

**NEEDS ACADEMY**  
**CMAT Model Entrance Examination**

**Instructions:**

There are multiple-choice questions, each having four choices of which only one choice is correct.

Fill ( ● ) the most probable one.

**Direction: In the following Questions, choose the word which best expresses the meaning of the capitalized word.**

1. **DECISIVE**  
a) Cruel                      b) Definite                      c) Deliberate                      d) Firm
2. **RACKET**  
a) Trick                      b) Approach                      c) Fraud                      d) Bulge
3. **PRECEDENT**  
a) Chief                      b) Accomplish                      c) Proof                      d) Example
4. **HERALD**  
a) Announce                      b) Deprive                      c) Cultivate                      d) Curse
5. **DWINDLE**  
a) Lesson                      b) Lumpen                      c) Itch                      d) Lessen

**Complete the following sentences with the appropriate choice form among the options that follow:**

6. **The notice clearly states that trespassers will be**  
a) Persecuted                      b) Persuaded                      c) Prosecuted                      d) Pervaded
7. **The police burst tear gas shells to ..... the mob.**  
a) Apprehend                      b) Divert                      c) Disturb                      d) Disperse
8. **The dose of sleeping pills proved ..... and he died in sheep.**  
a) Disastrous                      b) Fatal                      c) Effective                      d) Efficacious
9. **The thieves tried to ..... with the lock but they did not succeed in breaking it.**  
a) Tamper                      b) Temper                      c) Fiddle                      d) Temperature
10. **A referee should be .... in the outcome of the match.**  
a) Uninterested                      b) Disinterested                      c) Involved                      d) Participative

**Each question below consists of an idiom or a phrase, followed by four lettered expressions. Choose the lettered expression that most nearly expressed the meaning of the given idiom or phrase.**

11. **To bring to light**  
a) To open a window                      b) To reveal the facts  
c) To switch on the light                      d) To draw the curtains
12. **To see red**  
a) Stop at the signal                      b) Jump the red signal  
c) To be very angry                      d) To suffer from color blindness
13. **Roots and branch**  
a) Entirely                      b) Step by step                      c) Part by part                      d) Bare truth
14. **In full cry**  
a) To be upset about something                      b) Howling loudly  
c) At a fast pace                      d) At one's best
15. **Into the bargain**  
a) buy goods from sales                      b) An additional benefits

- c) A warranty card                      d) At no extra charge

**The following paragraph has a number of blanks marked 16, 17, 18, 19 and 20 followed by a set of options. Mark the options that best complete the blanks.**

The average new born .... 16..... is about fifty centimeters long in twenty years, this little body more than triples ....17..... in length. The average height of a man is 1.7 meters. .... 18.... man does not stop growing; he continues to grow even after the ....19.... of twenty five and reaches his maximum height at about the age of thirty five. An average person shrinks as much as ten millimeters ....20... ten years after the age of forty.

16. a) body                      b) infant                      c) kid                      d) child
17. a) itself                      b) around                      c) over                      d) last
18. a) since                      b) yet                      c) though                      d) however
19. a) ages                      b) years                      c) age                      d) period
20. a) in                      b) after                      c) every                      d) usually

**The passage given below is followed by questions based on its contents. After reading the passage, choose the best answer the question.**

It is a process in the human sciences that we must look to undo the evils which have resulted from the knowledge of physical world hastily and superficially acquired by population unconscious of the changes in themselves that the new knowledge has imperative. The road to a happier world than any known in the past lies open before us if atavistic destructive passions can be kept in leash while the necessary adaptations are made.

Fears are inevitable in time, but hopes are equally rational and far more likely to bear good fruit. We must learn to think rather less of the dangers to be avoided than of the good that will lie within our grasps if we can believe in it and let it dominate our thoughts. Science, whatever unpleasant consequences it may have by the way, is in its very nature a liberator, a liberator of bondage to physical nature and in time to come, a liberator from the weight of destructive passions. We are on the threshold of utter disaster or unprecedentedly glorious achievement. No previous age has been fraught with problems so momentous, and it is to science that we must look to for a happy future.

21. **What does science liberates from? It liberates us from**  
a) Fears and destructive passions.  
b) Slavery to physical nature & from passions.  
c) Bondage to physical nature.  
d) Idealistic hopes of glorious future.
22. **Should human sciences be developed because they will**  
a) Provide more knowledge of the physical world  
b) Make us conscious of the changing in ourselves  
c) Make us conscious of the changing in ourselves  
d) Eliminate the destruction caused by a superficial knowledge of the physical world.
23. **If man's bestial yearning is controlled**  
a) The future will be tolerable  
b) The present will be brighter than the future  
c) The future will be brighter than the present  
d) The present will become tolerable
24. **Fears and hopes according to the author**

- a) are closely linked with the life of modern man
- b) can bear fruit
- c) can yield good results
- d) are irrational

25. To crave out the bright future man should

- a) Analyze dangers that lie ahead
- b) Try to avoid danger
- c) Overcome fear & danger
- d) Cultivate a positive outlook

**Quantitative Ability**

26. Given that 100 milliliters is equal to approximately 0.4 cup, 205 milliliters is equal to approximately how many cups? Which of the following expressions models the solution to the problem above?

- a)  $100 - 0.4(205)$
- b) 105 % of 0.4
- c)  $205 - 100(0.4)$
- d) 205 % of 0.4

27. 18% of the students at a school are in Year 8, and 16% of the students are in Year 9. If the school has 8 students, determine the number of Year 9 students.

- a) 108
- b) 110
- c) 112
- d) 114

28. The exam scores of all 500 students were recorded and it was determined that these scores were normally distributed. If Jane's score is 0.8 standard deviation above the mean, then how many, to the nearest unit, students scored above Jane?

- a) 106
- b) 250
- c) 394
- d) 400

29. In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?

- a) 6.25
- b) 6.5
- c) 6.75
- d) 7

30. In a dairy farm, 40 cows eat 40 bags of husk in 40 days. In how many days one cow will eat one bag of the husk?

- a) 1/40
- b) 1
- c) 40
- d) 80

31. A sum of money at simple interest amounts to Rs 815 in 3 years and to Rs 854 in 4 years. The sum is

- a) Rs 650
- b) Rs 690
- c) Rs 698
- d) Rs 700

32. The difference between simple interest and compound interest annually on a certain sum of money for 2 years at 4% per annum is Re. 1. The sum in Rs. is

- a) 625
- b) 630
- c) 640
- d) 650

33.  $\left(\frac{1}{2}\right)\left(\frac{5}{6}\right)\left(\frac{8}{5}\right) =$

- a)  $\frac{5}{12}$
- b)  $\frac{1}{2}$
- c)  $\frac{2}{3}$
- d)  $\frac{4}{3}$

34. If  $5^a = 3125$ , then the value of  $5^{(a-3)}$  is

- a) 25
- b) 125
- c) 144
- d) 150

35. A homeowner is planning to use carpet tiles to cover the floor of a room measuring 9 feet by 10 feet 8 inches. If the carpet tiles are 8 inches wide & 1 foot long and there are no gaps between the tiles as they are placed on the floor, how many carpet tiles will the homeowner need to cover the floor of the room?

- a) 100
- b) 125
- c) 144
- d) 150

36. Seats for mathematics, Computer and Accounting in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40 %, 50 % and 75 % respectively. What will be the ratio of increased seats?

- a) 2 : 3 : 4
- b) 6 : 7 : 8
- c) 6 : 8 : 9
- d) None of these

37. Look at this series : 7, 10, 8, 11, 9, 12, ... What number should come next?

- a) 7
- b) 10
- c) 12
- d) 13

38. Look at the series: 58, 52, 46, 40, 34,..... What number should come next?

- a) 26
- b) 28
- c) 30
- d) 32

39. If  $6x + 5 = -x + 40$ , then

- a)  $x = -9$
- b)  $x = -5$
- c)  $x = 5$
- d)  $x = 5$

40. The slope of the line determined by the equation  $3x + y = 4$  is

- a) -3
- b) 1/3
- c) 3/4
- d) 3

41. The three solutions of the equation  $f(x) = 0$  are -2, 0 and 3. Therefore, the three solutions of the equation  $f(x - 2) = 0$  are

- a) -4, -2 & 1
- b) -2, 0 & 3
- c) 4, 2 & 5
- d) 0, 2 & 5

42. The function is defined by  $f(x) = x^5 - 1$ , then  $f^{-1}$ , the inverse function of  $f$ , is defined by  $f^{-1}(x) =$

- a)  $\frac{1}{\sqrt[5]{x+1}}$
- b)  $\frac{1}{\sqrt[5]{x+1}}$
- c)  $\sqrt[5]{x-1}$
- d)  $\sqrt[5]{x+1}$

43. The set of all points  $(e^t, t)$  where  $t$  is a real number, is the graph of  $y =$

- a)  $\frac{1}{e^t}$
- b)  $e^{\frac{1}{t}}$
- c)  $te^{\frac{1}{t}}$
- d)  $\ln t$

44. Simplify:  $(Z^6) (Z^{-2})$

- a)  $Z^3$
- b)  $Z^4$
- c)  $Z^8$
- d)  $Z^{-12}$

45. There are 5 numbers in a data series. First number of the data series is 14 and mean, median and mode are 10, 9 and 6 respectively. Find the 5 numbers.

- a) 14, 6, 9, 6, 5
- b) 14, 9, 9, 9, 9
- c) 14, 9, 10, 8, 9
- d) 14, 9, 9, 6, 12

46. When a metallic ball bearing is placed inside a cylindrical container of radius 2 cm, the height of the water inside the container increases by 0.6 cm. The radius to the nearest tenth of a centimeter of the ball bearing is

- a) 1 cm
- b) 1.2 cm
- c) 2 cm
- d) 0.6 cm

47. The probability that an electronic device produced by a company does not function properly is equal to 0.1. If 10 devices are bought then the probability to the nearest thousandth that 7 devices function properly is

- a) 0.057
- b) 0.470
- c) 0.001
- d) 0

48. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green?

- a) 1/3
- b) 3/4
- c) 7/9
- d) 8/21

49. Given a sequence 1, 4, 9, 16, 20, 36, 49, find the odd one out

- a) 29
- b) 9
- c) 20
- d) 49

50. A school committee consists of 2 teachers and 4 students. The number of different committees that can be formed from 5 teachers and 10 students is

- a) 8
- b) 10
- c) 15
- d) 21

**LOGICAL REASONING**

51. Drug addicts are hated because they are criminal.

- a) All who hated are drug addicts
- b) All criminals are hated
- c) All hated are criminals
- d) Some criminals are hated

52. "Make hay while sun shines."

- a) Sleep when you are tired
- b) Jump when you are dancing
- c) Take the flood at its tide
- d) Entering hope when others help

53. I. I know a professor of the university.

II. He has beard

Interference: All the professor of the university have beard.

- a) the interference is definitely true
- b) the interference is definitely false
- c) the interference is neither true nor false

- d) interference cannot be drawn
54. **Statements: Some blankets are beds. Some pillows are blankets. All beds are pillows.**  
**Conclusion: I. Some blankets are pillows. II. Some pillows are bed**  
**III. Some beds are blankets.**
- a) Only either I or II follows                      b) Only I and either II or III follows  
c) Only III & either I or II follows              d) All I, II & III follows
55. **Reentry occurs when a person leaves his or her social system for a period of time and then returns. Which situation below the best describes Reentry?**
- a) When he is offered a better paying position, Yadav leaves the restaurant he manages to manage a new restaurant on the other side of the town.  
b) Sita is spending her junior year of college studying abroad in France.  
c) Arjun is readjusting to civilian life two years of overseas military service.  
d) After several miserable months, Seema decides that she can no longer share an apartment with her roommate Hilary.
56. **“Don’t take sugar because you have diabetes.” The statement given above is logically similar to which of the following statement?**
- a) Do not play as you are hurt  
b) Do not read as you have weak eye sight.  
c) Do not sing as you have hoarse throat.  
d) Do not speak as you are not asked to speak.
57. **A basket has as many mangoes as it has oranges. Three-fourth of the fruits are yellow. One half of the fruits are ripe. Which of the following statement is definitely true?**
- a) All fruits are ripe.                                      b) At least one half of the oranges are yellow  
c) All mangoes are ripe                                      d) None of these
58. **An informal Gathering occurs when a group of people get together in a casual, relaxed manner. Which situation below is the best example of an Informal Gathering?**
- a) The book club meets on the first Thursday evening of every month.  
b) After finding out about his promotion, Jeremy and a few coworkers decide to go out for a quick drink after work.  
c) Mary spends out 25 invitations for the bridal shower she is giving for her sister.  
d) Whenever she eats at the Mexican restaurant, Clara seems to run into Peter.
59. **A Tiebreaker is an addition contest or period of play designed to establish a winner among tied contestants. Which situation below is the best example of a Tiebreaker?**
- a) At halftime, the score is tied at 28  
b) Mary and Megan have each scored three goals in the game  
c) The referee tosses a coin to decide which team will have possession of the ball first.  
d) The Sharks and the Bears each finished with 14 points, and they are now battling it out in a five-minute overtime.
60. **Statements:**  
**I: The police authority has recently caught a group of house breakers.**  
**II: The citizens group in the locality have started night vigil in the area.**
- a) Statement I is the cause & statement II is its effect.  
b) Statement II is the cause & statement I is its effect.  
c) Both statement I & II are independent causes  
d) Both statement I & II are effects of independent causes
61. **Statements:**  
**I: There is sharp decline in the production of oil seeds this year.**  
**II: The Government has decided to increase the import quantum of edible oil.**
- a) Statement I is the cause & statement II is its effect.

- b) Statement II is the cause & statement I is its effect.  
c) Both statement I & II are independent causes  
d) Both statement I & II are effects of independent causes

Larry has purchased a device that the manufacturer claims will reduce the fuel consumption in his car. After a month has passed Larry determines that his mileage currently rests at 17 miles per gallon. Larry’s best friend, Steve, owns the exact same make and model car, and has calculated his mileage at 23 miles per gallon . Steve’s car does not have the device that Larry purchased one month ago. Larry then makes the conclusion that the manufacturer of the device’s claim is not true.

62. **Which of the following statements would cause Larry’s conclusion to be the weakest?**
- a) Though Larry has the same make and model of car as Steve, Larry’s car is 15 years old.  
b) Larry was driving in the city, whereas Steve drives the highway  
c) Larry purchases a lower grade of gasoline than Steve  
d) Steve lied, he actually only gets 15 miles per gallon

Read the following passage and answer the following (Question no. 63-66)

**A petrochemical plant manufactures a range of hazardous chemical products and must therefore follow strict guidelines concerning how each of the chemicals may interact with one another on a daily basis. The plant processes five different chemicals every week. Three of these chemicals can be processed on any given day.**

**Xenon may be processed any day except for every Monday and every other Thursday.**

**Oxygen can be processed only on Tuesdays and Wednesdays.**

**Liquid hydrogen may be processed on Mondays, Wednesdays and Fridays.**

**Sulphur dioxide can’t be processed on Friday.**

**Methane can’t be processed on Wednesday.**

63. **What are the three chemicals that can be processed on any given Monday?**

- a) Liquid Hydrogen, Xenon & Oxygen  
b) Methane, Oxygen & Sulphur dioxide  
c) Xenon, Oxygen & Sulphur dioxide  
d) Sulphur dioxide, Methane & liquid Hydrogen

64. **Which weekday is mostly likely to be impossible for three chemicals to be processed in one day?**

- a) Monday                                      b) Tuesday                                      c) Wednesday                                      d) Thursday

65. **There are three chemicals that can be processed on a Friday. What are they?**

- a) Oxygen, methane & liquid hydrogen  
b) Liquid Hydrogen, methane & Xenon  
c) Methane, Oxygen & xenon  
d) Liquid Hydrogen & Sulphur dioxide

66. **On which days of the week can they process liquid hydrogen and only additional two chemicals?**

- a) 2Monday & Tuesday                      b) Tuesday & Thursday  
c) Wednesday & Friday                                      d) Monday & Friday

67. **If FRAGRANCE is written as SBHBSODFG, how can IMPOSING be written?**

- a) NQPTJHOJ                                      b) NQPTJOHJ                                      c) NQTPJOHJ                                      d) NQTJOHI

68. **If ROBUST is coded as QNATRS in a certain language, which word would be coded as ZXCMP?**

- a) AYDNQ                                      b) AWDLQ                                      c) BZEOR                                      d) YYBNO

69. **If BE quick is coded as ZC OSGAL, then the code of the last letter of the third word is the sentence I LOVE MY COUNTRY is**

- a) A                                      b) T                                      c) Y                                      d) W

70. **If ZEBRA can be written as 2652181, how can COBRA be written?**

- a) 302181                                      b) 31822151                                      c) 3152181                                      d) 1182153

Question 71 & 75 follows the given pattern. Select the appropriate pattern.

71. **Horse : Mare ::**
- a) Fox : Vixen                                      b) Duck : Geese  
c) Dog : Puppy                                      d) Donkey : Pony

72. **Cricket : Pitch ::**  
 a) Ship : Dock  
 c) Boxing : Ring  
 d) Wrestling : Track  
 b) Boat : Harbour
73. **Oceans : Deserts :: Waves :**  
 a) Dust  
 b) Sand dunes  
 c) Ripples  
 d) Sea
74. **Grain : Stock :: Stick : ?**  
 a) String  
 b) Heap  
 c) Collection  
 d) Bundle
75. **Cube is related to square in the same way as square is related to**  
 a) Plane  
 b) Triangle  
 c) Line  
 d) Point
76. **Nepal's Best Bank of the Year 2021 was awarded to**  
 a) NMB Bank  
 c) Nepal Investment bank  
 b) Nepal SBI Bank  
 d) Megha Bank
77. **Who was the winner of Madan Pursraskar 2076?**  
 a) Shanti Thatal  
 c) Bhagiram Ingnam  
 b) Chandra Prakash Baniya  
 d) Satya Mohan Joshi
78. **Epicentre of COVID-19 was**  
 a) Beijing  
 b) Xingning  
 c) Wuwei  
 d) Wuhan
79. **First Case of COVID 19 in the World was seen on**  
 a) 30<sup>th</sup> December  
 b) 29<sup>th</sup> December  
 c) 31<sup>st</sup> December  
 d) 28<sup>th</sup> December
80. **Human Rights Day is celebrated on**  
 a) December 10  
 b) December 20  
 c) October 8  
 d) November 9
81. **What is the standard time of Nepal?**  
 a) +5 : 45 hrs GMT  
 b) +5 : 30 hrs GMT  
 c) +5 : 15 hrs GMT  
 d) +5 : 00 hrs GMT
82. **Which is the largest reserve of Nepal?**  
 a) Annapurna Hunting Reserve  
 c) Dhorpatan Hunting Reserve  
 b) Parsa Wildlife Reserve  
 d) Koshi Tappu Wildlife Reserve
83. **Which one is the national game of Australia?**  
 a) Archery  
 b) Hockey  
 c) Cricket  
 d) Horse riding
84. **Which country first provided the voting rights to the women?**  
 a) France  
 b) New Zealand  
 c) Switzerland  
 d) Russia
85. **Which is the largest university in the world?**  
 a) Harward University  
 c) Standford University  
 b) Moscow University  
 d) Oxford University
86. **Who is the first Film Director in Nepal?**  
 a) Suchita Shrestha  
 c) Shivahari Poudel  
 b) Dinesh D.C  
 d) Bhuwan KC
87. **When was World Cup football started?**  
 a) 1920 AD  
 b) 1926 AD  
 c) 1932 AD  
 d) 1930 AD
88. **France beat Croatia in World Cup Football 2018 AD with the score**  
 a) 4-1  
 b) 3-1  
 c) 4-2  
 d) 3-2
89. **Glossology is the study of**  
 a) Language  
 b) culture  
 c) grasses  
 d) glands

90. **Who is the father of quantum theory?**  
 a) Albert Einstein  
 b) Max Plank  
 c) Rohmer  
 d) Sir Issac Newton
91. **' I Have a Dream ' is a famous speech of**  
 a) Rabindranath Tagore  
 c) Martin Luther King  
 b) Leonardo Da Vinchi  
 d) Barack Obama
92. **Which Vitamin is found in ripe fruits & green vegetables?**  
 a) Vitamin A  
 b) Vitamin B<sub>1</sub>  
 c) Vitamin K  
 d) Vitamin B<sub>2</sub>
93. **SMTP stands for**  
 a) Simple Mode Transfer Protocol  
 b) Simple Mail Transfer Protocol  
 c) Simple Mode Transmission Protocol  
 d) Simple Mail Transmission Protocol
94. **The country without coin is**  
 a) Czech Republic  
 b) Paraguay  
 c) Finland  
 d) Panama
95. **SMS stands for**  
 a) Simple Message Service  
 c) Significant Message Service  
 b) Short Message Service  
 d) Sweet Message Service
96. **Which is the most expensive city to live as an expatriate?**  
 a) Moscow  
 b) London  
 c) Tokyo  
 d) New York
97. **Tribhuvan University celebrated its golden jubilee in**  
 a) 2009  
 b) 2010  
 c) 2012  
 d) 2013
98. **Which British Emperor could not speak English?**  
 a) James First  
 b) Charles First  
 c) George First  
 d) Edward Seventh
99. **When is the International Worker 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
100. **Pagal Basti is the famous book written by**  
 a) Amar Neupane  
 c) Narayan Wagle  
 b) Saru Neupane  
 d) Sudheer Sharma

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