



Gandaki University

गण्डकी विश्वविद्यालय

Pokhara, Nepal

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Entrance Examination 2080 (2023)

Bachelor of Information Technology (BIT)

Symbol No.:

Time: 75 minutes

In words:.....

Total Questions: 100

Encircle 'o' the correct answer from the multiple choices.

1. If the digits of the numbers 5372648 are arranged in ascending order, how many digits will remain at the same position?

- (A) One (B) Two (C) Three (D) Four

2. Which of the following two sets are equal?

- (A) $A = \{1, 2\}$ and $B = \{1\}$ (B) $A = \{1, 2\}$ and $B = \{1, 2, 3\}$
 (C) $A = \{1, 2, 3\}$ and $B = \{2, 1, 3\}$ (D) $A = \{1, 2, 4\}$ and $B = \{1, 2, 3\}$

3. If $A = \{5, 6, 7\}$ and $B = \{7, 8, 9\}$ then $A \cup B$ is equal to

- (A) $\{5, 6, 7, 8, 9\}$ (B) $\{5, 6, 7\}$ (C) $\{7, 8, 9\}$ (D) None of these

4. How many elements are there in the complement of set A?

- (A) All the elements of A (B) 1
 (C) 0 (D) None of these

5. From coordinate geometry, in 2^{nd} quadrant

- (A) $x < 0, y < 0$ (B) $x > 0, y > 0$ (C) $x > 0, y < 0$ (D) $x < 0, y > 0$

6. The distance between the point $P(0, 1)$ and $Q(4, 4)$ is

- (A) 3 (B) 4 (C) 5 (D) 6

7. The distance of the point $P(2, 3)$ from the x-axis is

- (A) 1 (B) 2 (C) 3 (D) 4

8. What time will be taken by an amount of Rs. 900 to yield Rs. 81 as interest at 4.5% per annum of simple interest?

- (A) 1 year (B) 2 years (C) 3 years (D) 4 years

9. If $\begin{vmatrix} x & 8 \\ 2 & 2 \end{vmatrix} = 0$ then the value of x is

- (A) 2 (B) 8 (C) 16 (D) 0

10. If a, b, c are in arithmetic progression then

- (A) $b = a + c$ (B) $b^2 = a + c$ (C) $2b = a + c$ (D) $2b^2 = a + c$

11. For all values of x , $(3x + 4)(4x - 3) = \dots\dots\dots$

- (A) $7x + 1$ (B) $7x - 12$ (C) $12x^2 + 7x - 12$ (D) $12x^2 - 25x - 12$

12. The equation with roots 1 and 0 is $\dots\dots\dots$

- (A) $x^2 - x = 0$ (B) $x^2 - 1 = 0$ (C) $x^2 - 2x + 1 = 0$ (D) None of these

13. If two straight lines have same slope, then these two lines are classified as $\dots\dots\dots$

- (A) horizontal lines (B) parallel lines (C) vertical lines (D) perpendicular lines

14. The sum of the first n natural number is $\dots\dots\dots$

- (A) $\frac{n(n+1)}{2}$ (B) $n(n+1)$ (C) n^2 (D) $\frac{n(n+1)(2n+1)}{6}$

15. What is the 0.5% of 100,000?

- (A) 0.05 (B) 0.50 (C) 50 (D) 500

16. If $3^x = 81$, then what is the value of x ?

- (A) 3 (B) 4 (C) 9 (D) 27

17. If seven persons can build a house in 30 days, how long will it take for three persons to build the same house, provided that they all work at the same rate?

- (A) 100 days (B) 70 days (C) 30 days (D) 210 days

18. Find the HCF of $6x^2y^4z^5$, $12x^3y^2z^3$, $48x^6y^5z^2$.

- (A) $6x^2y^4z^5$ (B) $6x^2y^2z^3$ (C) $12x^2y^2z^2$ (D) $6x^2y^2z^2$

19. The value of $\frac{\tan 60^\circ}{\cot 30^\circ}$ is equal to
- (A) 0 (B) 1 (C) 2 (D) 3
20. If $0 \leq \theta \leq 90^\circ$, what is the minimum value of $\sin \theta$?
- (A) -1 (B) 0 (C) 1 (D) $\frac{1}{2}$
21. A cylindrical pencil sharpened at one edge is the combination of
- (A) a cone and a cylinder (B) frustum of a cone and a cylinder
(C) a hemisphere and a cylinder (D) two cylinders
22. A rectangular prism has a width of 6cm, a height of 10cm and a depth of 7cm. What is the volume of the prism?
- (A) 396 cubic cm (B) 400 cubic cm (C) 420 cubic cm (D) 450 cubic cm
23. Q is the set of rational numbers of the form p/q , such that
- (A) $p, q \in \mathcal{Z}, q \neq 0$ (B) $p, q \in W, q \neq 0$ (C) $p, q \in \mathcal{Z}, q = 0$ (D) $p, q \in N, q \neq 0$
24. If $f(x) = x^2 + 1$, then $f(-3) =$
- (A) -8 (B) 8 (C) 9 (D) 10
25. A card is drawn at random from a well-shuffled deck of 52 cards. What is the probability of getting a red card?
- (A) $\frac{1}{26}$ (B) $\frac{1}{52}$ (C) $\frac{1}{2}$ (D) $\frac{1}{4}$
26. Which of the following is not a measure of central tendency?
- (A) Mean (B) Mode
(C) Standard Deviation (D) Median
27. If $a^x = b^y$, then:
- (A) $\log \frac{a}{b} = \frac{x}{y}$ (B) $\frac{\log a}{\log b} = \frac{x}{y}$ (C) $\frac{\log a}{\log b} = \frac{y}{x}$ (D) None of these
28. If $R = \{(2, 1), (4, 3), (4, 5)\}$, then range of the function is
- (A) Range $R = \{2, 4, 4\}$ (B) Range $R = \{1, 3, 5\}$
(C) Range $R = \{2, 3, 4, 5\}$ (D) Range $R\{1, 4, 5\}$

29. The synonym of the word 'Rescue' is -----
 (A) Safety (B) Help (C) Defense (D) Command
30. That which can't be believed is called.....
 (A) Implausible (B) Unreliable (C) Incredulous (D) Incredible
31. The passive form of the statement, 'The novel 'Romeo and Juliet interest me' is.....
 (A) I was interested by the novel 'Romeo and Juliet'.
 (B) I was interested at the novel 'Romeo and Juliet'.
 (C) I was interested in the novel 'Romeo and Juliet'.
 (D) I was interested with the novel 'Romeo and Juliet'.
32. He is cutting an apple.....a knife.
 (A) with (B) from (C) by (D) in
33. Which of the following words has a different initial sound?
 (A) Sure (B) Cell
 (C) Psychology (D) All have same initial sound
34. Find the correct spelling.
 (A) Rigerous (B) Rigourous (C) Rigorous (D) Regerous
35. Since the beginning of history
 P: have managed to catch
 Q: the Eskimos and Red Indians
 R: by a very difficult method
 S: a few specimens of this aquatic animal
 The proper sequence should be:
 (A) RPSQ (B) PRQS (C) SRQP (D) QPSR
36. What is the meaning of the idiom 'as the crow flies'?
 (A) slow (B) straight (C) zigzag (D) quick
37. How many syllables do you find in the word 'Extraordinary'?
 (A) 6 (B) 5 (C) 4 (D) 7

38. Which word would find in a dictionary that comes between guidewords Edition. Effort?

- (A) Ecology (B) Edit (C) Education (D) Eco-critics

39. Samir is.M.A. student.

- (A) a (B) an (C) the (D) no article

40. , I wouldn't have suffered Dengue.

- (A) If I use mosquito net (B) If I would use mosquito net
(C) If I used mosquito net (D) If I had used mosquito net

41. No-one is calling me,.

- (A) are they? (B) do they? (C) aren't they? (D) is he?

42. his busy schedule, he came in meeting on time.

- (A) Because of (B) Despite (C) Due to (D) Although

43. The director and principal. absent today.

- (A) are (B) have been (C) is (D) were

44. He has already done his assignment. Its negative form is.

- (A) He hasn't done his assignment.
(B) He hasn't done his assignment now.
(C) He hasn't already done his assignment.
(D) He hasn't done his assignment yet.

45. As soon as I. the result, I immediately joined a college.

- (A) had got (B) got (C) get (D) had

46. He said to me 'When will you get back from London.' Its indirect speech is.

- (A) He told me when I would get back from London.
(B) He inquired me when I would get back from London.
(C) He said to me when I would get back from London.
(D) He inquired me if I would get back from London.

47. Which one of the following words doesn't take the prefix 'Im'?

- (A) proper (B) moral (C) fertile (D) pure

48. Smita makes her teacher..... a poem.
(A) to write (B) writing (C) written (D) write
49. Which one of the phrases should replace the phrase 'You needn't come unless you want to' to make it grammatically correct.
(A) You don't need to come unless you want to.
(B) You come only when you want to.
(C) You come unless you don't want to.
(D) You needn't come until you don't want to.
50. The administration has officially asked transportation employees to..... their demonstration.
(A) call at (B) call for (C) call on (D) call off
51. The poem 'A Red, Red Rose' was written by.....
(A) Bishnu S. Rai (B) William Shakespeare
(C) Robert Burns (D) Emily Dickinson
52. The good boy behaved well. The word 'well' in the sentence is.....
(A) a noun (B) a verb (C) an adjective (D) an adverb
53. I hate people scratching my back. It means.....
(A) I hate having my back scratched. (B) I hate my back being scratched.
(C) I hate being my back scratched. (D) I hate being my back scratched by people.
54. According to Lewis's concept of acid-base theory, a base is an
- (A) Electron pair donor (B) Electron pair acceptor
(C) Proton donor (D) Proton acceptor
55. Which chemical is commonly used to coat X-ray film?
(A) Zinc chloride (B) Copper chloride (C) Calcium chloride (D) Silver bromide
56. Which one is not an example of heavy metal?
(A) Mercury (B) Arsenic (C) Lead (D) Calcium
57. Which substance undergoes sublimation?
(A) Iodine (B) Fluorine (C) Copper sulphate (D) Zinc

58. Which acid is profoundly present in curd or sour milk?
(A) Malic acid (B) Lactic acid (C) Formic acid (D) Acetic acid
59. Molecular formula " $C_6H_{12}O_6$ " represents -----.
(A) Fructose (B) Glucose
(C) Sucrose (D) Both glucose and fructose
60. The formula used to convert degree centigrade into degree Fahrenheit is -----.
(A) $^{\circ}F = (^{\circ}C \times 1.8) + 32$ (B) $^{\circ}F = (^{\circ}C \times 1.5) + 32$
(C) $^{\circ}F = (^{\circ}C \times 1.8) + 35$ (D) $^{\circ}F = (^{\circ}C \times 1.5) + 35$
61. Which color of the visible light has the longest wavelength?
(A) Green (B) Blue (C) Violent (D) Red
62. What type of solution of sodium chloride is suitable for cleaning wounds?
(A) Hypertonic solution (B) Hypotonic solution
(C) Isotonic solution (D) All of the above
63. A passenger in a moving train facing the engine, tosses a coin. If the coin falls behind him, the train must be moving -----.
(A) With an acceleration (B) With uniform speed
(C) With a deceleration (D) None of the above
64. The source of sound and listener are moving in the same direction with a velocity equal to half the velocity of sound, what is the change in frequency?
(A) 0% (B) 25% (C) 50% (D) 100%
65. Sound energy is converted into electrical energy in -----.
(A) Loudspeaker (B) Microphone (C) Sonometer (D) Radio
66. The unit of work is -----.
(A) Joule (B) Newton (C) Pascal (D) Watt
67. A pyrometer is an instrument to measure -----.
(A) Latent heat (B) Specific heat
(C) Low temperature (D) High temperature
68. The frequency of AC mains in our country is -----.
(A) 30 cycle/sec (B) 50 cycle/sec (C) 60 cycle/sec (D) 0 cycle/sec

69. Which of the planets has maximum number of moons?
 (A) Earth (B) Jupiter (C) Saturn (D) Uranus
70. Water evaporates under the atmospheric pressure. If the same water is placed under a vacuum, then the rate of evaporation
 (A) Will decrease
 (B) Will increase
 (C) Will remain unchanged
 (D) May increase or decrease depending on the volume of water
71. The instrument which is used to record earthquake waves is -----
 (A) Seismogram (B) Seismometer (C) Scintillometer (D) Seismograph
72. Which one is not classified as a mammal
 (A) Dolphin (B) Bats (C) Whales (D) Crocodile
73. Among four nucleotide bases, which is not present in DNA molecule ?
 (A) Uracil (B) Adenine (C) Cytosine (D) Guanine
74. *Allium sativum* is the scientific name of -----
 (A) Ginger (B) Garlic (C) Onion (D) Turmeric
75. Which gas is widely used to stimulate the ripening of fruit?
 (A) Methane (B) Carbon dioxide (C) Ethylene (D) Oxygen
76. The weight of any body is -----
 (A) more on equator (B) maximum at poles
 (C) same at every place on earth's surface (D) more on mountain than in plains
77. Which among the following can become negative?
 (A) Vector (B) Speed (C) Distance (D) Mass
78. Dengue an infection caused by mosquito bite is a type of -----
 (A) Viral infection (B) Bacterial infection
 (C) Fungal infection (D) Worm infection

79. Which part is missing in animal cells?
(A) Centrioles (B) Centrosomes (C) Lysosomes (D) Chloroplast
80. Which of the following organisms breathes from skin?
(A) Snake (B) Earthworm (C) Frog (D) Fish
81. Which one is a water-soluble vitamin?
(A) Vitamin A (B) Vitamin C (C) Vitamin D (D) Vitamin E
82. Heat travels through vacuum by -----
(A) Convection (B) Radiation (C) Conduction (D) All of the above
83. Eye flu breakdown in recent days in Nepal is a type of?
(A) Viral Conjunctivitis (B) Bacterial Conjunctivitis
(C) Allergic Conjunctivitis (D) Both A and B
84. Which one is correct statement about Cyber Security?
(A) Cyber Security provides security against malware
(B) Cyber Security provides security against cyber-terrorists
(C) Cyber Security protects a system from cyber-attacks
(D) All of the mentioned
85. Which of the following is a type of cyber security?
(A) Cloud Security (B) Network Security
(C) Application Security (D) All of the above
86. The part/s of CPU is/are:
(A) Control Unit (B) ALU (C) registers (D) all of above
87. The value of radix in binary number system is -----
(A) 2 (B) 8 (C) 10 (D) 1
88. The binary equivalent of the decimal number 10 is -----
(A) 0010 (B) 10 (C) 1010 (D) 010
89. A computer ----- is a malicious code which self-replicates by copying itself to other programs.
(A) worm (B) program (C) virus (D) None of these

90. WWW is a -----.
- (A) Protocol of internet (B) service of internet
(C) language of internet (D) None of above
91. The unique address of a web page on the internet is called -----.
- (A) URL (B) Browser (C) Protocol (D) HTTP
92. Which of the following is the component of multimedia?
- (A) Network (B) Microphone (C) Power Cable (D) Printer
93. An upcoming technology that makes users feel in Virtual Environment by using computer, hardware and software is -----.
- (A) Virtual Space (B) Virtual Computer
(C) Virtual Reality (D) None of above
94. What is the full form of “AI”?
- (A) Artificially Intelligent (B) Artificial Intelligence
(C) Artificially Intelligence (D) Advanced Intelligence
95. Which of the following is not an application of artificial intelligence?
- (A) Face recognition system (B) Chatbots
(C) LIDAR (D) DBMS
96. Token passing system is used in ----- topology.
- (A) Star (B) Ring (C) Mesh (D) Bus
97. Which of the following is the type of software that has self-replicating software that causes damage to files and system?
- (A) Worms (B) Backdoors (C) Viruses (D) Trojan horses
98. TV broadcasting is an example for ----- data transmitting.
- (A) Half Duplex mode (B) Simplex mode
(C) Full duplex mode (D) All of them
99. Which is not a network device?
- (A) Hub (B) Repeater (C) Switch (D) TCP/IP
100. Which of the following is not a network operating system?
- (A) Linux (B) UNIX (C) MS-DOS (D) Windows

All the best !!!