest continent?  
a. Africa    b. South Asia    c. North America    d. Australia
49. How many bones are in the body of an adult human?  
a. 330    b. 206    c. 250    d. 210
50. Which organ in the human body is responsible for secreting insulin?  
a. Liver    b. Kidneys    c. Pancreas    d. Stomach

**English**

51. She made him \_\_\_\_\_ the truth.  
a) tell    b) told    c) telling    d) to tell
52. Ten kilometers \_\_\_\_\_ a long distance.  
a) is    b) are    c) were    d) be
53. If I were you, I \_\_\_\_\_ the job.  
a) will take    b) would take    c) take    d) took
54. He went to school, \_\_\_\_\_?  
a) didn't he    b) did he    c) doesn't he    d) wasn't he
55. The cat is hiding \_\_\_\_\_ the table.  
a) between    b) under    c) at    d) across
56. She bought \_\_\_\_\_ one-rupee tattered note yesterday.  
a) a    b) an    c) the    d) no article
57. I ..... my lunch when he dropped in at my house.  
a) eat    b) ate    c) was eating    d) have eaten
58. "Do you like music?" he asked me. → He asked me if I .....music.  
a) liked    b) like    c) was liking    d) likes



77. What kind of adjective is used in “Five students entered the room”?  
 a. Demonstrative    b. Descriptive    c. Quantitative    d. Possessive
78. Which sentence contains a prepositional phrase?  
 a. He quickly left.    b. The dog slept under the bed.  
 c. She is singing loudly.    d. I ate a sandwich.
79. He is good ..... math.  
 a. in    b. on    c. for    d. with
80. What type of article is “the”?  
 a. Indefinite    b. Definite    c. Possessive    d. Quantitative

### **Computer Science**

81. Which of the following is the brain of the computer?  
 a. Central Processing Unit    b. Memory  
 c. Arithmetic and Logic unit    d. Control unit
82. Which of the following computer language is written in binary codes only?  
 a. pascal    b. machine language    c. C    d. C#
83. Which of the following is the smallest unit of data in a computer?  
 a. Bit    b. KB    c. Nibble    d. Byte
84. Which of the following is not a type of computer code?  
 a. EDIC    b. ASCII    c. BCD    d. EBCDIC
85. Which of the following is used in EBCDIC?  
 a. Super Computers    b. Mainframes    c. Machine Codes    d. Programming
86. Which of the following storage is a system where a robotic arm will connect or disconnect off-line mass storage media according to the computer operating system demands?  
 a. Magnetic    b. Secondary    c. Virtual    d. Tertiary
87. Which of the following can access the server?  
 a. Web Client    b. User    c. Web Browserd. Web Server
88. Which of the following is created when a user opens an account in the computer system?  
 a. SFD    b. MFD    c. Subdirectory    d. RFD
89. Which of the following type of computer is mostly used for automatic operations?  
 a. analog    b. digital    c. hybrid    d. remote
90. Which of the following is the first neural network computer?  
 a. AN    b. AM    c. RFD    d. SNARC
91. When a key is pressed on keyboard, which standard is used for converting the keystroke into the corresponding bits?  
 a. ANSI    b. ASCII    c. EBCDIC    d. ISO
92. Which of these output devices are used for the translation of information from any computer into a pictorial form on the papers?  
 a. Card punch    b. Touch panel    c. Plotter    d. Mouse
93. What is the function of the Control Panel in Windows?  
 a. To access web browsers    b. To change settings and control system configurations  
 c. To edit documents    d. To play media files

