## Tribhuvan University

## Faculty of Humanities \& Social Sciences

OFFICE OF THE DEAN
2019

## Bachelor in Computer Applications (BCA) <br> Entrance Exam

Full Marks: 100
Time: 2 hrs.

## Group A [English]

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

1. This is $\qquad$ mobile I like most.
a) a
b) an
c) the
d) nothing
2. Which of the following word is an abstract noun?
a) bed
b) desk
c) fear
d) class
3. We must be early $\qquad$ we won't get the tickets.
a) otherwise
b) yet
c) however
d) but
4. The city center was crowded $\qquad$ tourists.
a) for
b) of
c) with
d) by
5. Why do you laugh $\qquad$ poor?
a) of
b) at
c) in
d) to
6. A book is different $\qquad$ a copy.
a) than
b) by
c) of
d) from
7. He is a student $\qquad$ Tribhuvan University.
a) on
b) in
c) at
d) of
8. Let us play $\qquad$ cash.
a) by
b) in
c) for
d) at
9. Let's have fun $\qquad$ .?
a) will we
b) will you
c) shall we
d) shall you
10. An $\qquad$ pen is an example of input device.
a) Electron
b) Electronic
c) electronics
d) electronically
11. In Nepal, rice is grown $\qquad$ in Terai region.
a) Apparently
b) Mostly
c) Amazingly
d) Enormously
12. Select the correct antonym for "shrewd"
a) Clever
b) intelligent
c) dull
d) virtuous
13. Select the correct synonym for "brief".
a) limited
b) small
c) little
d) short
14. I think all drivers $\qquad$ seat belt.
a) should better to
b) should wear
c) should have worn
d) had better worn wear friends I made in School are still in touch with me
a) Few
b) A few
c) The few
d) Little
15. For the last few months I $\qquad$ for entrance exam.
a) am preparing
b) have been
c) prepared
d) have prepared preparing
16. The phrase "black sheep" means
a) costly item
b) A dark shiny item
c) an unworthy
d) a funny mass
17. You, and not I, $\qquad$ guilty.
a) are
b) is
c) am
d) has
18. Many $\qquad$ missing.
a) book is
b) book are
c) a book is
d) a book are
19. I heard Kamala $\qquad$ I passed her room.
a) to sing
b) sing
c) singing
d) to sing
20. Newton $\qquad$ the force of gravity makes apple fall.
a) discovered
b) had discovered
c) discovers
d) was discovered
21. The teacher has entered the classroom, now $\qquad$ us.
a) is going to teach
b) teaches
c) will teach
d) will have taught
22. My mother encouraged $\qquad$ BCA.
a) to study
b) studying
c) me studying
d) me to study
23. If you have the mixed cement on the floor $\qquad$
a) it set
b) it sets
c) it will set
d) it might set
24. I $\qquad$ this book is 2068.
a) wrote
b) have written
c) write
d) was writing
25. Today is $\qquad$
a) so hot
b) much hot
c) more hot
d) much hotter
26. The passive of "this news surprises me is" $\qquad$
a) I am surprised by this news
b) I am surprised at this news
c) I was surprised by this news
d) I was surprised at this news
27. "Bravo" Well done! Can be reported as
a) My papa said I did well
b) My papa told me Bravo as I did well
c) My papa encouraged me in my excellent performance
d) My papa told me bravo
28. Sujana is $\qquad$ Anjali.
a) more pretty than
b) much pretty than
c) much more prettier than
d) prettier than
29. She's a good sense of Humor $\qquad$ .?
a) hasn't she
b) does she
c) isn't she
d) doesn't she
30. Which of the following is correct?
a) I am understanding all the chapters
b) I have understand all the chapters
c) I have understood all the chapters
d) I have been understanding all the chapters
31. It took us one and
a) a half hours
b) a half hour
c) half hours
d) half hour
32. The world "please" take the prefix $\qquad$
a) un-
b) down-
c) over-
d) dis-
33. An unmarried woman is $\qquad$
a) bachelor
b) alone
c) spinster
d) widower
34. Before he went home, he $\qquad$ to the hospital
a) goes
b) went
c) has gone
d) had gone

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

Television acts as a narcotic on children -mesmerizing them, stunting their ability to think, and displacing some wholesome activities as book reading and family discussions. Right?

Wrong says researcher Daniel Anderson, a Psychologist at University of Massachusetts at Amherst. Anderson doesn't have any particular affection for Garfield and friend, MTV clips, or Gilligan's island returns. But he does believe it's important to distinguish television's impact on children from influences of the family and the wider culture. We tend to blame TV he says, for problem it really doesn't cause. In the process we overlook on our roles in shaping children's minds.

One conventional belief about television is that it impairs a child's ability to think and to interpret the world. But Anderson's own research and reviews of scientific literature discredit this assumption. While watching TV, children do not merely absorb words and images. Instead they muse upon the meaning of what they see, its plausibility.
36. According to Angerson, television acts as
a) A narcotic on children
b) A change agent in the society
c) A means of book reading
d) An agent in shopping children's mind
37. TV impairs a child's ability to think and interpret the world. Whose opinion is it?
a) of the post modern researches.
b) of the conventional critics
c) of Anderson
d) of recent researchers and reviews
38. While watching TV children are more concerned with. $\qquad$
a) word
b) images
c) meaning
d) word and images
39. TV depends on $\qquad$
a) cinematic techniques
b) rapid reading
c) natural disaster
d) news reports
40. TV develops $\qquad$ power of children.
a) inferencing
b) drawing
c) reading
d) thinking

## Group B [Mathematics]

41. $\%$ of 2 is equal to
a) 20
b) 4
c) 0.4
d) 0.04
42. The graph of the equation $y=a x 2+b x+c$, where $a$ and $c$ are zero, is
a) Parabola
b) Straight Line
c) Circle
d) Ellipse
43. If $P=\{a, b, c, d, e\}, Q=\{a, c, e, d, t\}$ and $R=\{t, d, c, b, e\}$ then the intersection of $P, Q$ and $R$ is
a) $\{\mathrm{a}, \mathrm{c}\}$
b) $\{\mathrm{a}, \mathrm{c}, \mathrm{e}\}$
c) $\{\mathrm{c}, \mathrm{d}\}$
d) $\{\mathrm{c}, \mathrm{d}, \mathrm{e}\}$
44. Which of the following set is equivalent to set $\{\mathrm{c}, \mathrm{r}, \mathrm{e}, \mathrm{a}, \mathrm{t}, \mathrm{e}\}$ ?
a) $\phi$
b) $\sigma$
c) $\{\mathrm{L}, \mathrm{O}, \mathrm{V}, \mathrm{E}\}$
d) $\{\mathrm{f}, \mathrm{a}, \mathrm{m}, \mathrm{i}, 1, \mathrm{y}\}$
45. Five person can be seated at round table in
a) 20 ways
b) 4 ways
c) 24 ways
d) 5 ways
46. If 40 student play football, 60 students play volleyball and 25 play both games. The number of students who play football only, If every student play at least one game is.
a) 15
b) 35
c) 75
d) 125
47. Ram buys an old e-cycle for Rs 4700 and spend Rs 800 on its repairs. If he sells the ecycle for Rs 5800, his gain percent is
a) $4\{4 / 7\} \%$
b) $5\{5 / 11\} \%$
c) $20 \%$
d) $30 \%$
48. A man buys a cycle for Rs 1400 and sells it at a loss of $15 \%$, the selling price of the cycle is
a) 1090
b) 1160
c) 1190
d) 1202
49. Solution of the equation $\mathrm{x} 3-5 \mathrm{x} 2+3 \mathrm{x}+9=0$ is
a) 2
b) 6
c) 3
d) 1
50. Which one is the formula for $\cos 2 x$
a) $1-2 \cos 2 x$
b) $1-2 \sin 2 x$
c) $\sin 2 x+\cos 2 x$
d) $2 \sin x \cos x$
51. Which of the following represents the set $\mathrm{A}-\mathrm{B}$ ?
a) $\{x: x \notin A, x \in B\}$
b) $\{x: x \in A, x \notin B\}$
c) $\{x: x \notin A, x \notin B\}$
d) $\{x: x \in A, x \in B\}$
52. If $A=\{a, b, c, d\}, B=\{c, d, e, f\}$ and $=\{a, b, c, d, e, f, g\}$ then set $(A \quad B)$ is equal to
a) $\{a, b, f, g\}$
b) $\{\mathrm{a}, \mathrm{b}\}$
c) $\{a, b, e, f, g\}$
d) $\{c, d>\}$
53. Which of the following is correct?
a) $\lim _{x \rightarrow 0} \frac{\sin ^{2} x}{x}=1$
b) $\lim _{x \rightarrow 1} \frac{\sin x}{x}=1$
C) $\lim _{x \rightarrow 0} \frac{\cos x}{x}=1$
d) $\lim _{x \rightarrow 0} \frac{\sin x}{x}=1$
54. $(\cot x \cdot \sec x) / \operatorname{cosec} x$ is same to
a) $\sin x \cos x$
b) 1
c) $1 / \sin \cos x$
d) $\left(\cos 2_{x}\right) / \sin x$
55. The expression $\left(\sin 2_{x}\right) /\left(1-\cos _{x}\right)$ is identical to
a) $1+\sin x$
b) $1+\cos x$
c) $\left(\sin 2_{\mathrm{x}}\right) /\left(1+\cos _{\mathrm{x}}\right)$
d) $\left(\sin 2_{x}\right) / \cos _{x}$

56．If a line parallel to $x$－asix，then slope of this line is
a） 1
b）-1
c） 0
d）$\infty$

57．What does $\left(r^{6}\right)^{3} \div\left(r^{4}\right) 2$ equal ？
a） $\mathrm{r}^{3}$
b）$r^{10}$
c）$r^{6}$
d）$r^{12}$

58．Area of an equilateral triangle whose one side is 2 cm is
a）$\sqrt{ } 3 \mathrm{~cm}^{2}$
b）$\sqrt{3} / 4 \mathrm{~cm}^{2}$
c）$\sqrt{3} / 2 \mathrm{~cm}^{2}$
d） $1 /(\sqrt{ } 3) \mathrm{cm}^{2}$

59．Semi－perimeter of triangle whose sides are $2 \mathrm{~cm}, 3 \mathrm{~cm}$ and 5 cm is
a） 2 cm
b） 3 cm
c） 5 cm
d） 10 cm

60．If p and q are two different prime numbers then $\operatorname{LCM}(p, q)$ is
a）$p+q$
b）$p$
c）$q$
d） pq

61．If $\mathrm{a}+1,2 \mathrm{a}+1,4 \mathrm{a}-1$ are in AP，then value of a is
a） 1
b） 2
c） 3
d） 4

62．$(\mathrm{a}+\mathrm{b})^{2}+(\mathrm{a}-\mathrm{b})^{2}$ is equal to
a）$a^{2}+b^{2}$
b） $2\left(a^{2}+b^{2}\right)$
c）$a^{2}-b^{2}$
d） $2\left(\mathrm{a}^{2}-\mathrm{b}^{2}\right)$

63．The angle formed by the radius of a circle and tangent to that circle has measure of
a） $45^{\circ}$
b） $90^{\circ}$
c） $135^{\circ}$
d） $180^{\circ}$

64．Slope of a line peroendicular to the line whose equation is $3 x+4 y=9$ ；is
a） $3 / 4$
b）$-4 / 3$
c）$-3 / 4$
d） $4 / 3$

a） Cl ㅁ
b） $\mathrm{\square D}$
c） 8 d
d） $8 \square^{\square}$

60．：KFKKRQHRITMHIRGRZ IQ UVIUUMRQDOQXP EHU
a）$\square \square$
b）¥ロロロロ
c）$¥ \square$
d）$¥ \square \square \square$

a） BDOGT
b） 1 DOG
c）ERUKD
d） 10 ［10 Call

60．，IIFRVS
a） 305
b） $5[4$
c） $5 / 3$
d） $3 / 0$

60．A person took a loan of Rs 1500 from his employer for three months at 12 per annum si interest the amount he has to return is
a）Rs 45
b）Rs 1454
c）Rs 1545
d）Rs 1554

ㅁ．The circle of the area is $311 \mathrm{~cm}^{2}$ If $\pi 3.14$ then its diameter is，
a） 100 cm
b） 50 cm
c） 20 cm
d） 10 cm

7．The total surface area of closed right circular cylinder of radius of 3.5 m and height 7 m is
a） $77 \mathrm{~m}^{2}$
b） $154 \mathrm{~m}^{2}$
c） $231 \mathrm{~m}^{2}$
d） $308 \mathrm{~m}^{2}$

ㄴ．The volume of a cube is $1728 \mathrm{~m}^{3}$ then its surface area is＂
a） $864 m^{2}$
b） $846 \mathrm{~m}^{2}$
c） $144 \mathrm{~m}^{2}$
d） $72 \mathrm{~m}^{2}$

ㅁ．If $f(x)=4 x-2$ ，then $f(x-1)$ is＂
a） $4 x^{2}-6 x+2$
b） $4 x^{2}+2 x+2$
c） $4 x-6$
d） $4 x-1$
74. . If $3^{x+5}=1 / 27$ then value of $x$ is
a) -10
b) -8
c) -6
d) -2
75. If $\cos 60^{\circ}=1 / 2$ then the value of $\cos 300^{\circ}$ is
a) $\sqrt{ } 3 / 2$
b) $-1 / 2$
c) $-\sqrt{3} / 2$
d) $-1 / 2$
76. The zeros of quadratic polynomial $x^{2}+7 x+12$ are
a) $-2,-5$
b) $-3,-4$
c) 2,5
d) 3,4
77. The lines pair $2 x+4 y=3$ and $x+2 y=1$ are
a) Coincide
b) perpendicular
c) parallel
d) intersect at a point
78. Slope of a line perpendicular to a line $20 x-2 y=6$ is
a) -10
b) $-1 / 10$
c) 10
d) $1 / 10$
79. In given triangle ABC if side BC is extended to point D with $\angle \mathrm{A}=\mathrm{x}, \angle \mathrm{B}=2 \mathrm{x}+15$ and $\angle A C D=5 x+5$, then $\angle B$ is
a) 5
b) 20
c) 25
d) 55
80. If height and diameter of a cylinder are 15 cm and 12 cm respectively then its volume is
a) $180 \pi \mathrm{~cm}^{3}$
b) $540 \pi \mathrm{~cm}^{3}$
c) $675 \pi \mathrm{~cm}^{3}$
d) $2160 \pi \mathrm{~cm}^{3}$
81. What is a perimeter of a square whose diagonal is $3 \sqrt{ } 2$
a) 18
b) 12
c) 9
d) 6
82. The $5^{\text {th }}$ term of a sequence an $=(2 n-1)$ is
a) 9
b) 5
c) 11
d) 8
83. $2^{(n+1)} / 2^{(n-2)}$ is equal to
a) $(\mathrm{n}+1) /(\mathrm{n}+2)$
b) $1 / 8$
c) $-1 / 2$
d) 8
84. The derivative of $x^{3}$ wrt $x^{2}$ is
a) $2 x / 3$
b) $x$
c) $3 x / 2$
d) $3 / 2 x$
85. The value of $\sqrt{ }(-8)^{*} \sqrt{ } 2$ is
a) -4
b) 4
c) 4 i
d) $-4 i$
86. If $U=\{1,2,3,4,5,6\}$ and $A=\{2,3,5\}$ the $\bar{A}$ is
a) $\{1,4,6\}$
b) $\{1,2,3,4,5,6\}$
c) $\{2,3,5\}$
d) $\{1,3,5,6\}$
87. The opposite angles of any quadrilateral inscribed in a circle are
a) Tangent
b) supplementary
c) complementary
d) reflective
88. If a set has 5 elements, then possible number of subsets are
a) 30
b) 120
c) 32
d) 25
89. 2,4,6,8 $\qquad$ is
a) Geometric series
b) Harmonic Series
c) Geometric progression
d) Arithmetic progression
90. Which of the following is correct?
a) $\lim _{x \rightarrow a} \frac{x^{n}-a^{n}}{x-a}=n a^{n-1}$
b) $\lim _{x \rightarrow 0} \frac{x^{n}-a^{n}}{x-a}=n a^{n-1}$
c) $\lim _{x \rightarrow 0} \frac{x^{n}-a^{n}}{x-a}=n x^{n-1}$
d) $\lim _{x \rightarrow a} \frac{x^{n}-a^{n}}{x-a}=n^{x-1}$

## Group C [General Knowledge]

91. Who is the author of the novel "Ghanchakkar"?
a) Sanjeev Upreti
b) Laxmi Prasad Devkota
c) Madhav Prasad Ghimire
d) Manjushree Thapa
92. When was Tribhuvan University established?
a) 2016 B.S.
b) 2015 BS
c) 2022 BS
d) 2013 BS
93. Which of the following is not input device?
a) Mouse
b) Scanner
c) Monitor
d) Keyboard
94. Who is the father of Computer?
a) Charles Babbage
b) Lady Ada Lovelace
c) Bill Gates
d) John Napier
95. Boxing matches are held in a
a) Square
b) Ring
c) Court
d) Ground
96. Who is the Prime Minister of Nepal?
a) Khadka Prasad Oli
b) Puspa Kamal Dahal
c) Shushil Koirala
d) Jhalnath Khanal
97. Who is the education Minister of Nepal?
a) GiriRaj Mani Pokharel
b) Yogesh Bhattarai
c) Lal Babu Pandit
d) Barsaman Pun
98. Where is the tallest bridge of Nepal?
a) Baglung
b) Dang
c) Parbat
d) Bajang
99. Cricket World Cup started in $\qquad$
a) 1974
b) 1975
c) 1976
d) 1977
100. How many provinces are there in Nepal?
a) 3
b) 9
c) 7
d) 8
