



◆ ◆ ◆

**ADMISSIONS TEST (IT)  
PREPARATION  
QUESTIONS  
2083**

◆ ◆ ◆

**Model Questions for  
Bachelor in Computer Application (BCA)  
Set I**



**Tribhuvan University**  
**Faculty of Humanities & Social Sciences**  
**OFFICE OF THE DEAN**  
**2018**

**Bachelor in Computer Applications (BCA)**  
**Entrance Exam**

**Full Marks: 100**

**Time: 2 hrs.**

**Group A [English]**

**Circle the correct answer from among the given options (Multiple Choice Questions)**

1. The danger of volcanoes ..... not to be taken lightly.  
a) must                      b) might                      c) has                      d) have
2. Ramesh ..... here for the last seven years.  
a) worked                      b) is working                      c) has worked                      d) works
3. Supply the correct tag for the following statement.  
*Let us go, .....*  
a) shall we?                      b) will we?                      c) do we?                      d) don't we?
4. Two ladies had ..... hand bags stolen at the Kathmandu Mall.  
a) its                      b) her                      c) their                      d) they
5. They are as lucky as .....
6. Sincere people abide ..... their promise.  
a) by                      b) of                      c) at                      d) on
7. The new manager will ..... his position on August 30.  
a) take off                      b) take out                      c) take over                      d) take after
8. Choose the correct alternative for underlined phrase in the given sentence.  
*He got a Lion's share of the profits.*  
a) no share at all                      b) greater share of a things



- c) He was late for dinner, we decided to eat without him.  
 d) We were glad to see him, because he had brought gifts.
24. Choose the part participate of the verb *quit*.  
 a) quited                      b) quit                      c) quitting                      d) has quit
25. Choose the correct alternative from among the given options.  
*We spent a ..... evening together.*  
 a) quite                      b) quit                      c) quiet                      d) quitter
26. Which of the following words needs capitalization?  
 a) winter                      b) ocean                      c) jewish                      d) university
27. Choose the correct preposition from among the given options.  
*He is occurred ..... cheating.*  
 a) for                      b) of                      c) on                      d) in
28. Select the correct alternative to fill in the gap in the following sentence.  
*He is coming here ..... six o'clock.*  
 a) upon                      b) on                      c) at                      d) to
29. Select the correct meaning of the idiom in,  
*In the good book of*  
 a) enjoying a pleasant moment.                      b) enjoying a favour of someone.  
 c) possessing a good book for reading.                      d) purchasing a good book.
30. Fill in the gap in the following sentence from among the given options.  
*I am ..... tired to go any further.*  
 a) to                      b) too                      c) so                      d) not
31. Which is the correct indirect speech for the direct speech given below?  
*Hari says, "I am very happy".*  
 a) Hari says he is very happy.                      b) Hari says he was very happy.  
 c) Hari said he is very happy.                      d) Hari said he was very happy.
32. Select the interrogative sentence from the given options below.  
 a) Shall I see you tomorrow?                      b) He has studied English for a long time.  
 c) They won't believe you.                      d) It will be dark soon.
33. Put the correct verb form in the gap below.  
*I ..... told you earlier if I had known.*  
 a) would                      b) would have                      c) had                      d) should
34. Choose the right pronoun from the given alternatives in the following sentence.  
*If everybody does ..... part, the game should go smoothly.*  
 a) his                      b) her                      c) his or her                      d) their
35. Which of the following word is an adverb?  
 a) good                      b) bad                      c) well                      d) melt

**Read the given passage and then choose the best answer to each question that follows.**

Recent advances in science and technology have made it possible for geneticists to find out abnormalities in the unborn foetus and take remedial action to rectify some defects which would otherwise prove to be fatal to the child. Though genetic engineering is still at its infancy, scientists can now predict with greater accuracy a genetic disorder. It is not yet an exact science. Since they are not in a position to predict when to change the genetic order of the gene in germs, they are optimistic and are holding out that in the near future they might be successful in achieving this feat. They have however, acquired the ability in manipulating tissue cells. Still, genetic misinformation can sometimes be damaging for it may adversely affect people psychologically. Genetic information may lead to a tendency to brand some people as inferiors. Genetic information can therefore be abused and its application in deciding the sex of the foetus and its subsequent abortion is now hotly debated on ethical lines. But on this issue, geneticists cannot be squarely blamed, through this charge has often been leveled at them. It is mainly detecting disorders, but scientists hope to reduce the costs when technology becomes more advanced in rich countries take the USA, UK and Japan. It remains to be seen if in the future this science will lead to the development of a race of supermen who will be able to obliterate disease from the world.

36. Which of the following is the same in meaning as in the word 'obliterate' used in the passage?  
 a) Wipe out                      b) Wipe off                      c) Very Literate                      d) Remove
37. Which of the following is term regarding the reasons for progress in genetic engineering?  
 a) Poor countries need genetic information.  
 b) It has become popular subject.  
 c) Economically and scientifically advanced countries can provide infrastructure for such research.  
 d) Human beings are interrelated in hereditary.
38. According to the passage the question of abortion is,  
 a) hotly debated                      b) ignored                      c) unanswered                      d) undecided
39. Which of the following is not true about the genetic engineering?  
 a) Acquired ability to detect disorder in unborn babies.  
 b) Possibility of abuse.  
 c) Increased tendency to manipulate gene cells.  
 d) Acquired ability to manipulate tissue cells.
40. According to the author of the passage, the present state of knowledge about heredity has made geneticists.  
 a) reckless                      b) optimistic                      c) introspective                      d) arrogant

### Group B [Mathematics]

41. A number is divided by 10 gives a remainder 7. If the same number is divided by 5, then what will be the remainder?  
 a) 1                      b) 2                      c) 3                      d) 4
42. Which one of the following value of 'n' gives the negative result on  $n^2 - 15$ ?  
 a) 7                      b) 5                      c) 3                      d) 4
43. If 'n' is an integer, then which one of the following expression must be even?  
 a)  $n(n + 1)$                       b)  $n^2 + 1$                       c)  $n(n + 2)$                       d)  $n(n + 4)$
44. What is the sum of first five prime numbers?

- a) 18                      b) 25                      c) 26                      d) 28
45. If you save 1 paisa today, 2 paisa next day, 4 paisa the succeeding day and so on, then what is the total saving on the week?  
a) 127 paisa              b) 64 paisa              c) 256 paisa              d) 128 paisa
46. What is the value of  $\sum_{n=10}^{10} (-1)^n$  ?  
a) 0                      b) -1                      c) 1                      d) 10
47. If 6 is subtracted from the cube of a number and the result is 21, then what is the value of that number?  
a) 2                      b) 3                      c) 4                      d) 5
48. If the product of two consecutive even number is 288, then what are these numbers from following?  
a) 14, 12              b) 14, 16              c) 16, 18              d) 22, 24
49. The total of ages of A and B is 3:5, if B is 8 years elder to A, then what is the age of the A?  
a) 12 yrs.              b) 15 yrs.              c) 18 yrs.              d) 21 yrs.
50. If the root of the equation  $x^2 - 6x + c = 0$  is 3, then what is the value of c?  
a) 3                      b) 6                      c) 8                      d) 9
51. Which one of the following is true for the roots of the equation  $x^2 - 8x + 16 = 0$ ?  
a) imaginary & unequal              b) rational & unequal  
c) real & equal                      d) real & unequal
52. If the matrix is of order 5 x 3, then how many elements will be single column?  
a) 5                      b) 3                      c) 4                      d) 15
53. If  $x - 5 = 1$ , then what is the value of  $x + 7$ ?  
a) 5                      b) 7                      c) 8                      d) 13
54. If  $5x + 13 = 31$ , what is the value of  $\sqrt{(5x + 31)}$  ?  
a) 5                      b) 6                      c) 7                      d) 8
55. What is the correct value of  $\frac{5^4 - 5^3}{4}$  .  
a)  $5^3$                       b)  $\frac{1}{5}$                       c)  $5^4$                       d)  $\frac{5}{4}$
56. If  $a^x = b$ ,  $b^y = c$  and  $c^z = a$ , then what is the value of  $xyz$ ?  
a) c                      b) a                      c) b                      d) 1
57. If  $6p + 6q = 36$ , then what is the average value of a and b?  
a) 2                      b) 3                      c) 4                      d) 5
58. If  $p + q = r$ , then what is the average value of p, q and r?  
a)  $\frac{r}{3}$                       b)  $\frac{(p + q)}{3}$                       c)  $\frac{2r}{3}$                       d)  $\frac{r}{2}$
59. What is the slope of the line whose equation is  $2x - 4y = 9$ ?  
a) 1                      b)  $\frac{1}{2}$                       c) 2                      d) 3
60. Which one of the following is correct for the acute angle of right angled triangle?  
a) complementary      b) supplementary      c) adjacent              d) equal

61. There are 60 students in a class. If 60% of them are girls, then how many boys in the class?  
 a) 24                      b) 36                      c) 18                      d) 40
62. Last year Hari was 4 feet tall, and this year he is 5 feet tall. What is the percent increase of his height?  
 a) 10%                      b) 15%                      c) 20%                      d) 25%
63. What is the difference between  $\frac{3}{5}$  of 80 and 30% of 80?  
 a) 12                      b) 18                      c) 24                      d) 20
64. The cost of 6 pens is equal to the cost of the 10 pencils. If the cost of 4 pencils is Rs. 120, then what is the cost of 4 pens?  
 a) 100                      b) 200                      c) 300                      d) 400
65. If the cost of 7 kg sugar is Rs. 210, how much sugar can be purchased for Rs. 330?  
 a) 11kg                      b) 12kg                      c) 13kg                      d) 14kg
66. Ganga can read 48 pages per hour. At this rate, how many pages she can read in 80 minutes?  
 a) 60                      b) 72                      c) 48                      d) 64
67. Two numbers are in the ratio of 6:7 and their sum is 117, then what are these numbers?  
 a) 56, 58                      b) 63, 54                      c) 54, 63                      d) 48, 56
68. If  $5:7 = 15:x$ , then what is the value of  $x$ ?  
 a) 18                      b) 21                      c) 24                      d) 35
69. If cost price of 8 pens and selling price of 10 pens is equal, then what is loss percentage?  
 a) 20%                      b) 15%                      c) 10%                      d) 25%
70. If the 20% discount is given on computer book costing Rs. 300, then what will be selling price?  
 a) Rs. 240                      b) Rs. 220                      c) Rs. 260                      d) Rs. 250
71. A watch is bought at Rs. 250 and sold at Rs. 300, then what is the profit percentage?  
 a) 10%                      b) 15%                      c) 20%                      d) 25%
72. What is the population doubling time if the population growth rate is 2% per annum?  
 a) 60 yrs.                      b) 50 yrs.                      c) 40 yrs.                      d) 30 yrs.
73. What is the rate percentage per annum that a sum of money trebles itself in 25 years?  
 a) 2%                      b) 4%                      c) 6%                      d) 8%
74. What is the cardinal number of a vowel set  $V = \{a, e, i, o, u\}$ ?  
 a) 4                      b) 5                      c) 6                      d) 7
75. What is the minimum value of  $n(P \cap Q)$ ? When  $n(U) = 100$ ,  $n(P) = 70$ , and  $n(Q) = 45$ ?  
 a) 15                      b) 55                      c) 30                      d) 45
76. Which one of the following is true for prime number?  
 a) no factors                      b) only one factor                      c) only two factors                      d) more than two factors
77. Which one of the following interval notation is correct for  $\{x:5 \leq x \leq 15\}$ ?  
 a)  $[5, \infty]$                       b)  $[\infty, 15]$                       c)  $[6, 14]$                       d)  $[5, 15]$
78. What is the value of 'x' when it is multiplied by 6 and added to 3 times its own number gives 63?  
 a) 6                      b) 7                      c) 8                      d) 9

79. What is the value of  $(\sqrt{5} + \sqrt{5})^2$  ?  
 a) 20                                      b) 25                                      c) 10                                      d) 60
80. What is the number of seconds in  $1\frac{1}{3}$  hour?  
 a) 1200 sec                                      b) 2400 sec                                      c) 3600 sec                                      d) 4800 sec
81. In a kilometer race A beats B by 100 meters and B beats C by 150 meters. In the same race, by how many meters does A beats C?  
 a) 150 m                                      b) 100 m                                      c) 250 m                                      d) 200 m
82. The area of 4 walls of square room is  $120 \text{ m}^2$ . If the height is 5 m, then what is the area of its floor?  
 a)  $26 \text{ m}^2$                                       b)  $56 \text{ m}^2$                                       c)  $25 \text{ m}^2$                                       d)  $36 \text{ m}^2$
83. What is the probability of death?  
 a) 1                                      b)  $\frac{1}{2}$                                       c) 0                                      d)  $\infty$
84. What is the chance to give the birth by a pregnant lady on Tuesday?  
 a)  $\frac{3}{7}$                                       b)  $\frac{1}{7}$                                       c) 1                                      d)  $\frac{1}{2}$
85. If the BACHELOR is written as 12345678, then how will BCA be written?  
 a) 123                                      b) 432                                      c) 147                                      d) 132
86. Which one of the following is missing alphabet in given table?
- |   |   |   |
|---|---|---|
| T | Q | N |
| P | O | S |
| M | ? | R |
- a) L                                      b) U                                      c) S                                      d) V
87. Saru ranks 8<sup>th</sup> from the top and 20<sup>th</sup> from the bottom in class, then how many students are there in class room?  
 a) 28                                      b) 27                                      c) 20                                      d) 29
88. Find the value of 'x' in series 1, 1, 2, 3, 5, 8, 13, x?  
 a) 21                                      b) 22                                      c) 23                                      d) 20
89. How many squares in the following figure?
- |  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |
|  |  |  |
- a) 13                                      b) 14                                      c) 15                                      d) 16
90. What is the value of  $\cos 0^0$ ?  
 a)  $\frac{1}{2}$                                       b)  $\frac{1}{\sqrt{2}}$                                       c) 0                                      d) 1

**Group C [General Knowledge]**

91. When did the new constitute of Nepal "Nepal Ko Sambidhan" was released?



Set II



**Tribhuvan University**  
**Faculty of Humanities & Social Sciences**  
**OFFICE OF THE DEAN**  
**2018**

**Bachelor in Computer Applications (BCA)**  
**Entrance Exam**

**Full Marks: 100**

**Time: 2 hrs.**

**Group A [English]**

**Circle the correct answer from among the given options (Multiple Choice Questions)**

2. When did you ..... on the last stage of your journey?  
a) set to                      b) set out                      c) set up                      d) set off
2. Jenny always ..... when you least expected her.  
a) showed up                      b) shut up                      c) showed off                      d) shut down
3. It is a 14 hour flight, so it will give me a change ..... my reading.  
a) catch up on                      b) catch on                      c) catch up with                      d) catch out
4. Mrs. MacDonald is having the old cottage .....  
a) do for something      b) do without                      c) do over                      d) do with
5. The new commercial ..... very well.  
a) gets away                      b) gets across                      c) gets about                      d) gets along
6. I'm still trying to ..... common cold.  
a) shake off                      b) shake up                      c) shack up                      d) show off
7. Take up a brisk walk to ..... a good appetite.  
a) work out                      b) work up                      c) wrap up                      d) write off
8. The synonym of "ameliorate" is:  
a) finish                      b) appreciate                      c) improve                      d) affluent
9. Which one is appropriate synonym of "squalor".  
a) miser                      b) indolent                      c) hinder                      d) shabby
10. Give an exact synonym of "hallowed".  
a) mellowed                      b) sacred                      c) decayed                      d) mixed

11. The antonym of "cynical" is:  
a) rustic                      b) friendly                      c) hostile                      d) simple
12. Give the antonym of "corpulent".  
a) bulky                      b) skinny                      c) obese                      d) fat
13. Killing of one's sister is called .....  
a) regicide                      b) genocide                      c) sororicide                      d) suicide
14. Killing of snake is called:  
a) apicide                      b) avicide                      c) herpeticide                      d) filicide
15. Badminton is played on a court whereas boxing in a .....  
a) court                      b) track                      c) ring                      d) arena
16. A nun lives in a ..... whereas a hermit in a .....  
a) prison, sty                      b) convent, hermitage                      c) asylum, stable                      d) cottage, inn
17. The bell ..... but bracelets jingles.  
a) tolls                      b) jingles                      c) whistle                      d) rattles
18. What is the opposite of "pompous"?  
a) humble                      b) rough                      c) cheap                      d) unique
19. One who abandons his religious faith is a/an .....  
a) apostate                      b) atheist                      c) secular                      d) credulous
20. Repetition or writing word for word is putting it .....  
a) pedantic                      b) extempore                      c) epilogue                      d) verbatim
21. Johnson died ..... cancer.  
a) by                      b) in                      c) of                      d) from
22. I hope you will agree ..... me on this issue.  
a) to                      b) on                      c) with                      d) for
23. I am angry ..... your rude manner but not angry ..... you for not helping me.  
a) at, with                      b) with, with                      c) to, with                      d) to, to
24. I know you are looking ..... a job.  
a) for                      b) at                      c) with                      d) by
25. This magazine is not useful ..... me as I have no taste in music debates.  
a) to                      b) with                      c) for                      d) by
26. She was fined ..... parking her car in a no parking area.  
a) for                      b) on                      c) in                      d) at
27. I'm interested in cricket but I'm not very good ..... it.  
a) in                      b) with                      c) at                      d) about
28. What is the meaning of the phrase "ad interim"?  
a) at pleasure                      b) at will                      c) to the extreme                      d) for the time being
29. A government controlled by the rich is:  
a) oligarchy                      b) aristocracy                      c) plutocracy                      d) democracy
30. We must be early ..... we won't get a seat.  
a) otherwise                      b) yet                      c) however                      d) but



37. Why did Sultan Nasiruddin not use the money in the treasury for himself?  
 a) He was afraid that his subjects would accuse him of theft.  
 b) He had already distributed the money to the poor.  
 c) He wanted to annoy his Begum.  
 d) He was convinced that the money belonged to the people.
38. The demand of the queen was that the .....  
 a) Sultan should earn his own livelihood.  
 b) money in the treasury should not be distributed to the poor.  
 c) Sultan should employ a maid-servant.  
 d) Sultan should help her in her household duties.
39. Why was Sultan Nasiruddin popular among his people?  
 a) He was devoted to the holy Koran.  
 b) He was fair to all and was full of wisdom.  
 c) He kept the treasury full of wealth.  
 d) He made his wife work like an ordinary woman.
40. What forced the queen to do all the household chores?  
 a) The simple life style of the Sultan.  
 b) The lack of money in the treasury.  
 c) The poor working of the maid servant.  
 d) The Sultan's greed for money.

**Group B [Mathematics]**

41. If the slope of line joining (1,2) and (k, -5) is equally inclined with both the axes, then the value of k is  
 a) 6                                      b) -6                                      c) 3                                      d) -2
42. What is the value of  $\cot 90^\circ$ ?  
 a) 3                                      b)  $\frac{1}{2}$                                       c) 0                                      d) 1
43. What is the probability of drawing a queen when one card is drawn randomly from a well shuffled pack of 52 cards? Find the probability of drawing a red queen?  
 a)  $\frac{1}{26}$                                       b)  $\frac{5}{6}$                                       c)  $\frac{3}{4}$                                       d)  $\frac{15}{36}$
44. If A, B, C are the subsets of a universal set U. Then  $A - (B \cup C)$  is equal to,  
 a)  $(A - B) \cup (A - C)$                       b)  $(A - B) \cap (A - C)$                       c)  $(A \cap B) - (A \cap C)$                       d)  $(A \cup B) - (A \cup C)$
45. Of a group of 120 students, 90 takes mathematics and 72 takes statistics. If 10 students neither of two, the number of student taking both subjects are:  
 a) 50                                      b) 45                                      c) 52                                      d) 58
46.  $-5 < x < 7$  can be written in the absolute value sign as:

47. a)  $|x-1| < 7$       b)  $|x-1| < 6$       c)  $|x-1| < 2$       d)  $|x-1| < -1$   
 If the relation  $R = \{(1, 2), (2, 3), (3, 4), (4, 5)\}$  then its range is,
48. a)  $\{2, 3, 4, 5\}$       b)  $\{1, 2, 3, 4\}$       c)  $\{1, 2, 3, 5\}$       d)  $\{1, 3, 4, 5\}$   
 The value of  $\tan 180^\circ$  is equal to,  
 a) 1      b) -1      c) 0      d)  $\infty$
49.  $1^2 + 2^2 + 3^2 + \dots + n^2$  is equal to,  
 a)  $\frac{n(n+1)}{2}$       b)  $\frac{n(n+1)(2n+1)}{6}$       c)  $\left\{\frac{(n+1)}{2}\right\}^2$       d) None of the above
50. If a matrix  $A = \begin{pmatrix} 0 & 5 & -6 \\ -5 & 0 & 2 \\ 6 & -2 & 0 \end{pmatrix}$ , then matrix A is known as  
 a) Symmetric Matrix      b) Skew-Symmetric Matrix  
 c) Diagonal Matrix      d) Triangular Matrix
51. The radius of the circle  $x^2 + y^2 = 9$  is equal to,  
 a) 4      b) 3      c) 5      d) 9
52. The value of  $2\sqrt{128} + \sqrt{162}$  is,  
 a)  $25\sqrt{2}$       b)  $4\sqrt{3}$       c) 0      d) 60
53. If  $A = \begin{bmatrix} 1 & 2 \\ 3 & 1 \end{bmatrix}$ , then the value of  $A^2 - 2A - 5I$  is equal to,  
 a) 1      b) -1      c) 2      d) 0
54. What is the half of quarter of 400?  
 a) 200      b) 100      c) 50      d) 90
55. Half percent, written as a decimal is,  
 a) 0.2      b) 0.02      c) 0.005      d) 0.05
56. The true discount on Rs. 2,562 due 4 months hence is Rs. 122. The rate percent is:  
 a) 12%      b) 13%      c) 14%      d) 15%
57. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is:  
 a) 40%      b) 42%      c) 44%      d) 46%
58. AB and CD bisect each other at O. If  $AD = 6$  cm, BC is:  
 a) 5.9 cm      b) 6 cm      c) 4.8 cm      d) 7 cm
59. The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:  
 a) 2      b) 3      c) 4      d) 8
60. If a man were to sell his chair Rs. 720, he would lose 25% to gain 25%. He would sell it for:  
 a) Rs. 1,200      b) Rs. 1,000      c) Rs. 960      d) Rs. 900
61. Find the percentage gain or loss when the dot pens bought for Rs. 96 per dozen were sold at the rate of 10 for Rs. 90?  
 a) 13%      b) 20%      c) 4%      d) 12.5%
62. What is the value of  $\cos^2 30^\circ - \sin^2 30^\circ$ ?

- a)  $\frac{1}{2}$                       b)  $\frac{\sqrt{3}}{2}$                       c)  $\frac{1}{\sqrt{3}}$                       d)  $\frac{-1}{2}$
63. How many stones each of area 0.16 cm square are required for paving a courtyard 5.5 m long and 4.8 m wide?  
a) 60                      b) 100                      c) 50                      d) 165
64. Which one is the formula for area of equilateral triangle?  
a)  $\frac{\sqrt{3}}{4a^2}$                       b)  $\frac{1}{2} \times b \times h$                       c)  $\sqrt{(s-a)(s-b)(s-c)}$                       d) None of these.
65. The commission of Rs. 5,600 at the rate of 3.5% is:  
a) Rs. 196                      b) Rs. 440                      c) Rs. 360                      d) Rs. 1,000
66. The discount percent of marked price is Rs. 5,800 and discount amount is Rs. 696 then the discount percent is,  
a) 12%                      b) 20%                      c) 5%                      d) 38%
67. What is the tax rate if original price is Rs. 2,000 and selling price is Rs. 2,400?  
a) 20%                      b) 17.39%                      c) 35%                      d) 10%
68. The sum of the ages of father and his son is 52 years. Eight years ago the father was eight times as old as his son, the present age of son is,  
a) 10 years                      b) 20 years                      c) 12 years                      d) 15 years
69. If 4 is subtracted from a square of a number, its result is 21. The number is,  
a) 5                      b) 4                      c) 6                      d) 3
70. The radius of the circle  $x^2 + y^2 - 12x - 4y = 9$  is equal to,  
a) 18                      b) 7                      c) 10                      d) 2
71. The system of linear equation will be consistent and independent if they have,  
a) exactly one solution                      b) more than one solution  
c) no solution                      d) none of these
72. Let a and b are two numbers on the real line. If  $(a, b] = \{x: a < x \leq b\}$  is known as,  
a) left open interval                      b) right open interval  
c) closed interval                      d) open interval
73. Let  $f: \mathbb{R} \rightarrow \mathbb{R}$  and  $g: \mathbb{R} \rightarrow \mathbb{R}$  be defined by  $f(x) = 2x^2 - 3$ ,  $g(x) = 3x + 2$ . Then the composite functions  $g \circ f(x)$  is,  
a)  $9x + 8$                       b)  $2x + 2$                       c)  $2x + 1$                       d)  $6x^2 - 7$
74. A square matrix A is said to be singular if its determinant is equal to,  
a) 1                      b) 0                      c) -1                      d) none of these
75. The system of equations  $4x - 3y = -6$ ,  $-4x + 2y = 16$  is,  
a) consistent and dependent                      b) inconsistent and independent  
c) inconsistent and dependent                      d) consistent and independent
76. Ratio of 2 km to 600 m should be,  
a) 2:7                      b) 2:8                      c) 2:3                      d) 10:3
77. In  $a : b = c : d$ , then b and c are called,

78. a) antecedent                      b) extreme                      c) consequent                      d) mean  
 If  $b^2 - 4ac < 0$  then the roots of  $ax^2 + bx + c = 0$  are:  
 a) equal                      b) rational                      c) irrational                      d) imaginary
79. A polygon having 10 sides is called,  
 a) decagon                      b) heptagon                      c) quadrilateral                      d) hexagon
80. Linear equation is also known as,  
 a) simultaneous equation                      b) second degree equation  
 c) first degree equation                      d) zero degree equation
81. Two straight lines in same plane which never meet are called,  
 a) angles                      b) transversal lines                      c) vertex                      d) parallel line
82. If  $x^4 - 3x + 5$  is divided by  $2x - 1$ , then remainder is,  
 a)  $\frac{35}{16}$                       b)  $-\frac{35}{16}$                       c) -9                      d) 3
83. If A, G, H are arithmetic, geometric and harmonic means between a and b,  
 a) in G.P                      b) in A.P                      c) real numbers                      d) in H.P
84. In selling an article for Rs. 76, a shopkeeper gain 52%. The gain by selling that for Rs. 74 is  
 a) 45%                      b) 48%                      c) 49%                      d) 50%
85. Ram bought oranges at 6 for Rs. 10 and sold them at 4 for Rs. 6, find his loss percent  
 a) 12%                      b) 8%                      c) 6%                      d) 10%
86. Which of the following is incorrect?  
 a)  $A.M = ab$                       b)  $G.M = \frac{2ab}{a+b}$                       c)  $H.M = \frac{a+b}{2}$                       d) none of these
87. By giving a discount of 10% on the marked price of Rs. 1,100 of a mobile phone a dealer gains 10%, then the cost price is  
 a) Rs. 950                      b) Rs. 900                      c) Rs. 1,000                      d) Rs. 1,050
88. Rama purchased a table in Rs. 1,260 and due to some damage on its top, she had to sell it for Rs. 1,197,  
 a) 20%                      b) 15%                      c) 10%                      d) 5%
89. A shopkeeper purchases 11 pens for Rs. 10 and sells them at of 10 for Rs. 11, then the profit is,  
 a) 18%                      b) 19%                      c) 20%                      d) 21%
90. If  $A = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$ , then A is  
 a) unit matrix                      b) singular matrix                      c) symmetric                      d) all of them are true

### Group C [General Knowledge]

91. The famous Muktinath Temple is situated in,  
 a) Tanahun                      b) Makwanpur                      c) Mustang                      d) Gorkha

92. The longest river in the world is,  
a) Nile                      b) Ganga                      c) Amazon                      d) Indus
93. In computer abbreviation of 'OS' usually means?  
a) Order Significance                      b) Open Software  
c) Operating System                      d) Optical Sensor
94. What day was yesterday, if Monday is in two days?  
a) WEDnesday                      b) Thursday                      c) Friday                      d) Saturday
95. Which district lie in state number 3?  
a) Helambu                      b) Birgunj                      c) Tanahun                      d) Lumbini
96. How many bits equal to one byte?  
a) 4                      b) 16                      c) 8                      d) 32
97. Who won the FIFA World Cup 2018?  
a) Croatia                      b) Russia                      c) Argentina                      d) France
98. What is the term to ask the computer to put information in order numerically or alphabetically?  
a) Crop                      b) Report                      c) sort                      d) Record
99. How many districts are there in Nepal?  
a) 75                      b) 73                      c) 77                      d) 76
100. Which one of the following is not a part of the internet?  
a) WWW                      b) E-mail                      c) CDROM                      d) HTTP

**Best of Luck**

**Model Questions for  
Bachelor in Computer Application (BCA)  
Set I**



**Tribhuvan University**  
**Faculty of Humanities & Social Sciences**  
**OFFICE OF THE DEAN**  
**2018**

**Bachelor in Computer Applications (BCA)**  
**Entrance Exam**

**Full Marks: 100**

**Time: 2 hrs.**

**Group A [English]**

**Circle the correct answer from among the given options (Multiple Choice Questions)**

1. The danger of volcanoes ..... not to be taken lightly.  
a) must                      b) might                      c) has                      d) have
2. Ramesh ..... here for the last seven years.  
a) worked                      b) is working                      c) has worked                      d) works
3. Supply the correct tag for the following statement.  
*Let us go, .....*  
a) shall we?                      b) will we?                      c) do we?                      d) don't we?
4. Two ladies had ..... hand bags stolen at the Kathmandu Mall.  
a) its                      b) her                      c) their                      d) they
5. They are as lucky as .....
6. Sincere people abide ..... their promise.  
a) by                      b) of                      c) at                      d) on
7. The new manager will ..... his position on August 30.  
a) take off                      b) take out                      c) take over                      d) take after
8. Choose the correct alternative for underlined phrase in the given sentence.  
*He got a Lion's share of the profits.*  
a) no share at all                      b) greater share of a things



- c) He was late for dinner, we decided to eat without him.  
 d) We were glad to see him, because he had brought gifts.
24. Choose the part participate of the verb *quit*.  
 a) quited                      b) quit                      c) quitting                      d) has quit
25. Choose the correct alternative from among the given options.  
*We spent a ..... evening together.*  
 a) quite                      b) quit                      c) quiet                      d) quitter
26. Which of the following words needs capitalization?  
 a) winter                      b) ocean                      c) jewish                      d) university
27. Choose the correct preposition from among the given options.  
*He is occurred ..... cheating.*  
 a) for                      b) of                      c) on                      d) in
28. Select the correct alternative to fill in the gap in the following sentence.  
*He is coming here ..... six o'clock.*  
 a) upon                      b) on                      c) at                      d) to
29. Select the correct meaning of the idiom in,  
*In the good book of*  
 a) enjoying a pleasant moment.                      b) enjoying a favour of someone.  
 c) possessing a good book for reading.                      d) purchasing a good book.
30. Fill in the gap in the following sentence from among the given options.  
*I am ..... tired to go any further.*  
 a) to                      b) too                      c) so                      d) not
31. Which is the correct indirect speech for the direct speech given below?  
*Hari says, "I am very happy".*  
 a) Hari says he is very happy.                      b) Hari says he was very happy.  
 c) Hari said he is very happy.                      d) Hari said he was very happy.
32. Select the interrogative sentence from the given options below.  
 a) Shall I see you tomorrow?                      b) He has studied English for a long time.  
 c) They won't believe you.                      d) It will be dark soon.
33. Put the correct verb form in the gap below.  
*I ..... told you earlier if I had known.*  
 a) would                      b) would have                      c) had                      d) should
34. Choose the right pronoun from the given alternatives in the following sentence.  
*If everybody does ..... part, the game should go smoothly.*  
 a) his                      b) her                      c) his or her                      d) their
35. Which of the following word is an adverb?  
 a) good                      b) bad                      c) well                      d) melt

**Read the given passage and then choose the best answer to each question that follows.**

Recent advances in science and technology have made it possible for geneticists to find out abnormalities in the unborn foetus and take remedial action to rectify some defects which would otherwise prove to be fatal to the child. Though genetic engineering is still at its infancy, scientists can now predict with greater accuracy a genetic disorder. It is not yet an exact science. Since they are not in a position to predict when to change the genetic order of the gene in germs, they are optimistic and are holding out that in the near future they might be successful in achieving this feat. They have however, acquired the ability in manipulating tissue cells. Still, genetic misinformation can sometimes be damaging for it may adversely affect people psychologically. Genetic information may lead to a tendency to brand some people as inferiors. Genetic information can therefore be abused and its application in deciding the sex of the foetus and its subsequent abortion is now hotly debated on ethical lines. But on this issue, geneticists cannot be squarely blamed, through this charge has often been leveled at them. It is mainly detecting disorders, but scientists hope to reduce the costs when technology becomes more advanced in rich countries take the USA, UK and Japan. It remains to be seen if in the future this science will lead to the development of a race of supermen who will be able to obliterate disease from the world.

36. Which of the following is the same in meaning as in the word 'obliterate' used in the passage?  
 a) Wipe out                      b) Wipe off                      c) Very Literate                      d) Remove
37. Which of the following is term regarding the reasons for progress in genetic engineering?  
 a) Poor countries need genetic information.  
 b) It has become popular subject.  
 c) Economically and scientifically advanced countries can provide infrastructure for such research.  
 d) Human beings are interrelated in hereditary.
38. According to the passage the question of abortion is,  
 a) hotly debated                      b) ignored                      c) unanswered                      d) undecided
39. Which of the following is not true about the genetic engineering?  
 a) Acquired ability to detect disorder in unborn babies.  
 b) Possibility of abuse.  
 c) Increased tendency to manipulate gene cells.  
 d) Acquired ability to manipulate tissue cells.
40. According to the author of the passage, the present state of knowledge about heredity has made geneticists.  
 a) reckless                      b) optimistic                      c) introspective                      d) arrogant

### Group B [Mathematics]

41. A number is divided by 10 gives a remainder 7. If the same number is divided by 5, then what will be the remainder?  
 a) 1                      b) 2                      c) 3                      d) 4
42. Which one of the following value of 'n' gives the negative result on  $n^2 - 15$ ?  
 a) 7                      b) 5                      c) 3                      d) 4
43. If 'n' is an integer, then which one of the following expression must be even?  
 a)  $n(n + 1)$                       b)  $n^2 + 1$                       c)  $n(n + 2)$                       d)  $n(n + 4)$
44. What is the sum of first five prime numbers?

- a) 18                      b) 25                      c) 26                      d) 28
45. If you save 1 paisa today, 2 paisa next day, 4 paisa the succeeding day and so on, then what is the total saving on the week?  
a) 127 paisa              b) 64 paisa              c) 256 paisa              d) 128 paisa
46. What is the value of  $\sum_{n=10}^{10} (-1)^n$  ?  
a) 0                      b) -1                      c) 1                      d) 10
47. If 6 is subtracted from the cube of a number and the result is 21, then what is the value of that number?  
a) 2                      b) 3                      c) 4                      d) 5
48. If the product of two consecutive even number is 288, then what are these numbers from following?  
a) 14, 12              b) 14, 16              c) 16, 18              d) 22, 24
49. The total of ages of A and B is 3:5, if B is 8 years elder to A, then what is the age of the A?  
a) 12 yrs.              b) 15 yrs.              c) 18 yrs.              d) 21 yrs.
50. If the root of the equation  $x^2 - 6x + c = 0$  is 3, then what is the value of c?  
a) 3                      b) 6                      c) 8                      d) 9
51. Which one of the following is true for the roots of the equation  $x^2 - 8x + 16 = 0$ ?  
a) imaginary & unequal              b) rational & unequal  
c) real & equal                      d) real & unequal
52. If the matrix is of order 5 x 3, then how many elements will be single column?  
a) 5                      b) 3                      c) 4                      d) 15
53. If  $x - 5 = 1$ , then what is the value of  $x + 7$ ?  
a) 5                      b) 7                      c) 8                      d) 13
54. If  $5x + 13 = 31$ , what is the value of  $\sqrt{(5x + 31)}$  ?  
a) 5                      b) 6                      c) 7                      d) 8
55. What is the correct value of  $\frac{5^4 - 5^3}{4}$  .  
a)  $5^3$                       b)  $\frac{1}{5}$                       c)  $5^4$                       d)  $\frac{5}{4}$
56. If  $a^x = b$ ,  $b^y = c$  and  $c^z = a$ , then what is the value of  $xyz$ ?  
a) c                      b) a                      c) b                      d) 1
57. If  $6p + 6q = 36$ , then what is the average value of a and b?  
a) 2                      b) 3                      c) 4                      d) 5
58. If  $p + q = r$ , then what is the average value of p, q and r?  
a)  $\frac{r}{3}$                       b)  $\frac{(p + q)}{3}$                       c)  $\frac{2r}{3}$                       d)  $\frac{r}{2}$
59. What is the slope of the line whose equation is  $2x - 4y = 9$ ?  
a) 1                      b)  $\frac{1}{2}$                       c) 2                      d) 3
60. Which one of the following is correct for the acute angle of right angled triangle?  
a) complementary      b) supplementary      c) adjacent              d) equal

61. There are 60 students in a class. If 60% of them are girls, then how many boys in the class?  
a) 24                      b) 36                      c) 18                      d) 40
62. Last year Hari was 4 feet tall, and this year he is 5 feet tall. What is the percent increase of his height?  
a) 10%                      b) 15%                      c) 20%                      d) 25%
63. What is the difference between  $\frac{3}{5}$  of 80 and 30% of 80?  
a) 12                      b) 18                      c) 24                      d) 20
64. The cost of 6 pens is equal to the cost of the 10 pencils. If the cost of 4 pencils is Rs. 120, then what is the cost of 4 pens?  
a) 100                      b) 200                      c) 300                      d) 400
65. If the cost of 7 kg sugar is Rs. 210, how much sugar can be purchased for Rs. 330?  
a) 11kg                      b) 12kg                      c) 13kg                      d) 14kg
66. Ganga can read 48 pages per hour. At this rate, how many pages she can read in 80 minutes?  
a) 60                      b) 72                      c) 48                      d) 64
67. Two numbers are in the ratio of 6:7 and their sum is 117, then what are these numbers?  
a) 56, 58                      b) 63, 54                      c) 54, 63                      d) 48, 56
68. If  $5:7 = 15:x$ , then what is the value of  $x$ ?  
a) 18                      b) 21                      c) 24                      d) 35
69. If cost price of 8 pens and selling price of 10 pens is equal, then what is loss percentage?  
a) 20%                      b) 15%                      c) 10%                      d) 25%
70. If the 20% discount is given on computer book costing Rs. 300, then what will be selling price?  
a) Rs. 240                      b) Rs. 220                      c) Rs. 260                      d) Rs. 250
71. A watch is bought at Rs. 250 and sold at Rs. 300, then what is the profit percentage?  
a) 10%                      b) 15%                      c) 20%                      d) 25%
72. What is the population doubling time if the population growth rate is 2% per annum?  
a) 60 yrs.                      b) 50 yrs.                      c) 40 yrs.                      d) 30 yrs.
73. What is the rate percentage per annum that a sum of money trebles itself in 25 years?  
a) 2%                      b) 4%                      c) 6%                      d) 8%
74. What is the cardinal number of a vowel set  $V = \{a, e, i, o, u\}$ ?  
a) 4                      b) 5                      c) 6                      d) 7
75. What is the minimum value of  $n(P \cap Q)$ ? When  $n(U) = 100$ ,  $n(P) = 70$ , and  $n(Q) = 45$ ?  
a) 15                      b) 55                      c) 30                      d) 45
76. Which one of the following is true for prime number?  
a) no factors                      b) only one factor                      c) only two factors                      d) more than two factors
77. Which one of the following interval notation is correct for  $\{x:5 \leq x \leq 15\}$ ?  
a)  $[5, \infty]$                       b)  $[\infty, 15]$                       c)  $[6, 14]$                       d)  $[5, 15]$
78. What is the value of 'x' when it is multiplied by 6 and added to 3 times its own number gives 63?  
a) 6                      b) 7                      c) 8                      d) 9

79. What is the value of  $(\sqrt{5} + \sqrt{5})^2$  ?  
 a) 20                                      b) 25                                      c) 10                                      d) 60
80. What is the number of seconds in  $1\frac{1}{3}$  hour?  
 a) 1200 sec                                      b) 2400 sec                                      c) 3600 sec                                      d) 4800 sec
81. In a kilometer race A beats B by 100 meters and B beats C by 150 meters. In the same race, by how many meters does A beats C?  
 a) 150 m                                      b) 100 m                                      c) 250 m                                      d) 200 m
82. The area of 4 walls of square room is  $120 \text{ m}^2$ . If the height is 5 m, then what is the area of its floor?  
 a)  $26 \text{ m}^2$                                       b)  $56 \text{ m}^2$                                       c)  $25 \text{ m}^2$                                       d)  $36 \text{ m}^2$
83. What is the probability of death?  
 a) 1                                      b)  $\frac{1}{2}$                                       c) 0                                      d)  $\infty$
84. What is the chance to give the birth by a pregnant lady on Tuesday?  
 a)  $\frac{3}{7}$                                       b)  $\frac{1}{7}$                                       c) 1                                      d)  $\frac{1}{2}$
85. If the BACHELOR is written as 12345678, then how will BCA be written?  
 a) 123                                      b) 432                                      c) 147                                      d) 132
86. Which one of the following is missing alphabet in given table?
- |   |   |   |
|---|---|---|
| T | Q | N |
| P | O | S |
| M | ? | R |
- a) L                                      b) U                                      c) S                                      d) V
87. Saru ranks 8<sup>th</sup> from the top and 20<sup>th</sup> from the bottom in class, then how many students are there in class room?  
 a) 28                                      b) 27                                      c) 20                                      d) 29
88. Find the value of 'x' in series 1, 1, 2, 3, 5, 8, 13, x?  
 a) 21                                      b) 22                                      c) 23                                      d) 20
89. How many squares in the following figure?
- |  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |
|  |  |  |
- a) 13                                      b) 14                                      c) 15                                      d) 16
90. What is the value of  $\cos 0^0$ ?  
 a)  $\frac{1}{2}$                                       b)  $\frac{1}{\sqrt{2}}$                                       c) 0                                      d) 1

**Group C [General Knowledge]**

91. When did the new constitute of Nepal "Nepal Ko Sambidhan" was released?



Set II



**Tribhuvan University**  
**Faculty of Humanities & Social Sciences**  
**OFFICE OF THE DEAN**  
**2018**

**Bachelor in Computer Applications (BCA)**  
**Entrance Exam**

**Full Marks: 100**

**Time: 2 hrs.**

**Group A [English]**

**Circle the correct answer from among the given options (Multiple Choice Questions)**

2. When did you ..... on the last stage of your journey?  
a) set to                      b) set out                      c) set up                      d) set off
2. Jenny always ..... when you least expected her.  
a) showed up                      b) shut up                      c) showed off                      d) shut down
3. It is a 14 hour flight, so it will give me a change ..... my reading.  
a) catch up on                      b) catch on                      c) catch up with                      d) catch out
4. Mrs. MacDonald is having the old cottage .....  
a) do for something      b) do without                      c) do over                      d) do with
5. The new commercial ..... very well.  
a) gets away                      b) gets across                      c) gets about                      d) gets along
6. I'm still trying to ..... common cold.  
a) shake off                      b) shake up                      c) shack up                      d) show off
7. Take up a brisk walk to ..... a good appetite.  
a) work out                      b) work up                      c) wrap up                      d) write off
8. The synonym of "ameliorate" is:  
a) finish                      b) appreciate                      c) improve                      d) affluent
9. Which one is appropriate synonym of "squalor".  
a) miser                      b) indolent                      c) hinder                      d) shabby
10. Give an exact synonym of "hallowed".  
a) mellowed                      b) sacred                      c) decayed                      d) mixed

11. The antonym of "cynical" is:  
 a) rustic                      b) friendly                      c) hostile                      d) simple
12. Give the antonym of "corpulent".  
 a) bulky                      b) skinny                      c) obese                      d) fat
13. Killing of one's sister is called .....  
 a) regicide                      b) genocide                      c) sororicide                      d) suicide
14. Killing of snake is called:  
 a) apicide                      b) avicide                      c) herpeticide                      d) filicide
15. Badminton is played on a court whereas boxing in a .....  
 a) court                      b) track                      c) ring                      d) arena
16. A nun lives in a ..... whereas a hermit in a .....  
 a) prison, sty                      b) convent, hermitage                      c) asylum, stable                      d) cottage, inn
17. The bell ..... but bracelets jingles.  
 a) tolls                      b) jingles                      c) whistle                      d) rattles
18. What is the opposite of "pompous"?  
 a) humble                      b) rough                      c) cheap                      d) unique
19. One who abandons his religious faith is a/an .....  
 a) apostate                      b) atheist                      c) secular                      d) credulous
20. Repetition or writing word for word is putting it .....  
 a) pedantic                      b) extempore                      c) epilogue                      d) verbatim
21. Johnson died ..... cancer.  
 a) by                      b) in                      c) of                      d) from
22. I hope you will agree ..... me on this issue.  
 a) to                      b) on                      c) with                      d) for
23. I am angry ..... your rude manner but not angry ..... you for not helping me.  
 a) at, with                      b) with, with                      c) to, with                      d) to, to
24. I know you are looking ..... a job.  
 a) for                      b) at                      c) with                      d) by
25. This magazine is not useful ..... me as I have no taste in music debates.  
 a) to                      b) with                      c) for                      d) by
26. She was fined ..... parking her car in a no parking area.  
 a) for                      b) on                      c) in                      d) at
27. I'm interested in cricket but I'm not very good ..... it.  
 a) in                      b) with                      c) at                      d) about
28. What is the meaning of the phrase "ad interim"?  
 a) at pleasure                      b) at will                      c) to the extreme                      d) for the time being
29. A government controlled by the rich is:  
 a) oligarchy                      b) aristocracy                      c) plutocracy                      d) democracy
30. We must be early ..... we won't get a seat.  
 a) otherwise                      b) yet                      c) however                      d) but



37. Why did Sultan Nasiruddin not use the money in the treasury for himself?
- He was afraid that his subjects would accuse him of theft.
  - He had already distributed the money to the poor.
  - He wanted to annoy his Begum.
  - He was convinced that the money belonged to the people.
38. The demand of the queen was that the .....
- Sultan should earn his own livelihood.
  - money in the treasury should not be distributed to the poor.
  - Sultan should employ a maid-servant.
  - Sultan should help her in her household duties.
39. Why was Sultan Nasiruddin popular among his people?
- He was devoted to the holy Koran.
  - He was fair to all and was full of wisdom.
  - He kept the treasury full of wealth.
  - He made his wife work like an ordinary woman.
40. What forced the queen to do all the household chores?
- The simple life style of the Sultan.
  - The lack of money in the treasury.
  - The poor working of the maid servant.
  - The Sultan's greed for money.

**Group B [Mathematics]**

41. If the slope of line joining (1,2) and (k, -5) is equally inclined with both the axes, then the value of k is
- 6
  - 6
  - 3
  - 2
42. What is the value of  $\cot 90^\circ$ ?
- 3
  - $\frac{1}{2}$
  - 0
  - 1
43. What is the probability of drawing a queen when one card is drawn randomly from a well shuffled pack of 52 cards? Find the probability of drawing a red queen?
- $\frac{1}{26}$
  - $\frac{5}{6}$
  - $\frac{3}{4}$
  - $\frac{15}{36}$
44. If A, B, C are the subsets of a universal set U. Then  $A - (B \cup C)$  is equal to,
- $(A - B) \cup (A - C)$
  - $(A - B) \cap (A - C)$
  - $(A \cap B) - (A \cap C)$
  - $(A \cup B) - (A \cup C)$
45. Of a group of 120 students, 90 takes mathematics and 72 takes statistics. If 10 students neither of two, the number of student taking both subjects are:
- 50
  - 45
  - 52
  - 58
46.  $-5 < x < 7$  can be written in the absolute value sign as:

47. a)  $|x-1| < 7$                       b)  $|x-1| < 6$                       c)  $|x-1| < 2$                       d)  $|x-1| < -1$
48. If the relation  $R = \{(1, 2), (2, 3), (3, 4), (4, 5)\}$  then its range is,  
a)  $\{2, 3, 4, 5\}$                       b)  $\{1, 2, 3, 4\}$                       c)  $\{1, 2, 3, 5\}$                       d)  $\{1, 3, 4, 5\}$
49. The value of  $\tan 180^\circ$  is equal to,  
a) 1                      b) -1                      c) 0                      d)  $\infty$
50.  $1^2 + 2^2 + 3^2 + \dots + n^2$  is equal to,  
a)  $\frac{n(n+1)}{2}$                       b)  $\frac{n(n+1)(2n+1)}{6}$                       c)  $\left\{\frac{(n+1)}{2}\right\}^2$                       d) None of the above
51. If a matrix  $A = \begin{pmatrix} 0 & 5 & -6 \\ -5 & 0 & 2 \\ 6 & -2 & 0 \end{pmatrix}$ , then matrix A is known as  
a) Symmetric Matrix                      b) Skew-Symmetric Matrix  
c) Diagonal Matrix                      d) Triangular Matrix
52. The radius of the circle  $x^2 + y^2 = 9$  is equal to,  
a) 4                      b) 3                      c) 5                      d) 9
53. The value of  $2\sqrt{128} + \sqrt{162}$  is,  
a)  $25\sqrt{2}$                       b)  $4\sqrt{3}$                       c) 0                      d) 60
54. If  $A = \begin{bmatrix} 1 & 2 \\ 3 & 1 \end{bmatrix}$ , then the value of  $A^2 - 2A - 5I$  is equal to,  
a) 1                      b) -1                      c) 2                      d) 0
55. What is the half of quarter of 400?  
a) 200                      b) 100                      c) 50                      d) 90
56. Half percent, written as a decimal is,  
a) 0.2                      b) 0.02                      c) 0.005                      d) 0.05
57. The true discount on Rs. 2,562 due 4 months hence is Rs. 122. The rate percent is:  
a) 12%                      b) 13%                      c) 14%                      d) 15%
58. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is:  
a) 40%                      b) 42%                      c) 44%                      d) 46%
59. AB and CD bisect each other at O. If  $AD = 6$  cm, BC is:  
a) 5.9 cm                      b) 6 cm                      c) 4.8 cm                      d) 7 cm
60. The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:  
a) 2                      b) 3                      c) 4                      d) 8
61. If a man were to sell his chair Rs. 720, he would lose 25% to gain 25%. He would sell it for:  
a) Rs. 1,200                      b) Rs. 1,000                      c) Rs. 960                      d) Rs. 900
62. Find the percentage gain or loss when the dot pens bought for Rs. 96 per dozen were sold at the rate of 10 for Rs. 90?  
a) 13%                      b) 20%                      c) 4%                      d) 12.5%
63. What is the value of  $\cos^2 30^\circ - \sin^2 30^\circ$ ?

- a)  $\frac{1}{2}$                       b)  $\frac{\sqrt{3}}{2}$                       c)  $\frac{1}{\sqrt{3}}$                       d)  $\frac{-1}{2}$
63. How many stones each of area 0.16 cm square are required for paving a courtyard 5.5 m long and 4.8 m wide?  
a) 60                      b) 100                      c) 50                      d) 165
64. Which one is the formula for area of equilateral triangle?  
a)  $\frac{\sqrt{3}}{4a^2}$                       b)  $\frac{1}{2} \times b \times h$                       c)  $\sqrt{(s-a)(s-b)(s-c)}$                       d) None of these.
65. The commission of Rs. 5,600 at the rate of 3.5% is:  
a) Rs. 196                      b) Rs. 440                      c) Rs. 360                      d) Rs. 1,000
66. The discount percent of marked price is Rs. 5,800 and discount amount is Rs. 696 then the discount percent is,  
a) 12%                      b) 20%                      c) 5%                      d) 38%
67. What is the tax rate if original price is Rs. 2,000 and selling price is Rs. 2,400?  
a) 20%                      b) 17.39%                      c) 35%                      d) 10%
68. The sum of the ages of father and his son is 52 years. Eight years ago the father was eight times as old as his son, the present age of son is,  
a) 10 years                      b) 20 years                      c) 12 years                      d) 15 years
69. If 4 is subtracted from a square of a number, its result is 21. The number is,  
a) 5                      b) 4                      c) 6                      d) 3
70. The radius of the circle  $x^2 + y^2 - 12x - 4y = 9$  is equal to,  
a) 18                      b) 7                      c) 10                      d) 2
71. The system of linear equation will be consistent and independent if they have,  
a) exactly one solution                      b) more than one solution  
c) no solution                      d) none of these
72. Let a and b are two numbers on the real line. If  $(a, b] = \{x: a < x \leq b\}$  is known as,  
a) left open interval                      b) right open interval  
c) closed interval                      d) open interval
73. Let  $f: \mathbb{R} \rightarrow \mathbb{R}$  and  $g: \mathbb{R} \rightarrow \mathbb{R}$  be defined by  $f(x) = 2x^2 - 3$ ,  $g(x) = 3x + 2$ . Then the composite functions  $g \circ f(x)$  is,  
a)  $9x + 8$                       b)  $2x + 2$                       c)  $2x + 1$                       d)  $6x^2 - 7$
74. A square matrix A is said to be singular if its determinant is equal to,  
a) 1                      b) 0                      c) -1                      d) none of these
75. The system of equations  $4x - 3y = -6$ ,  $-4x + 2y = 16$  is,  
a) consistent and dependent                      b) inconsistent and independent  
c) inconsistent and dependent                      d) consistent and independent
76. Ratio of 2 km to 600 m should be,  
a) 2:7                      b) 2:8                      c) 2:3                      d) 10:3
77. In  $a : b = c : d$ , then b and c are called,

78. a) antecedent                      b) extreme                      c) consequent                      d) mean  
 If  $b^2 - 4ac < 0$  then the roots of  $ax^2 + bx + c = 0$  are:  
 a) equal                      b) rational                      c) irrational                      d) imaginary
79. A polygon having 10 sides is called,  
 a) decagon                      b) heptagon                      c) quadrilateral                      d) hexagon
80. Linear equation is also known as,  
 a) simultaneous equation                      b) second degree equation  
 c) first degree equation                      d) zero degree equation
81. Two straight lines in same plane which never meet are called,  
 a) angles                      b) transversal lines                      c) vertex                      d) parallel line
82. If  $x^4 - 3x + 5$  is divided by  $2x - 1$ , then remainder is,  
 a)  $\frac{35}{16}$                       b)  $-\frac{35}{16}$                       c) -9                      d) 3
83. If A, G, H are arithmetic, geometric and harmonic means between a and b,  
 a) in G.P                      b) in A.P                      c) real numbers                      d) in H.P
84. In selling an article for Rs. 76, a shopkeeper gain 52%. The gain by selling that for Rs. 74 is  
 a) 45%                      b) 48%                      c) 49%                      d) 50%
85. Ram bought oranges at 6 for Rs. 10 and sold them at 4 for Rs. 6, find his loss percent  
 a) 12%                      b) 8%                      c) 6%                      d) 10%
86. Which of the following is incorrect?  
 a)  $A.M = ab$                       b)  $G.M = \frac{2ab}{a+b}$                       c)  $H.M = \frac{a+b}{2}$                       d) none of these
87. By giving a discount of 10% on the marked price of Rs. 1,100 of a mobile phone a dealer gains 10%, then the cost price is  
 a) Rs. 950                      b) Rs. 900                      c) Rs. 1,000                      d) Rs. 1,050
88. Rama purchased a table in Rs. 1,260 and due to some damage on its top, she had to sell it for Rs. 1,197,  
 a) 20%                      b) 15%                      c) 10%                      d) 5%
89. A shopkeeper purchases 11 pens for Rs. 10 and sells them at of 10 for Rs. 11, then the profit is,  
 a) 18%                      b) 19%                      c) 20%                      d) 21%
90. If  $A = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$ , then A is  
 a) unit matrix                      b) singular matrix                      c) symmetric                      d) all of them are true

### Group C [General Knowledge]

91. The famous Muktinath Temple is situated in,  
 a) Tanahun                      b) Makwanpur                      c) Mustang                      d) Gorkha

92. The longest river in the world is,  
a) Nile                      b) Ganga                      c) Amazon                      d) Indus
93. In computer abbreviation of 'OS' usually means?  
a) Order Significance                      b) Open Software  
c) Operating System                      d) Optical Sensor
94. What day was yesterday, if Monday is in two days?  
a) WEDnesday                      b) Thursday                      c) Friday                      d) Saturday
95. Which district lie in state number 3?  
a) Helambu                      b) Birgunj                      c) Tanahun                      d) Lumbini
96. How many bits equal to one byte?  
a) 4                      b) 16                      c) 8                      d) 32
97. Who won the FIFA World Cup 2018?  
a) Croatia                      b) Russia                      c) Argentina                      d) France
98. What is the term to ask the computer to put information in order numerically or alphabetically?  
a) Crop                      b) Report                      c) sort                      d) Record
99. How many districts are there in Nepal?  
a) 75                      b) 73                      c) 77                      d) 76
100. Which one of the following is not a part of the internet?  
a) WWW                      b) E-mail                      c) CDROM                      d) HTTP

**Best of Luck**

## BCA Entrance Mock Test –I

Time: 2 hrs.

Full Marks: 100

(Attempt all questions)

### Grammar (40X1=40)

1. I live..... the park.  
a) by                      b) with                      c) over                      d) from
2. She did the exams ..... two sittings.  
a) at                      b) by                      c) from                      d) over
- 3..... Chinese are hard working  
a) a                      b) an                      c) the                      d) None
4. The passive of: Who taught her such things? Is  
a) Who was she taught such things by?                      b) By whom she was taught such things?  
c) By whom was she taught such things?                      d) By whom is she taught such things?
5. Ten divided ..... two is 5.  
a) at                      b) by                      c) in                      d) None
6. She is ..... with sufferers.  
a) Sympathetic                      b) Sympthetic                      c) sympathatics                      d) Sympthetic
7. The plural form of „Lion” is  
a) Lion                      b) Lioness                      c) Leon                      d) lions
8. If bread is to yeast in the same way as curd is to  
a) Fungi                      b) Bacteria                      c) Yeast                      d) Algae
9. Had he had the time, he.....the function  
a) Would attend                      b) attended                      c) had attended                      d) would have attended
10. The rain .... Before the lightening flashed  
a) Had already stopped                      b) already stopped  
c) Was stooping                      d) has already stopped
11. None is available.....?  
a) are they                      b) do they                      c) didn’t they                      d) did they
12. We heard voices..... the hedge .  
a) at                      b) on                      c) in                      d) Over
13. He exchanged the cow ..... the horse.  
a) By                      b) for                      c) about                      d) on
14. A mania for books  
a) bibliomania                      b) logomania                      c) kleptomania                      d) pyromania
15. Synonyms of “off”  
a) of                      b) on                      c) down                      d) false
16. The Scissors.....to blunt.  
a) is                      b) are                      c) were                      d) was
17. Either his brother or his sister ..... always there  
a) is                      b) are                      c) was                      d) be
18. She said to me “Let me go”  
a) She said to me let me go.                      b) She requested me to let me go.  
c) She requested me letting her go.                      d) Sherequested me to let her go.
19. „Friend” is same as  
a) partner                      b) competitor                      c) foe                      d) associate
20. Listen to the birds .....  
a) sing                      b) singing                      c) to sing                      d) song
21. I bought this pen form the.....store  
a) Stationery                      b) Stationary                      c) Stationnary                      d) Stantianary
22. Don’t ..... to anybody  
a) lie                      b) lay                      c) laid                      d) laed
23. This bed is not ..... for two people to sleeping  
a) as wide as                      b) wide enough                      c) wider enough                      d) quite wider
24. The fault in engine is ..... this time then it was the last time.  
a) more serious                      b) serious                      c) very serious                      d) serious than
25. “To born the candle at both ends” means  
a) To born seriously.                      b) In very painful situation  
c) To work hard                      d) none of these
26. She.....English by next Friday  
a) will have studied                      b) studies                      c) will be studying                      d) will have studying
27. ARMY: LOGISTICS  
a) War :logic                      b) business: Strategy                      c) soldier: Student                      d) team: individual
28. Hurry up and use the fire ..... the house is on fire  
a) extincer                      b) extinguisher                      c) extinguishing                      d) extinguish
29. She cannot play chess, ..... can her sister.  
a) nor                      b) neither                      c) with                      d) either
30. Red handed means:  
a) quickly                      b) caught in the act  
c) caught with dirty hands                      d) caught with his hands tied
31. I am in a state of dilemma. That means I am .....  
a) dazzled                      b) tired                      c) puzzled                      d) not sure
32. Cholera broke..... in Jajarkot ten year ago  
a) out                      b) down                      c) up                      d) into
33. You like apples and so.....  
a) I do                      b) I like                      c) do I                      d) did I
34. The synonym of “Emulate”  
a) imitate                      b) deny                      c) question                      d) discuss
35. If you teased the day. It..... bite you.  
a) will                      b) would                      c) did                      d) sky
36. Ram sold his plot of land in the village so that he..... Buy a new house in city.



71. If  $x$  is an integer, then which of the following is the production of the next two integer than  $2(x+1)$ ?  
 a)  $4x^2 + 14x + 12$       b)  $4x^2 + 12$       c)  $x^2 + 14x + 12$       d)  $x^2 + x + 12$
72. The value of  $\sum_{n=1}^{10} (-1)^n$  is  
 a) 1      b) -1      c) 10      d) 0
73. If a matrix is of order  $5 \times 7$ , then each row will contain ..... elements  
 a) 5      b) 12      c) 35      d) 7
74.  $\log_a 81 = 4$ , then the values of „a“ is  
 a) 4      b) 3      c) 5      d) none of these
75. If A.M of  $x$  and  $y$  is 10 and G.M of there is 8. What is the value of  $x$  and  $y$ ?  
 a) 16, 4      b) 15, 5      c) 14, 6      d) 12, 8
76. If the ratio of  $\frac{1}{4}$  to  $\frac{1}{5}$  is equation to the ratio of  $\frac{1}{4}$  to  $x$ . then what is the value of  $x$ ?  
 a)  $\frac{1}{20}$       b)  $\frac{5}{16}$       c)  $\frac{1}{5}$       d)  $\frac{5}{4}$
77. Modulus of „i“ is  
 a) i      b) -i      c) 1      d) -1
78. A vendor bought bananas at 6 for a rupee. How many for a rupee must has sell to gain 20 %?  
 a) 3      b) 4      c) 5      d) 6
79. The slop of the line  $\frac{x}{a} + \frac{y}{b} = 3$  is  
 a)  $-\left(\frac{1}{b}\right)$       b)  $-\left(\frac{b}{a}\right)$       c) ab      d)  $-\frac{1}{ab}$
80. Sum of first „n“ odd natural number is  
 a)  $n(n+1)$       b)  $n^2$       c)  $\frac{n(n+1)(2n+1)}{6}$       d)  $\frac{n(n+1)}{2}$
81. If „n+1“ is even , then „n+13“ is  
 a) even      b) odd      c) neither a and b      d) none
82. The value of  $\cos^{-1} \theta + \sin^{-1} \theta$  is  
 a)  $\theta$       b)  $\pi\theta$       c)  $\pi$       d)  $\frac{\pi}{2}$
83. if  $A = \{ 1, 2, 3 \}$  then non- empty proper subset are  
 a) 8      b) 7      c) 6      d) 5
84. For a function to be inverse, it must be .....  
 a) Injective      b) bijective      c) Surjective      d) function only
85.  $ax^2 + 2hxy + by^2 = 0$  represents  
 a) a pair of lines      b) a pair of lines passing through origin  
 c) a line only      d) None of these
86.  $4x + 2y + 3 = 0$  and  $8x + 4y + 6 = 0$  are  
 a) Perpendicular lines      b) equal lines      c) parallel lines      d) parallel and equal
87. Which one of is correct.  
 a) Perpendicular lines have same slope      b) Parallel lines have same slope  
 c) Parallel and perpendicular lines have slope      d) none of there
88.  $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$   
 a) 0      b) 2      c) 3      d) 4
89. Inverse of matrix exists if matrix is  
 a) Singular      b) Invertible      c) unit      d) None of these
90. The ratio of largest 2 digit number to largest digit number is  
 a) 1      b) 10      c) 11      d) 0

**General Knowledge (10X1=10)**

91. Who propounded the atomic theory?  
a) Newton                      b) Joseph Addison                      c) John Dalton                      d) Henry Mosey
92. When was first operating system introduced?  
a) 1930                      b) 1950                      c) 1970                      d) 1990
93. Which is the longest day on the earth?  
a) June 21                      b) March 22                      c) January 21                      d) August 21
94. How many districts are there in the Terai region?  
a) 10                      b) 20                      c) 27                      d) 30
95. Who is popular as “LauhaPurush” (Iron man) of Nepal?  
a) Prithvi Narayan shah                      b) Junga Bahadur Rana  
c) Ganesh Man Sing                      d) Khila Raj Regmi
96. What is the weight of FIFA cup?  
a) 5kg                      b) 6kg                      c) 7 kg                      d) 8kg
97. Which river is known as sorrow of Bihar?  
a) Gandaki                      b) Mahakali                      c) Karnali                      d) Koshi
98. How old was Jung Bahadur when he became the prime minster of Nepal?  
a) 28                      b) 29                      c) 30                      d) 31
99. How many state member are there in the UNO?  
a) 190                      b) 191                      c) 192                      d) 193
100. Who is known as the father of genetics?  
a) Friederich Franz                      b) Christian Dopper  
c) Johann Karl Nestler                      d) Gregor Johann Mendal

**---Best of Luck---**

## BCA Entrance Mock Test - II

Time: 2 hrs.

Full Marks: 100

(Attempt all questions)  
**Grammar (40X1=40)**

1. The woman is dressed ..... a blue sari.  
a) in                      b)with                      c)by                      d)at
2. They enjoyed ..... Christmas.  
a) in                      b)during                      c)on                      d)at
3. .... silver is precious metal.  
a) a                      b)an                      c)the                      d)none
4. What is the passive of "I did it."  
a) It is done.                      b) It is being done.  
c) It was done.                      d) It has been done.
5. Come and sit.....me.  
a) by                      b)over                      c)at                      d)on
6. She is ..... with good health.  
a) belesed                      b)blessed                      c)blesseed                      d)blesed
7. The plural form of "ape" is  
a)apes                      b)apo                      c)apeses                      d)none
8. If overt is to secret in the same way as cautious is to .....  
a) pompous                      b)rash                      c)clever                      d)coy
9. What ..... if you were bitten by a poisonous snake?  
a) were you do                      b)would you have done                      c)would you do                      d)would you had done
10. She thanked me for what I .....  
a) did                      b)do                      c)have done                      d)had done
11. I am happy.....?  
a) am I                      b)aren't I                      c)can I                      d)do I
12. Never yield..... temptation.  
a) for                      b)in                      c)to                      d)over
13. I prefer coffee .....tea  
a) with                      b)over                      c)by                      d)to
14. Synonyms of "asset" is  
a) aid                      b) credit                      c) gem                      d) favor
15. The teacher seemed .....  
a) relaxed                      b)happiness                      c)quickly                      d)bore
16. Let's go, ..... ?  
a) will you                      b)shall you                      c)shall we                      d)will we
17. .... his leg is broken, he ran fast  
a) however                      b)although                      c)despite off                      d)in spite of
18. They said, "Where is the zoo?"  
a) They asked me where the zoo was.                      b) they wanted to know where the zoo was.  
c) They asked where the zoo is.                      d) they inquired where the zoo is.
19. "Domestic" is same as.....  
a) locale                      b)local                      c)country                      d)foreign
20. We saw them ..... out.  
a) go                      b)to go                      c)going                      d)went
21. Today I feel .....  
a) lazy                      b)laziness                      c)lazily                      d)none
22. The past participle of fly is .....  
a) flee                      b)fly                      c)flow                      d)flown
23. One should do.....duty very well.  
a) ones                      b)one                      c)one's                      d)their
24. "To throw out of currency" means .....  
a) extinguish                      b)forget                      c)destroy                      d)put out of use
25. "The alpha and omega" means  
a) two opposite things                      b)beginning and the end  
c) just a two symbol                      d)none of theabove
26. When they ..... I ..... a letter.  
a) entered, was writing                      b)was entering, wrote  
c) had entered, wrote                      d)enter, is writing
27. SHIELD: SOLDIER  
a) stethoscope: doctor                      b) book: author                      c) advocate: court                      d) helmet: rider
28. The tag question of " I am an engineer" is  
a) Aren't I?                      b)am not I?                      c)Don't I?                      d) Am not I?
29. Wight is to nocturnal in the same way as spring is to  
a) winter                      b)summer                      c)autumn                      d)vernal
30. Out of the moon means  
a)lightening                      b)suddenly                      c)euphoria                      d)out of thegloom
31. She undergoes a strange experience of seeing something not present in front of her. In other handshe is suffering from.....  
a) hallucination                      b)bronchitis                      c) tonsillitis                      d)psychosis
32. He is happy and ..... am I.  
a) too                      b)so                      c)neither                      d)either
33. I never watch TV and.....do they.  
a) either                      b)so                      c)neither                      d)too

34. The antonym of "Genuine" is .....  
 a) true                      b) facsimile                      c) pure                      d) original
35. The synonym of purgatory is .....  
 a) polluted city                      b) hell                      c) heaven                      d) sky
36. Because of the heavy rain, they decided to call.....the cricket match.  
 a) out                      b) up                      c) off                      d) down
37. The doctor felt her pulse.....  
 a) run                      b) ran                      c) to run                      d) running
38. There are a few students in the class, ..... ?  
 a) are there                      b) aren't there                      c) are they                      d) few they
39. This is the man.....  
 a) which I know                      b) who I know                      c) that I know                      d) whom I know
40. The committees.....to reform on policies.  
 a) needs                      b) is needing                      c) need                      d) has needed

**Mathematics (50X1=50)**

41. If  $\log_a ab = x$ ,  $\log_b bc = y$  and  $\log_c ac = z$ , then,  $\frac{1}{x+y} + \frac{1}{y+z} + \frac{1}{z+x}$  is  
 a) 0                      b) 1                      c) 2                      d) 2
42. A number of two digit is six times the sum of its digits. If 9 is subtracted from the number the digits are reversed. The number is  
 a) 44                      b) 54                      c) 64                      d) 74
43. If  $\lim_{x \rightarrow 2} \frac{x^n - 2^n}{x-2} = 80$  and n is any positive integer, then n is  
 a) 5                      b) 4                      c) 3                      d) none of these
44. The roots of the equation  $x^2 - 8x + 16 = 0$  are  
 a) Real and unequal                      b) real and equal  
 c) Imaginary and unequal                      d) none of these
45. The value of x and y satisfying the equation  $\frac{3}{x+y} + \frac{2}{x-y} = 3$ ,  $\frac{2}{x+y} + \frac{3}{x-y} = 3\frac{1}{2}$  are given by  
 a) 1, 2                      b) -1, -2                      c) 1, 1/2                      d) 2, 1
46. The null set is represented by  
 a)  $\{\emptyset\}$                       b)  $\{0\}$                       c)  $\emptyset$                       d) none of these
47. If  $(x+2)$  is a factor of  $x^3 - 3x^2 - 4x + 12 = 0$   
 a) Yes                      b) No                      c) both                      d) none of these
48. The point of intersection between the straight lines  $3x - y = 12$  and  $3x + 2y = 6$  lie in  
 a) 1<sup>st</sup> quadrant                      b) 2<sup>nd</sup> quadrant                      c) 3<sup>rd</sup> quadrant                      d) 4<sup>th</sup> quadrant
49. The lines (3, 1), (5,-5) and (-1, 13) are  
 a) Concurrent                      b) collinear                      c) parallel                      d) perpendicular
50.  $2^{4n} - 1$  is divisible by  
 a) 15                      b) 4                      c) 6                      d) 64
51. Sum to infinity of the series  $0.4 + 0.8 + 0.16 + \dots$  is  
 a) 5                      b) 10                      c) 8                      d) none of these
52. The sum of the cubes of the first "n" natural numbers is  
 a)  $\frac{n(n+1)}{2}$                       b)  $\frac{n(n+1)(2n+1)}{6}$                       c)  $\left[\frac{n(n+1)}{2}\right]^2$                       d) none

53. If 120 apples cost \$20, I can buy..... Apples for 50 cents  
 a) 1                      b) 2                      c) 3                      d) 4
54. The average of  $2^{10}$  and  $2^9$  is  
 a)  $2^9 + 2^8$                       b)  $\frac{2^{10} + 2^8}{2}$                       c)  $4^{80}$                       d) none
55. If 7<sup>th</sup> of a month falls two days after Monday on what day will 18<sup>th</sup> of the month fall?  
 a) Monday                      b) Friday                      c) Thursday                      d) Sunday
56. The value of  $(\log_b a \times \log_a b \times \log_a c)^3$  is equal to  
 a) 3                      b) 0                      c) 1                      d) 4
57. The geometric mean of  $a^{2n} \times b^{2n}$  is  
 a)  $\frac{a^{2n} b^{2n}}{2}$                       b)  $a^n b^n$                       c)  $\frac{a^{2n} + b^{2n}}{2}$                       d)  $(ab)^{2n}$
58. If x and y are rational number such that  $\sqrt{xy}$  is irrational number, then  $\sqrt{x} + \sqrt{y}$  is  
 a) rational                      b) irrational                      c) both                      d) none of these
59. Each prime number has  
 a) no factor                      b) only on factor  
 c) only two factors                      d) more than two factor
60. The area of square whose diagonal is 10 is  
 a) 20                      b) 30                      c) 40                      d) 50
61.  $\lim_{x \rightarrow 0} e^{1/x}$   
 a) 0                      b) 1                      c)  $\infty$                       d) none
62. If  $\frac{a}{4} = \frac{b}{5} = \frac{c}{9}$  then  $\frac{a+b+c}{c}$  is  
 a) 4                      b) 2                      c) 7                      d) none of these
63. The value of x when  $x\sqrt{x} = (x\sqrt{x})^x$  is  
 a) 1                      b) 2                      c) 3                      d) 4
64. If  $\frac{a}{b} = \frac{c}{d}$ , then  $\frac{a}{c} = \frac{b}{d}$  is called  
 a) invertendo                      b) alternendo  
 c) componendo                      d) componendo & dividendo
65. The lines  $y + 2 = 5x$  and  $5y + x = -15$  are  
 a) parallel                      b) perpendicular                      c) both                      d) none
66. The sum of prime number greater than 70 and less than 80 is  
 a) 220                      b) 224                      c) 223                      d) 228
67. The diameter of the circle connects the point (2, -3) and (6,4) on the circle. The co-ordinates of the centre of circles is  
 a) (2, 1/3)                      b)  $(\frac{1}{2}, 3)$                       c) (4, 1/2)                      d) (4, 4)
68. If  $A = \{a, b, c\}$  then which of the following is true?  
 a)  $\{a\} \in A$                       b)  $\{a\} \subset A$                       c)  $a \subseteq A$                       d)  $\{b, d\} \subseteq A$
69. Which of the following is not an "identity law" in set operation?  
 a)  $A \cup \emptyset = A$                       b)  $A \cap \emptyset = \emptyset$                       c)  $A \cup U = U$                       d)  $A \cup A = A$
70. The number of possible non-empty subsets of  $A = \{a, b, c, d\}$  is  
 a) 32                      b) 4                      c) 8                      d) 15
71. If  $f(x) = x^2$  domain =  $[-1, 2]$ , then range is  
 a)  $[-1, 2]$                       b) (1, 4)                      c) [1, 4]                      d) [1, 4)
72. The domain of  $f(x) = \frac{1}{x}$  in the real line is  
 a)  $(-\infty, \infty)$                       b)  $(-\infty, 0] \cup (0, \infty)$                       c)  $[0, \infty)$                       d)  $(-\infty, 0) \cup (0, \infty)$

73. If it takes 20 minutes to dry one shirt how much time does it takes to dry 10 shirts?  
 a) 10 min                      b) 20 min                      c) 25 min                      d) 30 min
74. If  $a = \frac{b}{c}$  and  $b = \frac{a}{c}$  then,  $c =$   
 a)  $\frac{b}{a}$                       b)  $\frac{a}{b}$                       c)  $-1$                       d)  $a$
75. Inclination of straight lines represented by  $x - 5 = 0$  is  
 a)  $0^\circ$                       b)  $90^\circ$                       c)  $\infty$                       d) 1
76. If A and B are sets, then  $A \cup B$  is equal to  
 a)  $\overline{A \cap B}$                       b)  $\overline{A \cup B}$                       c)  $A \cap B$                       d) none
77. The system of equations  $2x + 3y = 6$  and  $6x + 9y = 18$  have  
 a) Unique solution                      b) No solution                      c) Infinite solution                      d) none of these
78. Let  $\frac{x}{y} + \frac{w}{z} = 2$ , then the value of  $\frac{y+z}{x \cdot w}$  is  
 a)  $\frac{1}{2}$                       b)  $\frac{3}{4}$                       c) 5                      d) 2
79. Reeta ranked 37<sup>th</sup> from the bottom and 8<sup>th</sup> from the top. How many students are there?  
 a) 45                      b) 92                      c) 55                      d) none of these
80.  $3^n - 2n - 1$  is divided by:  
 a) 15                      b) 4                      c) 6                      d) 64
81. The logarithm of 64 to base  $2\sqrt{2}$   
 a) 2                      b) 4                      c) 6                      d) 8
82. The monthly income of two persons are in the ratio is 4:5 and their monthly expenditure are in the ratio 7:9. If each shares is 50 per month, then their monthly income are  
 a) 400500                      b) 400600                      c) 500400                      d) 600800
83. If  $a:b=3:4$  then the value of  $(2a+3b):(3a+4b)$  is  
 a) 54:25                      b) 18:25                      c) 2:21                      d) none of these
84. The ratio between the speeds of the two train is 7:9. If the second train runs 400km in 5hr, then the speed of first train is  
 a) 10 km/hr.                      b) 50km/hr.                      c) 71km/hr.                      d) 80km/hr.
85. The mean proportional between  $12x^2$  and  $27y^2$  is  
 a)  $18xy$                       b)  $81xy$                       c)  $8xy$                       d) none
86. If  $A = \frac{B}{2} = \frac{C}{5}$  then A:B:C is  
 a) 3:5:2                      b) 2:5:3                      c) 1:2:5                      d) none
87. The ratio 2 to  $\frac{1}{4}$  is equal to ratio  
 a) 2 to 1                      b) 6 to 1                      c) 8 to 1                      d) 7 to 1
88. If n is a prime number greater than 3, the remainder when  $n^2$  divided by 12 is  
 a) 0                      b) 2                      c) 1                      d) 4
89. If  $a:b=4:1$  then  $\frac{\sqrt{a}}{b} + \frac{\sqrt{b}}{a}$  is  
 a)  $\frac{5}{2}$                       b) 4                      c) 5                      d) None of these
90. If the average of for x numbers k,  $2k+3$ ,  $3k-5$  and  $5k+1$  is 63, then the value of k is  
 a) 22                      b) 23                      c) 24                      d) 25

### General Knowledge (10X1=10)

91. When was Bir Hospital established?  
 a) Shrawan, 1947 BS                      b) Marga, 1974 BS  
 c) Shrawan, 2047 BS                      d) Marga, 2047 BS
92. World Population Day is celebrated in ....  
 a) Dec 11                      b) July 11                      c) March 15                      d) Oct 20
93. Who is the author of the novel "Ghanachakkar"?  
 a) Bal Krishna Sam                      b) Subin Bhattarai                      c) Sanjeev Uprety                      d) Chetan Bhagat
94. Which country is the largest bilateral donor of Nepal?  
 a) China                      b) Japan                      c) India                      d) America
95. Who is the first lady driver of Nepal?  
 a) Manchura Devi                      b) Shantishree Sharma  
 c) Vidya Devi                      d) Prem Kumari Waiba
96. "People are lonely because they build wall instead of bridge". Who said this?  
 a) Abharam Linclon                      b) Carlyle                      c) Livy                      d) Joseph Neuton
97. Which bird can see the sun directly by its naked eye?  
 a) Crow                      b) Kiwi                      c) Eagle                      d) Vulture
98. "Blue Chips" is related to?  
 a) Share market                      b) Computers                      c) Vehicles                      d) Human body
99. What is the full form of CNN?  
 a) Connection News Network                      b) Cable Nepal Network  
 c) Connection New Nepal Network                      d) Cable News Network
100. Which is the longest district of Nepal?  
 a) Dhading                      b) Humla                      c) Jhapa                      d) Chitwan

---Best of Luck---

## BCA Entrance Mock Test –III

Time: 2 hrs.

Full Marks: 100

(Attempt all questions)

### Grammar (40X1=40)

1. She is very good..... in swimming.  
a) at                      b) on                      c) of                      d) for
2. Ravi will have arrived home.....8 pm tomorrow.  
a) in                      b) at                      c) by                      d) on
3. Rita is.....honest and diligent student.  
a) a                      b) an                      c) this                      d) no article
4. The passive version of "Who did it?" is:  
a) Who was it done?    b) Who was it done by?    c) Who was done it?    d) Who had it done by.
5. We had to stop .....the entrance for the security check.  
a) in                      b) on                      c) at                      d) for
6. Using a..... cleaner is the best way for avoiding the dust pollution.  
a) Vaccum                      b) Vacume                      c) Vacuum                      d) Vacuume
7. The plural form of "OX" is:  
a) oxen                      b) Oxes                      c) oxez                      d) none
8. The feminine form of deer is:  
a) deeress                      b) doe                      c) stag                      d) none
9. If I had know about your arrival, I.....to receive you at the airport.  
a) Would come                      b) would came                      c) would have come                      d) had come.
10. At midnight, all the goats were .....  
a) Bleating                      b) howling                      c) roaring                      d) mowing
11. The question tag of "They have already arrived," is  
a) Have they?                      b) Haven't they                      c) Weren't they?                      d) Did they?
12. Please..... The cigarette. It irritates me.  
a) put down                      b) put out                      c) put away                      d) put in
13. As Gretel's father could not do anything, he gave .....  
a) away                      b) out                      c) in                      d) into
14. I have eaten nothing for hours. I am.....hungry.  
a) quiet                      b) quit                      c) quite                      d) quit
15. The synonym of recurring is  
a) Occurring repeatedly    b) happening rarely                      c) occurring once a weak    d) occurring seldom
16. The antonym of "on" is:  
a) of                      b) un                      c) off                      d) out
17. .... he was very popular among common people, he could not win the election.  
a) Because                      b) So                      c) Although                      d) Therefore
18. The indirect speech of "Are you sure? She said to me." is:  
a) She asked me if I was sure                      b) She wanted to know was I sure  
c) She inquired if I am sure                      d) She asked him if I was sure.
19. In the night bus yesterday, I had my purse .....  
a) steal                      b) stole                      c) stolen                      d) to steal
20. I am looking forward to..... You very soon again.  
a) see                      b) seen                      c) seeing                      d) be seen
21. I bought this pen form the.....store.  
a) stationery                      b) stationary                      c)stationnary                      d) stantianory
22. This bed is not ..... for two people to sleep in.  
a) as wide as                      b) wide enough                      c) wider enough                      d) quite wider
23. The fault in the engine is.....this time than it was the last time.  
a) More serious                      b) serious                      c) very serious                      d) serious than
24. You will find the photograph of mine ....  
a) at                      b) on                      c) of                      d) with
25. Reeta can dance..... of all in this class.  
a) The best                      b) better                      c) best                      d) more better
26. Hurry up and use the fire ..... the house is on fire.  
a) extincer                      b) extinguisher                      c) extinguishing                      d) extinguish
27. The tag question of "I am an engineer." is :  
a) Aren't I?                      b) am not I?                      c) Don't I?                      d) Am not I?
28. I am in a state of dilemma. That means I am .....  
a) dazzled                      b) tired                      c) puzzled                      d) not sure
29. She undergoes a strange experience of seeing something not present in front of her. In other words, she is suffering from .....  
a) hallucination    b) bronchitis                      c) tonsillitis                      d) psychosis
30. She can play tennis, but she is ..... at it than her friend.  
a) badly                      b) worse                      c) more badly                      d) worsely
31. Sulav sold his plot of land in the village so that he .....buy a new house in the city.  
a) could                      b) can                      c) need                      d) would
32. If you teased the dog. It ..... bite you.  
a) will                      b) would                      c) did                      d) can
33. She is so .....that she easily catches cold.  
a) sincere                      b) sensitive                      c) sensible                      d) sober
34. The synonym of purgatory is:  
a) Polluted city                      b) hell                      c) heaven                      d) sky
35. The synonym of creek is:  
a) pond                      b) late                      c) rivulet                      d) tributary
36. No sooner had I left the room, the bomb..... exploded.  
a) had                      b) could be                      c) would be                      d) none of the above

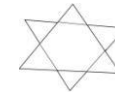
37. Sarita plays chess ..... than her sister.  
 a) More better      b) better      c) well      d) best
38. I am looking forward to.....you soon.  
 a) seeing      b) see      c) be seen      d) seen
39. Because of the heavy rain they decided to call .....The cricket match.  
 a) out      b) up      c) off      d) down
40. Cholera broke.....in Jajarkot ten years ago.  
 a) out      b) down      c) up      d) into

**Mathematics (50X1=50)**

41. Which one of the following number has a remainder of 4 when it is divided by 6?  
 a) 8      b) 12      c) 22      d) 29
42. The sum of the product and quotient of 4 and 4 is .....  
 a) 16      b) 15      c) 8      d) 17
43. The average of all even numbers between -4 and 5 is .....  
 a) 1      b) 0.5      c) -1      d) none of these
44. The sum of first five prime numbers is:  
 a) 11      b) 18      c) 26      d) 28
45. The value of  $\sum_{n=10}^{10} (-1)^n$  is:  
 a) 1      b) -1      c) 10      d) 0
46. The product of two consecutive even number is 224. Then the numbers are:  
 a) 16, 18      b) 12, 14      c) 14, 16      d) 18, 20
47. If 5 is added to the square of a number, then the result is 14. What is the value of that number?  
 a) 3      b) 5      c) 7      d) 9
48. If three spoons equals to one glass, two glasses equals to one plate, then how many spoons equals to one plate?  
 a) 3      b) 6      c) 9      d) 2
49. If a matrix is of order 5 X 7, then each column will contain.....elements.  
 a) 5      b) 12      c) 35      d) 7
50. If the equation are  $3x + 4y = 7$  and  $4x - y = 3$  after solving these equations the value of x and y will be:  
 a) 1,1      b) 1,2      c) 2,1      d) 2,2
51. What is the value of x in series 1, 9, 25, x, 81, 121?  
 a) 100      b) 36      c) 49      d) 64
52. If  $a + b = c$ , then what is the average value of a, b and c?  
 a)  $\frac{(a+b)}{3}$       b)  $\frac{c}{3}$       c)  $\frac{2c}{3}$       d)  $\frac{c}{3}$
53. If x in an integer and  $y = -2x - 8$ , what is the least value of x for which y is less than 9?  
 a) -8      b) -9      c) -10      d) -11
54. The slope of line which equation is  $2x - 4y = 9$  is:  
 a) 2      b) 1/2      c) -1/2      d) 3
55. What is the slope of horizontal line?  
 a) >1      b) <0      c) 0      d) 1

56. The difference between  $\frac{3}{5}$  of 80 and 30% of 80 is:  
 a) 20      b) 14      c) 15      d) 24
57. Gautam spent Rs. 40/-, which is 5% of his daily wage, then his total daily wage is:  
 a) Rs.400/-      b) Rs.600/-      c) Rs.800/-      d) Rs. 1000/-
58. If 1254376 represents the CENTURY, then what represents 735?  
 a) NUT      b) RUT      c) RUN      d) YET
59. Find the missing value in  $\begin{bmatrix} 2 & 7 & 6 \\ 9 & 5 & 1 \\ 4 & 3 & ? \end{bmatrix}$ .  
 a) 5      b) 8      c) 7      d) 9

60. There are 48 students in a computer class. If number of boys are twice than girls, then how many girls are there?  
 a) 16      b) 18      c) 32      d) 28
61. Find the number x, which is equal to (80% of x) plus 5.  
 a) 20      b) 30      c) 40      d) 25
62. If the ratio of two numbers is 2:3 and sum of these numbers is 30, then which are these numbers?  
 a) 14, 16      b) 10, 20      c) 12, 18      d) 18, 12
63. If the age of five girls are 15, 16, 17, 18, 19 respectively then what is the average age of girls?  
 a) 15      b) 17      c) 18      d) 19
64. How many triangles in this figure?



- a) 6      b) 7      c) 8      d) 9
65. What is the value of  $\cos 60^\circ$ ?  
 a) 1      b)  $\frac{1}{2}$       c) 0      d)  $\frac{\sqrt{3}}{2}$
66. Find the value of x in series 1, 1, 2, 3, 5, 8, 13, x.  
 a) 21      b) 22      c) 19      d) 23
67. If 'n' is an integer, which of the following must be even?  
 a) n + 1      b) n + 2      c) 2n + 1      d) 2n
68. The largest prime factor of 255 is:  
 a) 45      b) 25      c) 17      d) 5
69. The sum of first n natural number is:  
 a)  $\frac{n(n+1)}{2}$       b)  $\frac{n(n+1)(2n+1)}{2}$       c)  $\frac{(n+1)^2}{2}$       d) none of these
70. The root of the equation  $3x^2 - 8x + 16 = 0$  are  
 a) real & equal      b) real & unequal      c) imaginary & unequal      d) none of these
71. If  $x + y = 12$  and  $x - y = 6$  then, the value of  $x^2 - y^2$  is:  
 a) 18      b) 36      c) 60      d) 72
72. If  $x - 5 = 2$ , then the value of  $x + 12$  is:  
 a) 15      b)  $\frac{17}{6^4 - 6^3}$       c) 19      d) 18
73. The value when simplified  $\frac{6^4 - 6^3}{5}$  is:  
 a) 1/5      b)  $6^3$       c) 6/5      d)  $6^4$

