

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO



DCA ENTRANCE EXAMINATION - VIII
DEFENCE CAREER ACADEMY,
AURANGABAD.

As an ISO 9001 : 2008 - Certified

ENT : 2017-2018
TIME : 2.30 Hrs.

MATH & GAT

Sr. No.
MAXIMUM MARKS : 150

QUESTION - BOOKLET

GENERAL INSTRUCTIONS

1. Do not carry any book, paper or any other material with you inside the Examination Hall.
2. Carry only writing material with you in the Examination Hall.
3. Keep the Hall Ticket with you ready for scrutiny.
4. Result of this Examination will be displayed on the Notice Board. The Result Sheet will include the successful/ qualified candidates ONLY.
5. All successful candidates indicated on the list shall present themselves for the interview on the same day.
6. This Test Booklet contains 140 items (Questions). Question No. 1 to 140 (MCQ) carry 1 mark each and Question No. 141 (Descriptive) carries 10 marks. You have to select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, Choose Only One response for each item.
7. All the answers must be marked on the Answer Sheet only. Do not write anything on this Test Booklet.
8. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR QUESTION ETC. IF SO, GET IT REPLACED BY A NEW ONE.
9. Ask for a separate paper for rough work.

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10. Read the questions carefully, Remember, answers are to be indicated in the Answer Sheet Only. Return the Test Booklet, Rough work papers and the Answer Sheet immediately when asked to do so. You are NOT permitted to take away with you any paper concerning the Examination.

ANSWER SHEET

11. The Answer Sheet contains 140 counts, each subdivided in four { (a) (b) (c) (d) } subdivisions for indicating the correct choice of answers. After having selected the correct choice from the test Booklet, you should indicate that choice by completely blackening the respective circle, DO NOT merely cross the circle. You should indicate correct answer by blackening ONLY ONE circle in each answer. Any answer having more than ONE blackened circle will be treated as WRONG answer.

12. Before starting the answering ensure that you have filled the complete information at the top of this Answer Sheet. Incomplete Answer Sheet will be regarded as invalid.

THANK YOU AND BEST OF LUCK

C

A

1. $12 \times (-13) =$
 a) 156 b) 136 c) -156 d) -136
2. $-4 \times -9 = \dots\dots\dots$
 a) 36 b) -36 c) +13 d) -13
3. $(-16) + (-4) \boxed{} (-16) - (-4)$
 a) $>$ b) $<$ c) $=$ d) none of these
4. $2\frac{3}{4}$ is a fraction.
 a) proper b) improper c) mixed d) None of these
5. $\frac{23}{5} =$
 a) $4\frac{3}{5}$ b) $5\frac{3}{4}$ c) $3\frac{4}{5}$ d) $3\frac{5}{4}$
6. The smallest fraction is :
 a) $\frac{4}{4}$ b) $\frac{3}{4}$ c) $\frac{2}{4}$ d) $\frac{1}{4}$
7. The greatest fraction is.
 a) $\frac{1}{8}$ b) $\frac{1}{5}$ c) $\frac{1}{3}$ d) $\frac{1}{2}$
8. Equivalent fraction of $\frac{2}{3}$
 a) $\frac{6}{12}$ b) $\frac{8}{12}$ c) $\frac{7}{14}$ d) $\frac{9}{27}$
9. $\frac{7}{8} \boxed{} \frac{3}{3}$
 a) $<$ b) $>$ c) $=$ d) none of these
10. $6\frac{4}{7} = \dots$
 a) $\frac{46}{7}$ b) $\frac{31}{7}$ c) $\frac{17}{7}$ d) $\frac{46}{6}$
11. Simplest form of fraction $\frac{15}{36}$
 a) $\frac{4}{9}$ b) $\frac{1}{3}$ c) $\frac{5}{12}$ d) $\frac{1}{2}$

12. $\frac{11}{5} = \frac{\square}{10}$
 a) 20 b) 22 c) 44 d) 55
13. $\frac{4}{7}$ of 49 =
 a) 28 b) 21 c) 35 d) 31
14. $\frac{1}{5} + \frac{3}{5} = .$
 a) $\frac{4}{10}$ b) $\frac{4}{5}$ c) $\frac{3}{25}$ d) $\frac{4}{25}$
15. $9 \times \frac{1}{4}$
 a) $\frac{36}{4}$ b) $\frac{37}{4}$ c) $\frac{14}{4}$ d) $\frac{9}{4}$
16. 0.27 =
 a) $\frac{27}{1000}$ b) $\frac{27}{100}$ c) $\frac{27}{10}$ d) $\frac{27}{1}$
17. 12.08 12.70
 a) > b) < c) = d) none of these
18. $\frac{39}{1000}$
 a) 0.39 b) 3.9 c) 39 d) 0.039
19. 405 m = km
 a) 0.405 b) 4.05 c) 40.5 d) 405
20. 32 paise = Rupees
 a) 3.2 b) 0.32 c) 0.032 d) 0.0032
21. Mean of 2, 9, 7, 5, 2, 5 is
 a) 5 b) 6 c) 7 d) 2
22. How many faces does a cuboid have ?
 a) 2 b) 4 c) 6 d) 8
23. The radius is 8 cm, what is the diameter?
 a) 16 m b) 16 cm c) 16 cu.m d) 16 cu.cm

24. HCF of 20, 28
 a) 4 b) 6 c) 8 d) None of these
25. Which plane figure has two lines of symmetry
 a) square b) rectangle c) circle d) triangle
26. Identify fraction 0.04 in lowest form.
 a) $\frac{1}{25}$ b) $\frac{2}{5}$ c) $\frac{30}{25}$ d) $\frac{4}{100}$
27. How many times is the letter 'e' repeated in the sentence: 'Peter Piper Picked a peck of pickled pepper popcorn'?
 a) Ten b) Eight c) Seven d) Nine
28. $-7 - 8 - (-25) = ?$
 a) 10 b) 15 c) 16 d) 20
29. Prime factor of 60
 a) $5 \times 2 \times 2 \times 3$ b) $5 \times 3 \times 2$ c) 30×2 d) None of these
30. A number with 4 or more digits is divisible by 8, if the number formed by the last three digits is divisible by
- a) 4 b) 2 c) 6 d) 8
31. If the perimeter of square is 80 cm, find the length of its sides.
 a) 20 cm b) 80 cm c) 320 cm d) 240 cm
32. The Ramesh borrowed Rs. 6,00,000 from a Dena Bank to buy a house. After 5 years, he paid back entire debt by returning an amount of Rs 8, 40, 000 to the bank: find the interest.
 a) 2,10,000 b) 2,40,000 c) 3,40,000 d) 3,10,000
33. Find the perimeter of the triangle whose sides are 4.8 m, 10.2 m and 5.3 m.
 a) 20.3 cm b) 20.3 m c) 20.2 m d) 20.5 m
34. Write in index form : the cube of 9 = ?
 a) 3^9 b) 27 c) 7^3 d) 9^3
35. Find the square of : $12 = ?$
 a) 144 b) 24 c) 121 d) 442
36. Santosh bought a case of 100 mangoes for Rs. 300. He sold them all at Rs. 5 per mangoes. How much was his profit or his loss.
 a) Profit is Rs. 200 b) loss is Rs. 200 c) Profit is Rs. 20 d) loss is Rs. 20
37. Divide : $1.393 \div 0.7 = \dots\dots\dots$
 a) 1.99 b) 1.80 c) 1.85 d) 1.08
38. If Nitin scored 820 out of 1000 marks in an exam, what was the percentage of the marks she scored?
 a) 76 % marks b) 82 % marks c) 96 % marks d) 77 % marks
39. Simplify : $(-8) - (-3) = \dots\dots\dots ?$
 a) -3 b) 3 c) -5 d) 5

40. Find the perimeter of the triangle whose sides are 18.4 m, 13.2 m and 18.5 m.
 a) 51.00 cm b) 50.00 m c) 48.30m d) 50.1 m
41. Biggest 4 digit number.
 a) 1000 b) 9000 c) 9999 d) 2599
42. 52 in Roman is
 a) LI b) IIL c) LXI d) LII
43. Rajesh bought a case of 50 apples for Rs. 260. He sold them all at Rs. 5 per apple. How much was his profit or his loss.
 a) Profit is Rs. 55 b) loss is Rs. 10 c) Profit is Rs. 45 d) loss is Rs. 55
44. Find the value of : 5 % of 60
 a) 5 b) 3 c) 8 d) 4
45. If Shankar scored 72 out of 100 marks in an exam, what was the percentage of the marks he scored?
 a) 76 % marks b) 72 % marks c) 96 % marks d) 77 % marks
46. How many cubic centimetre in one cubic metre
 a) 10,00, 000 cu.cm b) 10,00,00,000 cu.cm c) 1,00,000 cu.cm d) None of these
47. Simplify : $10 + 3 \times 100 \div 5$
 a) 60 b) 75 c) 55 d) 70
48. Which is the number that is neither prime nor composite ?
 a) 7 b) 3 c) 0 d) 1
49. The rate of interest is 12 and the period is 3 years find the interest on Rs. 100.
 a) 42 Rs. b) 38 Rs. c) 36 Rs. d) 40 Rs.
50. An obtuse angle measures more than
 a) 80° b) 90° c) 70° d) 180°
51. Add : $105.24 - 78.55 = \dots\dots\dots$
 a) 69.26 b) 26.69 c) 69.66 d) 69.79
52. If one number is positive and the other negative, the product is
 a) Positive b) Negative c) both a and b d) None of these
53. How many lines can be drawn through point ?
 a) Ten b) Infinite c) Only 1 line d) None of the above.
54. Smallest three digit number
 a) 999 b) 900 c) 100 d) 102
55. Find the square of : $75 = ?$
 a) 7,215 b) 7,230 c) 5,625 d) 6, 224
56. 3D shape is
 a) Circle b) Rectangle c) Square d) Chobid
57. $3^9 \div 3^4 = \dots\dots\dots$
 a) 31^3 b) 3^5 c) 6^{13} d) 6^5

58. $3^6 = \dots\dots\dots$
 a) 9 b) 27 c) 81 d) 729
59. If $x + 5 = 15$ then $x =$
 a) 20 b) 10 c) 25 d) 5
60. If $2y - 1 = 11$ then $y =$
 a) 6 b) 12 c) 10 d) 5
61. Area of triangle whose base is 5 cm & height 152 cm.
 a) 10 sq. cm. b) 20 sq. cm. c) 5 sq.cm. d) 40 sq. cm.
62. Perimeter of square with side 15 cm. is.
 a) 30 cm b) 60 cm c) 120 cm d) 45 cm
63. Perimeter of rectangle with sides 7 cm & 18 cm is.
 a) 50 cm. b) 25 cm. c) 100 cm. d) 11 cm.
64. Area of square with side 10 cm is
- a) 20 sq. cm. b) 40 sq. cm c) 80 sq. cm. d) 100 sq. cm.
65. Area of rectangle with side 14 cm & 5 cm is.
 a) 19 cm sq. cm. b) 38 sq. cm. c) 70 sq. cm. d) 56 sq. cm.
66. $\frac{-3}{5} \square \frac{1}{3}$
 a) < b) > c) = d) None of these
67. sum of the measurement of all angle in triangle is
 a) 90° b) 180° c) = d) none of these
68. Classify triangle with sides 20 cm, 15 cm, 15 cm.
 a) scalene b) isoscales c) equilateral d) acute
69. The sides of triangle are 13 cm, 16 cm & 10 cm respectively, The triangle is.
 a) acute b) scalene c) equilateral d) isoscales
70. Equilateral triangle have
 a) 3 equal sides b) 2 equal sides c) 3 different sides d) none of these
71. An angle which is gretter than 180° but less than 360° is called.
 a) acute angle b) obtuse angle c) adjacent angle d) reflex angle
72. When the sum of the measurement of 2 angle is 180° are called.
 a) complementary b) supplementary c) adjacent d) none of these
73. Complement of angle 40° .
 a) 45° b) 50° c) 40° d) 60°
74. 7 g = _____ kilogram.
 a) 0.7 b) 0.07 c) 0.007 d) 0.0007
75. 14 m 5 cm = metres.
 a) 14.5 b) 14.05 c) 1.405 d) 1.45

PART - II GAT

- * **Q.76. to 79 :** Read the following passage carefully and answer the questions choosing the correct option.

PASSAGE - I

Nishad, a boy of seven (also called Seven because his name means the seventh note on the musical scale) and his ten-year-old sister Maya are very curious about one Mr Nath. Then one day the children's marble rolls into Mr Nath's room, and Nishad gets a chance to see him. Is he a crook on the run? Why is his face badly scarred? Why has he no friends?

Nishad's mother, a doctor, knows Mr Nath as a patient, who is very polite.

76. How old was Nishad?
a) a boy of seven b) a boy of nine c) a boy of ten d) very little child
77. His sister name was
a) Chaya b) Radha c) Maya d) Mayuri
78. What was Nishad's mother?
a) a doctor b) a lawyer c) a homemaker d) a clerk
79. About whom Maya was very curious ?
a) Mr. Nath b) Nishad c) Her mon d) Father

- * **Q.80. to 84 :** Read the following passage carefully and answer the questions choosing the correct option.

PASSAGE - I

Once there was a talking fan
Electrical his chatter.
I couldn't quite hear what he said
And I hope it doesn't matter
Because one day somebody oiled
His little whirling motor
And all the mystery was spoiled
He ran as still as water.

80. Talking fan needs
a) electricity b) water c) fire d) wind
81. I couldn't quite hear what he said i.e means.....
a) It works very fast that I couldn't attend others.
b) It has gone defected.
c) Its language is electrical thats why
d) I am hard to get it.

82. What made mystery spoil?
 a) oiling b) reparing c) washing d) cleaning
83. It gives steady run
 a) as fast as deer b) as slow as tortoise
 c) as still as water d) a still as wind

* **Direction : Answer the following questions by identifying noun.**

84. I don't like to fight for rights.
 a) like c) fight c) I d) rights
85. To take bribe or to give bribe means to give birth to crime.
 a) means b) crime c) take d) or

* **Direction : I identify the gender going opposite.**

86. Prince
 a) Princes b) Princess Queen d) Widow
87. Vixon
 a) lion b) tiger c) wolf d) fox

* **Direction : Identify the correct 'Plural' form of the words given below.**

88. Syllabus
 a) Syllabus b) syllabuses c) sylabuses d) sylabi
89. louse
 a) louses b) lous' c) lice d) louse
90. Wife
 a) wives b) wife's c) wives d) wifees

* **Direction : do as Directed:**

91. Find the word with correct spellings.
 a) lie-utenant b) lefthant c) leftnaunt d) liftnant
92. a) Kernel b) Kernal c) cornel d) colonel

* **Direction : Give the synonyms of :**

93. Rich
 a) moneyed b) poor c) drastic d) worse
94. Mejority
 a) less in numbers b) maximum in numbers
 c) scarcity d) countless

* **Direction : I identify the pronoun.**

95. Manish and Mona can understand that language.
 a) Manish b) Mona c) understand d) that

* **Direction : Identify the verb “work doesn’t go fail if done with proper will”.**

96. a) go b) if c) proper d) work

* **Direction : Give the Antonyms of :**

97. Shallow

- a) deep b) broad c) wide d) highted

98. Rude

- a) noisy b) cruel c) polite d) timid

* **Direction: Identify the adjectives from the following.**

99. a) justice b) loyal c) judgement d) sympathy

100. kindness b) honesty c) population d) brave

101. If in a code language, COULD is written as BNTKC and MARGIN is written as LZQFHM, how will MOULDING be written in that code?

- a) CHMFINTK b) LNKTCHEMF c) LNTKCHMF d) NITKHCMF

* **Direction : In each of the following questions, four words have been given, out of which three are alike in some manner and one is different. Choose the odd one.**

102. a) Potassium b) Silicon c) Zirconium d) Gallium

* **Direction : In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and fill in the blank spaces.**

103. 1, 9, 17, 33, 49, 73, (.....)

- a) 97 b) 98 c) 99 d) 100

104. Rohit walked 25 metres towards South. Then he turned to his left and walked 20 metres. He then turned to his left and walked 25 metres. He again turned to his right and walked 15 metres. At what distance is he from the starting point and in which direction?

- a) 35 metres East b) 35 metres Nort c) 40 metres East d) None of these

* **Direction : In each of the following questions, there is a certain relationship between two given words on one side of : :and one word is given on another side of : : while another word is to be found from the given alternatives, having the same relation with this word as the words of the given pair bear. Choose the correct alternative.**

105. Forecast : Future : : Regret : ?

- a) Present b) Atonement c) Past d) Sins

106. Curdling of milk is _____ type of change

- a) reversible b) irreversible c) harmful d) physical

107. For rusting, the presence of both _____ & water is essential.

- a) oxygen b) hydrogen c) neon d) sulfur

108. All changes in the weather are caused by the _____

- a) sun b) moon c) nature d) Venus

109. Air is mixture of _____

- a) water b) gases c) minerals d) dust

110. In the atmospheric air _____ gas is present in highest percentage.
 a) oxygen b) carbon dioxide c) nitrogen d) hydrogen
111. _____ percentage of oxygen is present
 a) 21 b) 30 c) 6 d) 22
112. _____ is celebrated as the world water day
 a) 22nd march b) 21st march c) 1st march d) 1st may
113. _____ of the earth's surface is covered with water.
 a) 71% b) 70% c) 17% d) 3%
114. _____ is a not & dry place
 a) Maharashtra b) Jammu c) Rajasthan d) Punjab
115. which of the following is not obtained from forest.
 a) fruit b) sugar c) medicine d) honey
116. _____ is state animal o Maharashtra
 a) tiger b) lion c) monkey d) shekru
117. _____ influence climate, water cycle for air quality
 a) human b) forest c) animals d) microorganisms
118. which of the following plant does not observer in desert.
 a) coconut b) cycus c) cactus d) mango
119. _____ is known as ship of desert.
 a) lizard b) camel c) peacock d) snake
120. temperature at day time in desert
 a) high b) humid c) cool d) medium
121. Which one of the following does NOT make substance a resource?
 a) utility b) value c) quantity d) time
122. Which of following is more densely populated compared to the others?
 a) Deserts b) thick forest c) Plains d) Mountains
123. Which one of the following is leading producer of copper in the world?
 a) Bolivia b) Chile c) Ghana d) Zimbabwe
124. Golden fibre refers to
 a) tea b) cotten c) jute d) copper
125. For which of the following purpose is land not used?
 a) mining b) Fishing c) forestry d) Industrial set-up
126. Fossils are the remains of dead _____
 a) Plants b) Animals c) Both a and b d) None of the above
127. The metamorphic rocks are formed under the influence of _____
 a) High temperature b) High pressure c) Low pressure d) Both a and b
128. _____ minerals are found in the continental masses
 a) Silica and alumina b) Silica and magnesium
 c) Nickel and iron d) Silica and iron

129. Which is not an erosional feature of sea waves?
a) Cliff b) Beach c) Sea cave d) None of these
130. The depositional feature of a glacier is:
a) Flood plain b) Beach c) Moraine d) None of these
131. Who is known as the Father of our Nation?
a) Jawaharlal Nehru b) Mahatma Gandhi c) Rajendra Prasad d) Sardar Patel
132. How many colours are there in our National Flag?
a) Two b) Three c) Four d) Five
133. 20 million is equal to?
a) 2 lakh b) 20 lakh c) 20 crore d) 2 crore
134. Largest island in the world is?
a) Green Land b) New Guinea c) Madagascar d) Sumatra
135. The average of first six odd number is?
a) 5 b) 6 c) 7 d) 8
136. P V Sindhu is associated with which sports?
a) Wrestling b) Boxing c) Chess d) Badminton
137. 6) Which is the longest river in the world?
a) Ganga b) Nile c) Amazon d) Brahmaputra
138. Water boils at?
a) 50 degree b) 100 degree c) 200 degree d) 300 degree
139. LBW is related to which sports?
a) Football b) Hockey c) Badminton d) Cricket
140. Which of the following facts about Rectangle is false?
a) All 4 sides are not equal b) All 4 sides are equal
c) It has 4 corners d) It has 4 edges

PART - III ESSAY

* Write an essay on any one of the following.

10 M

- a) My Favourite player.
b) My Favourite Game
c) My hobby.

