

# TU CMAT 2020

**Direction:** the passage given below is followed by questions based on its content. After reading the passage, choose the best answer to each question.

1. That large animals require luxuriant vegetation has been a general assumption which has passed from one work to another, but I do not hesitate to say that it is completely false and that it has vitiated the reasoning of geologists on some points of great interest in the ancient history of the world. The prejudice has probably been derived from India and the Indian islands where troops of elephants noble forests and impenetrable jungles are associated together in every ones mind. If however we refer to any work of travels through the southern parts of Africa we shall find allusions in almost every page either to the desert character of the country or to the numbers of large animals inhabiting it. The same thing is rendered evident by the many engravings, which have been published of various parts of the interior.
2. Dr. Andrew Smith who has lately succeeded in passing the Tropic of Capricorn informs me that taking into consideration the whole of the southern part of Africa there can be no doubt of its being a sterile country. On the southern coasts, there are some fine forests but with these exceptions the traveler may pass for days together through open plains covered by a poor and scanty vegetation. Now if we look to the animals inhabiting these wide plains we shall find their numbers extraordinarily great and their bulk immense.
3. It may be supposed that although the species are numerous the individuals of each kind are few. By the kindness of Dr. Smith I am enabled to show that the case is very different. He informs me that in lat. 24 in one days march with the bullock-wagons he saw without wandering to any great distance on either side between one hundred and one hundred and fifty rhinoceroses. The same day he saw several herds of giraffes amounting together to nearly a hundred.
4. At the distance of a little more than one hours march from their place of encampment on the previous night his party actually killed at one spot eight hippopotamuses and saw many more. In this same river, there were likewise crocodiles. Of course, it was a case quite extraordinary to see so many great animals crowded together but it evidently proves that they must exist in great numbers. Dr. Smith describes the country passed through that day as being thinly covered with grass and bushes about four feet high and still more thinly with mimosa-trees.
5. Besides these large animals anyone the least acquainted with the natural history of the Cape has read of the herds of antelopes which can be compared only with the flocks of migratory birds. The numbers indeed of the lion panther and hyena and the multitude of birds of prey plainly speak of the abundance of the smaller quadrupeds: one evening seven lions were counted at the same time prowling round Dr. Smiths encampment. As this able naturalist remarked to me the carnage each day in Southern Africa must indeed be terrific! I confess it is truly surprising how such a number of animals can find support in a country producing so little food.
6. The larger quadrupeds no doubt roam over wide tracts in search of it; and their food chiefly consists of underwood which probably contains much nutriment in a small bulk. Dr. Smith also informs me that the vegetation has a rapid growth; no sooner is a part consumed than its place is supplied by a fresh stock. There can be no doubt however that our ideas respecting the apparent amount of food necessary for the support of large quadrupeds are much exaggerated. The belief that where large quadrupeds exist the vegetation must necessarily be luxuriant is the more remarkable because the converse is far from true.
7. Mr. Burchell observed to me that when entering Brazil nothing struck him more forcibly than the splendour of the South American vegetation contrasted with that of South Africa together with the absence of all large quadrupeds. In his Travels he has suggested that the comparison of the respective weights if there were sufficient data of an equal number of the largest herbivorous quadruped of each

country would be extremely curious. If we take on the one side the elephants hippopotamus giraffe the caffer elan five species of rhinoceros, and on the American side two tapirs the guanaco three deer the vicuna peccari capybara after which we must choose from the monkeys to complete the number and then place these two groups alongside each other; it is not easy to conceive tanks more disproportionate in size. After the above facts, compelled to conclude, anterior probability that among the mammalia there exist no close relation between the bulk of the species; and the quantity of the vegetation in the countries which they inhabit.

1. What is the primary concern of the author?
  - a. Discussing the relationship between the size of mammals and the nature of vegetation in their habitats
  - b. Contrasting ecological conditions in India and Africa
  - c. Providing that large animals do not require much food
  - d. Describing the size of the animals in various parts of the world
2. According to the author, what has led to the 'prejudice'?
  - a. Errors in the reasoning of biologists
  - b. False ideas about animals in Africa
  - c. Incorrect assumptions on the part of geologists
  - d. Doubt in the mind of the author
3. Why are the flocks of migratory birds mentioned in the passage?
  - a. To describe an aspect of the fauna of South Africa
  - b. To illustrate a possible source of food for large carnivores
  - c. To contrast with the habits of the antelope
  - d. To suggest the size of antelope herds
4. Why does Darwin quote Burchell's observations?
  - a. To counter a popular misconception
  - b. To describe a region of great splendor
  - c. To prove a hypothesis
  - d. To illustrate a well-known phenomenon
5. What struck Mr. Burchell, when he entered Brazil?
  - a. South African vegetation
  - b. Presence of all large quadrupeds
  - c. South American vegetation contrasted with that of South Africa
  - d. Equal number of the largest herbivorous quadrupeds

**Direction:** For each question below, select the lettered word or set of words which when inserted in the blanks best completes the meaning of that sentence.

6. Marry ..... a question to Mohan yesterday.
 

a. was asked	b. asked	c. had asked	d. asking
--------------	----------	--------------	-----------
7. He has been seriously injured. There is ..... hope for his survival.
 

a. a little	b. a few	c. little	d. few
-------------	----------	-----------	--------
8. .... I were the richest person of the world!
 

a. If	b. Unless	c. when	d. Not any
-------	-----------	---------	------------
9. .... is a very regular class, sir
 

a. my	b. mine	c. your	d. ours
-------	---------	---------	---------
10. .... know about whether the soul goes after the death.
 

a. Few	b. A few	c. little	d. A little
--------	----------	-----------	-------------

**Direction:** choose the appropriate synonyms from the following.

11. Fostering
 

a. safeguarding	b. neglecting	c. ignoring	d. nurturing
-----------------	---------------	-------------	--------------



12. Propel:  
a. drive                      b. Jettison                      c. burst                      d. modify
13. Massive:  
a. lump sum                      b. strong                      c. gaping                      d. huge
14. Stumbling Block:  
a. argument                      b. frustration                      c. advantage                      d. hurdle
15. They were totally unaware of the impending disaster.  
a. threatening                      b. imminent                      c. terrible                      d. possible

**Direction:** In each sentence in the following questions, a word or phrase is underlined. Below each sentence are four other words or phrases. You are to choose the one word or phrase which would best keep the meaning of the original sentence if it were substituted for the underlined word.

16. He rides the high horse because of his connection.  
a. is famous                      b. talk flatteringly                      c. puts on airs                      d. is prosperous
17. We should give a wide berth to bad characters.  
a. keep away from                      b. publicly condemn  
c. keep away from                      d. not sympathize with
18. He threw cold water over the project that the secretary had prepared.  
a. encouraged                      b. discouraged                      c. cleared                      d. rejected
19. I won't mind even if he goes to dogs.  
a. goes mad                      b. is insulted                      c. is ruined                      d. becomes brutal
20. Rita might scream blue murder, but I feel Rita should get the promotion since she is better qualified for the job.  
a. suffer from persecution complex  
b. try to prove herself as more suitable to the job  
c. regard it as an act of partiality  
d. make a great deal of noise and object vehemently

**Direction:** Select the correct from the given options.

21. Kiran asked me, "Did you see the cricket match on television last night?"  
a. Kiran asked me whether I saw the cricket match on television the earlier night.  
b. Kiran asked me whether I had seen the cricket match on television the earlier night.  
c. Kiran asked me did I see the cricket match on television the last night.  
d. Kiran asked me whether I had seen the cricket match on television the last night.
22. David said to Anna, "Mona will leave for her native place tomorrow."  
a. David told Anna that Mona will leave for her native place tomorrow.  
b. David told Anna that Mona left for her native place the next day.  
c. David told Anna that Mona would be leaving for her native place tomorrow.  
d. David told Anna that Mona would leave for her native place the next day.
23. I said to him, "Why are you working so hard?"  
a. I asked him why he was working so hard.  
b. I asked him why he working so hard.  
c. I asked him why had he been working so hard.  
d. I asked him why he had been working so hard.
24. He said to her, "What a cold day!"  
a. He told that it was a cold day.  
b. He exclaimed that it was a cold day.  
c. He exclaimed sorrowfully that it was a cold day.  
d. He exclaimed that it was very cold day.

25. The tailor said to him, "Will you have the suit ready by tomorrow evening?"
- The tailor asked him that he will have the suit ready by the next evening.
  - The tailor asked him that he would had the suit ready by the next evening.
  - The tailor asked him if he would have the suit ready by the next evening.
  - The tailor asked him if he will like to the suit ready by the next evening.

### Section - II: Quantitative Ability

**Direction:** select the correct word from the given options.

26. Which of the following is not a measure of dispersion?
- Range
  - Standard deviation
  - arithmetic mean
  - variance
27. The sum of all deviations of the data from its mean is
- Always positive
  - Always negative
  - zero
  - Non-zero integer
28. Which of the following is incorrect?
- $p(A) > 1$
  - $0 \leq p(A) \leq 1$
  - $p(A) = 0$
  - $p(A) + p(A) = 1$
29. The probability a red marble selected at random from a jar containing p red, q blue and r green marbles is
- $q/p+q+r$
  - $p/p+q+r$
  - $p+q/p+q+r$
  - $p+r/p+q+r$
30. Henry went to play a lucky draw contest. 135 tickets of the lucky draw were sold. If the probability of Henry winning is  $1/9$ , then the number of tickets bought by Henry is
- 5
  - 10
  - 15
  - 20
31. The objective of the transportation problem which is to be maximized is to
- Maximize the total profit
  - Minimize the total loss
  - neither maximize nor minimize
  - Optimal cost
32. Cramer's rule is also known as.....
- Inverse matrix method
  - Matrix method
  - determinant method
  - Inverse method
33. The lender's are also known as.....
- creditor's
  - debtor's
  - buyer's
  - None of the above
34. If any two rows and columns of a determinant are identical, the value of the determinant is.....
- 1
  - 0
  - 1
  - unaltered
35.  $51 - 46 + 3(5) =$ .....
- 40
  - 20
  - 41
  - 52
36. what is the value of the following expression?  
 $\log(9/14) - \log(15/16) + \log(35/24)$
- 0
  - 1
  - 2
  - 3
37. An association of 2 or more persons to carry on a business for the purpose of earning profit is known as
- Partnership
  - Legal entity
  - insurance
  - None of above
38. The factors of  $4a^2 - 16$  are
- $4(a-2)(a+2)$
  - $4(a-2)(a+2)$
  - $(a+2)(a+2)$
  - $4(a+2)(a+2)$
39. If the maximum value in a series is 25 and its range is 15, the minimum value of the series is.
- 10
  - 15
  - 25
  - 35
40. If the square of 1 side of a triangle is equal to the sum of the other 2 sides, then the triangle is
- Isosceles triangle
  - scalene triangle
  - right angle triangle
  - reflection triangle
41. Unbounded solution in an LPP is.....
- Where the objective function can be decreased indefinitely.
  - Which maximizes the objective function
  - Where the objective function can be increased or decreased indefinitely
  - Where the objective function can be increased indefinitely

43. Find a value for  $x$  that is a square.
- a. 0.8                      b. 0.81                      c. 1.81                      d. 2.22
44. Three partners A, B and C start a business. B's capital is four times C's capital and twice A's capital is equal to three B's capital. If the total profit is Rs. 14,500 at the end of a year, find B's share in it.
- a. Rs. 4,000                      b. Rs. 5,000                      c. Rs. 5,166.67                      d. Rs. 7,000
45. How many permutations of the letters of the word APPLE are there?
- a. 600                      b. 120                      c. 240                      d. 60
46. A man positioned at the origin of the coordinate system. The man can take steps of unit measure in the direction north, east, west or south. Find the number way he can reach the point (5,6) covering the shortest possible distance.
- a. 252                      b. 432                      c. 462                      d. 504
47. In order to obtain an income of Rs. 650 from 10% stock at Rs. 96, one must make an investment of
- a. Rs. 3,100                      b. Rs. 6,240                      c. Rs. 6,500                      d. Rs. 9,600
48. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?
- a. 4 years                      b. 8 years                      c. 10 years                      d. None of these
49. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?
- a. 144                      b. 150                      c. 168                      d. 180
50. How many times are the hour hand and the minute hand of a clock at a right angle during their motion from 1:00 pm to 10:00pm?
- a. 9                      b. 10                      c. 18                      d. 20
51. By selling a bicycle for Rs. 2,850, a shopkeeper gain 14%. If the profit is reduced to 8%, then the selling price will be:
- a. Rs. 2,600                      b. Rs. 2,700                      c. Rs. 2,800                      d. Rs. 3,000

### Section- III: Logical Reasoning

Directions: Select the logically best answer

51. If TOUR is written as 1234, CLEAR is written as 56784 and SPARE is written as 90847, find the code for CARE
- a. 1247                      b. 4847                      c. 5247                      d. 5847
52. In a code sign DRLAL is coded as 62014314. How CAMEL is coded?
- a. 5315714                      b. 35729310                      c. 5313613                      d. None of these
53. E is the son of C. D is the husband of C. B and G is the only brother and daughter of D respectively. F is the maternal aunt of E and G. How is B related to E?
- a. uncle                      b. nephew                      c. niece                      d. aunt
54. In a group of five person A, B, C, D and E. One plays tennis, one plays chess and one hockey. A and D are unmarried women and play no game. There is a couple among them where E is husband of C. No women play either chess or hockey. B is the brother of C and he neither plays tennis nor chess. Who plays hockey here?
- a. A                      b. B                      c. C                      d. D
55. A, B and C are intelligent. A, D and E are laborious. D, C and E are honest. A, B, and E are ambitious. Who is neither laborious nor honest?
- a. A and D                      b. B only                      c. E only                      d. C only

Directions: In each of the following questions, two statements are given followed by an inference. Mark the correct inference.

- 56.
- a. My son is not old enough to vote.
- b. My son has handsome personality.



**Inference:** My son is a boy under 18 years of age.

- a. The inference is definitely true
- b. The inference is definitely false
- c. the inference is neither true nor false
- d. Inference cannot be drawn

57. a. I know a professor of a university.  
b. He has beard.

**Inference:** All the professors of the university have beard.

- a. The inference is definitely true
- b. The inference is definitely false
- c. The inference is neither true nor false
- d. Inference cannot be drawn

**Directions:** following question includes a set of statements out of which one supports the conclusion of the argument. Identify to correlate the conclusion.

58. a. Cats like rats                      b. Rats like bread

**Inference:** Bread is liked by cats.

- a. The inference is definitely true
- b. The inference is definitely false
- c. the inference is neither true nor false
- d. Inference cannot be drawn

59. One of the warmest winters on record has put consumers in the mood to spend money. The consumers' intend of spending is seen to be the strongest in 13 years. During the month of January, sales of existing single family homes hit an annual record rate of 5.70 million. This paragraph best supports the statement that:

- a. During the winter months, the prices of single-family homes are the lowest.
- b. Warm winter weather is likely to affect the rate of home sales.
- c. Consumer spending will be higher thirteen years from now than it is today
- d. There were about 5 million homes for sale during the month of January.

60. Mathematics allows us to expand our consciousness and tells us about the growth of populations, economic trends and the patterns of disease. Mathematics is good at exposing the truth, but it can also perpetuate misunderstandings and untruths. Figures have the power to mislead people. This paragraph best supports the statement that:

- a. Figure are sometimes used to deceive people.
- b. The study of mathematics is dangerous.
- c. The power of numbers is that they cannot lie.
- d. Words are more truthful than figures.

**Directions:** select the logically best answer

61. Soldier: gun:: blacksmith:?

- a. wood
- b. sword
- c. iron
- d. hammer

62. Petal: Flower

- a. salt: pepper
- b. tire: bicycle
- c. base: ball
- d. sandals: shoes

63. Odometer: Distance

- a. Scale: weight
- b. length: width
- c. inch: foot
- d. mileage: speed

64. Fish: School

- a. wolf: pack
- b. cow: farm
- c. herd: peacock
- d. elephant: jungle

65. Sound: Cacophony

- a. speech: oration
- b. touch: massage
- c. smell: stench
- d. taste: style

**Directions:** in each of the following questions a statement is given followed by arguments. Mark the appropriate option.

66. **Statement:** Should education be given by the government free of charge?

**Argument I:** Yes, it will help in universalization of education in the country

**Argument II:** No, there will be budgetary deficit creating some new problems.

- a. I is strong
- b. Only argument II is strong
- c. both arguments are strong
- d. Neither I nor II is strong

67. **Statement:** Should students study in early hours of morning?

**Argument I:** Yes, mind is fresh and alert at this time.

**Argument II:** No, early rises feel sleepy throughout the day.

- a. I is strong
- b. Only argument II is strong
- c. both the arguments are strong
- d. Neither I nor II is strong

68. **Statement:** Should all workers be allowed to participate in the management of factories in Nepal?

**Argument I:** Yes, it is the present management theory.

**Argument II:** No, many workers are illiterate and their contribution will not be of value.

- a. Only I is strong
- b. Only argument II is strong
- c. both the arguments are strong
- d. Neither I nor II is strong

**Directions:** select the logically best answer

69. In the following question, select the odd word from the given alternatives.

- a. herb
- b. flower
- c. tree
- d. shrub

70. In the following question, select the odd word pair from the given alternatives.

- a. pen
- b. paper
- c. marker
- d. highlighter

71. Three of the following four are alike in a certain way and so form a group. Which is the one that does not belong to that group?

- a. 125
- b. 130
- c. 131
- d. 138

72. In the following question, select the odd word pair from the given alternatives.

- a. petrol-car
- b. oil-lamp
- c. coal-lamp
- d. smoke-fire

**Direction:** in the question symbols \$, #, % are used for different meaning as follows.

\$ means 'neither greater nor equal to'.

# means 'neither greater nor smaller than'.

% means 'neither smaller nor equal to'.

In each of the following questions assuming the given statements to be true, find out which of the two conclusions I and II given below them is/are definitely true.

73. **Statements:** T % I, I # L, L % U

**Conclusions:**

I. T \$ L

II. U \$ T

- a. Only I is true
- b. Only II is true
- c. either I or II true
- d. Neither I nor II is true

74. **Statements:** M # K, K % P, P \$ R

**Conclusions:**

I. R \$ M

II. P % M

- a. Only I is true
- b. Only II is true
- c. either I or II true
- d. Neither I nor II is true

75. **Statements:** N \$ B, B # D, D % C

**conclusions:**

I. D \$ N

II. B % C

- a. Only I is true
- b. Only II is true
- c. either I or II true
- d. Neither I nor II is true

#### Section IV: General Awareness

**Direction:** Select the correct option from the given options.

76. A light sensitive device that converts drawing, printed text or other images into digital form is

- a. Keyboard
- b. Scanner
- c. OMR
- d. None of these

77. The basic architecture of computer was developed by
    - a. John von Neumann
    - b. Charles Babbage
    - c. Blaise pascal
    - d. Garden Moore
  78. Former Australian captain Mark Taylor has had several nicknames over his playing career. Which of the following was not one of them?
    - a. Tubby
    - b. Stodge
    - c. Helium Rat
    - d. Stumpy
  79. How many players are consisted in each team of basketball?
    - a. 6
    - b. 7
    - c. 4
    - d. 5
  80. When is the international workers' day?
    - a. 15<sup>th</sup> April
    - b. 12<sup>th</sup> December
    - c. 1<sup>st</sup> May
    - d. 1<sup>st</sup> August
  81. 4<sup>th</sup> February is celebrated as
    - a. Thinking day
    - b. World Radio day
    - c. World cancer day
    - d. World wildlife day
  82. 'Os' computer abbreviation usually means?
    - a. Order of significance
    - b. Open software
    - c. Operating system
    - d. Optical sensor
  83. Entomology is the science that studies
    - a. The origin and history of technical and scientific terms
    - b. Behavior of human beings
    - c. Insects
    - d. The formation of rocks
  84. Free market is
    - a. A condition in the international market where nations do not impose customs duty or other taxes on import of goods.
    - b. Market where the price of a commodity is determined by free play of the forces of supply and demand.
    - c. Ports that are exempted from payment of customs duty on articles of commerce, primarily to encourage tourism.
    - d. None of the above
  85. Yokohama and Kobe are the main centers of ship building industry in;
    - a. Japan
    - b. South Korea
    - c. North Korea
    - d. China
  86. The process that creates a sub layer, which is white to gray in colour and composes of silica sand in the A horizon is called
    - a. Podsolosation
    - b. Calcification
    - c. Laterisation
    - d. Gleisation
  87. Which of the following is not associated with the UNO?
    - a. ILO
    - b. WHO
    - c. ASEAN
    - d. All of the above
  88. The transformer that develops the high voltage in a home television is commonly called as:
    - a. Testa coil
    - b. Flyback
    - c. Yoke
    - d. Van de Graff
  89. Permanent secretariat to coordinate the implementation of SAARC programme is located at
    - a. Dhaka
    - b. New Delhi
    - c. Colombo
    - d. Kathmandu
  90. "Bulls and bears" is a term associated with
    - a. Parliamentary Affairs
    - b. Bullfights
    - c. Racing
    - d. Stock exchange
  91. Who invented the ballpoint pen?
    - a. Biro brothers
    - b. Waterman brothers
    - c. Bicc brothers
    - d. Write brothers
  92. The hardest metal of the human body is
    - a. Bones
    - b. Enamel
    - c. Nails
    - d. Head



93. Which is the coldest planet?  
a. Jupiter                      b. Mercury                      c. Neptune                      d. Earth
94. Which scientist discovered the radioactive element radium?  
a. Isaac Newton                      b. Albert Einstein                      c. Benjamin Franklin d. Marie Curie
95. Who is the first president of Nepal?  
a. Mrs. Bidhya Bhandari                      b. Ram Raja Prasad Singh  
c. Dr. Rambaran Yadav                      d. Ram Prit Paswan
96. Which of the following things is known by its chemical name sodium chloride?  
a. Washing soda                      b. Baking soda  
c. Salt used in kitchen                      d. Chilli power used in the kitchen
97. Women are better teacher at primary level because  
a. They behave more patiently with children.  
b. They are ready to work with low salary.  
c. Higher qualifications is not needed in this profession.  
d. They have less chances in other profession.
98. What now ubiquitous device was invented by Zenith engineer Eugene Polley in 1955?  
a. Microwave oven                      b. Remote control                      c. VCR                      d. Calculator
99. The longest river in Nepal is  
a. Karnali                      b. Koshi                      c. Arun                      d. Trishuli
100. "Lingonberry" is a kind of  
a. Grain                      b. Animal                      c. Game                      d. Fruit

Answer Sheet									
1. a	2. c	3. d	4. a	5. c	6. b	7. c	8. a	9. d	10. a
11. d	12. a	13. d	14. d	15. b	16. c	17. c	18. b	19. c	20. d
21. b	22. d	23. a	24. d	25. c	26. c	27. c	28. a	29. b	30. c
31. a	32. c	33. b	34. b	35. b	36. a	37. a	38. b	39. a	40. c
41. c	42. d	43. c	44. d	45. c	46. b	47. a	48. d	49. c	50. b
51. d	52. a	53. a	54. b	55. b	56. b	57. d	58. b	59. b	60. a
61. d	62. b	63. a	64. a	65. c	66. c	67. a	68. b	69. b	70. b
71. c	72. d	73. a	74. d	75. c	76. b	77. a	78. c	79. d	80. c
81. c	82. c	83. c	84. b	85. a	86. a	87. c	88. b	89. d	90. d
91. a	92. b	93. c	94. d	95. c	96. b	97. a	98. b	99. a	100. d