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

## DCA ENTRANCE EXAMINATION -VI

# DEFENCE CAREER ACADEMY, AURANGABAD.

### As an ISO 9001 : 2008 - Certified

| ENT : 2018-2019 TIME : 2.00 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.  Use only Black / Blue ball pen.

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 invetview on the same day.

6.  This Test Booklet contains 150 items (Questions). Question No. 1 to 150 (MCQ) carry 1 mark each 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 THE SUPERVISOR.

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.

## <u>ANSWER SHEET</u>

11. The Answer Sheet contains 150 counts, each subdivided in four { (1) (2) (3) (4)} 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 a 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.

## <u>THANK YOU AND BEST OF LUCK</u>

# PART - I MATHS

1. Which of the following is not correctly matched ?

   1) I = 1         2) x = 10        3) v = 2        4) XII = 12

2. XXIII ☐ 13

   1) >         2) <        3) =        4) none of these

3. predecessor of 100,000,000 is -------------

   1) 99999999        2) 999999        3) 99999        4) 999999999

4. Place value of 6 in 43, 34, 96, 258 is ☐

   1) 6000        2) 60000        3) 600000        4) 6000000

5. 73,52,39,621 has ☐ crores

   1) 52        2) 73        3) 39        4) 5

6. Which of the following is not True?

   1) $959877 \times 0 = 0$    2) $959877 \times 1 = 959877$    3) $959877 \times 10 = 0$    4) none of these

7. Lata baked 2200 cookies she sold 800 of them & gave the rest equally to 20 of her triends. How mangcookies did each of her triends receive?

   1) 18        2) 80        3) 70        4) 1400

8. The value of $12 \times 7 + 24 \div 4 + 14 = $ ☐

   1) 104        2) 121        3) 224        4) 98

9. There are 25 pens in a packet how many pens are thre in 35 such packets.

   1) $25 \times 35$        2) $35 + 25$        3) $35 \div 25$        4) $35 - 25$

10. The value of $(8)^2 + 7 \times 2 \div 2 - 6 + 5$

    1) 70        2) 92        3) 102        4) 100

11. Biggest 5 digit number + smallest 3 digit number

    1) 1000        2) 10,0099        3) 100000        4) 99900

12. Least common multiple of 8,12 and 20 is ☐

    1) 12        2) 24        3) 120        4) 140

13. 10000 = ----------------- hundred

    1) 100        2) 1000        3) 10        4) 10000

14. $9709 \times 5 \times 17 \times 0 \times 11 = $ ☐

    1) 2,88,240        2) 74,055        3) 0        4) 96,08132

15. A number is divisible by 6, it is divisible by both

    1) 4&3        2) 2&4        3) 2&3        4) 3&5

16. a number which is a factor of every number is factor

    1) 0        2) 1        3) 2        4) none of these

17. Number of prime nubers between 50 to 60 is

    1) 1            2) 2            3) 3            4) 4

18. Prime factorisation of 143 are :

    1) $2 \times 11 \times 13$            2) $11 \times 13$            3) $2 \times 3 \times 7$            4) none of these

19. Successor of every even number is

    1) even            2) prime            3) odd            4) none of these

20. HCF of 24,36 and 92 is

    1) 24            2) 36            3) 12            4) 4

21. The prime number that comes just after 43 is --------

    1) 49            2) 45            3) 47            4) none of these

22. Subtract $\dfrac{11}{30}$ from $\dfrac{12}{15}$

    1) $\dfrac{84}{35}$            2) $\dfrac{11}{30}$            3) $\dfrac{13}{30}$            4) $\dfrac{17}{35}$

23. Reciprocal of $3\dfrac{1}{2}$ is

    1) $\dfrac{7}{2}$            2) $\dfrac{2}{7}$            3) $1\dfrac{2}{3}$            4) none of these

24. Decimal form of $\dfrac{48}{1000}$ is

    1) 0.48            2) 4.8            3) 0.048            4) 48.00

25. $0.05 \times 0.09 \times 5 =$ --------------------

    1) 0.025            2) 0.225            3) 0.005            4) 0.0225

26. Difference of 32 and 27.091 is

    1) 30.791            2) 5.909            3) 4.909            4) 3.909

27. If the cost of 15 pens is Rs 148.50 then the cost of one pen is

    1) Rs. 12.80            2) Rs. 8.90            3) Rs. 10.90            4) Rs. 9.90

28. $58 + \dfrac{3}{100} + \dfrac{7}{1000} = ?$

    1) 58.0037            2) 58.37            3) 58.037            4) none of these

29. $2.1+3.5-1.5 \div 0.5 = ?$

    1) 5.6            2) 2.6            3) 3.6            4) 4.6

30. 7386+3333- ---------------- = 10010

    1) 619            2) 609            3) 719            4) 709

31. The measurement of right angle is.

    1) $45^0$            2) $90^0$            3) $135^0$            4) $18^0$

32. 65 paise = ................ Rupee.

    1) 6.5            2) 0.65            3) 65            4) 650

33. 89% is written as

1) $\dfrac{89}{100}$　　　　2) $\dfrac{98}{100}$　　　　3) 8.9　　　　4) $8\dfrac{9}{100}$

34. $\dfrac{6}{20}$ is equal to = --------------%

1) 5　　　　2) 30　　　　3) 20　　　　4) 6

35. On a chess board percentage of black colared squares is

1) 50%　　　　2) 60%　　　　3) 15%　　　　4) 75%

36. The average of $5, 0, 6, \dfrac{1}{4}$ and $8\dfrac{3}{4}$ is

1) 1　　　　2) 2　　　　3) 3　　　　4) 4

37. The ratio of 96 m and 72 m is....

1) 3:4　　　　2) 4:3　　　　3) 2:1　　　　4) 4:1

38. The ratio of Rs 3 and 60 paise is

1) 1:20　　　　2) 5:1　　　　3) 1:2　　　　4) 20:1

39. Line has ------------- end points

1) no　　　　2) 3　　　　3) 2　　　　4) 4

40. Angles are messured in

1) compasses　　　　2) protactor　　　　3) degrees　　　　4) centi metres

41. Perimeter of circle is called its

1) circumference　　　　2) area　　　　3) diameter　　　　4) none of these

42. A triangle can have

1) one right angle　　　　2) two right angles　　　　3) three obtuse angles　　　　4) none of these

43. Area of square is 144 sq m. its side measure

1) 13m　　　　2) 14m　　　　3) 12m　　　　4) 11m

44. Area of a reactangle is

1) length $\times$ breadth　　　　2) length $\times$ 4　　　　3) 3 $\times$ length　　　　4) breadth $\times$ 6

45. Perimeter of a triangle is the sum of the length of all lthe ------------- sides

1) 4　　　　2) 2　　　　3) 3　　　　4) 6

46. The shape of a geometry box is

1) reactangle　　　　2) circle　　　　3) square　　　　4) cuboid

47. A quadrilateral has -------------- diagonals

1) 1　　　　2) 4　　　　3) 2　　　　4) 3

48. The area of a square whose side is 500 cm is

1) 25sqm　　　　2) 25sqm　　　　3) 25000 sqm　　　　4) none

49. $4132 \times 27 = ?$

1) 111564　　　　2) 121564　　　　3) 131564　　　　4) 1331564

50. $(16 + 12) - (2 \times 6) =$

1) 12　　　　2) 18　　　　3) 16　　　　4) 14

51. Simplify : 7800 + 4200 - 2000 = ?
   1) 10000　　　　2) 10003　　　　3) 11100　　　　4) 10090

52. Fill in the blanks in the given series : 6, 10, 14, 18, ...... 26, 30
   1) 17　　　　2) 20　　　　3) 22　　　　4) 25

53. A man purchased goat for Rs. 465. He sold it all for Rs 435. How much did the lose?
   1) Rs. 40　　　　2) Rs. 10　　　　3) Rs. 30　　　　4) Rs. 20

54. Fill in the blanks.  i) 7 minutes = ............. seconds.
   1) 180　　　　2) 420　　　　3) 180　　　　4) 70

55. The length is 8 cm and breadth is 4 cm of Rectangle. Find the perimeter ?
   1) 24 cm　　　　2) 18 cm　　　　3) 12 cm　　　　4) 2 cm

56. The side of a square sheet of paper is 25 cm. what is its area?
   1) 225 sq.cm　　　　2) 625 sq.cm.　　　　3) 125 sq. cm　　　　4) 1225 sq. cm.

57. The length of book is 8 cm and its breadth is 9 cm, Find the area of note book?
   1) 56 sq. cm　　　　2) 96 sq. cm　　　　3) 72 sq. cm　　　　4) 84 sq. cm

58. Total number of match points are = ......
   1) 7　　　　2) 6　　　　3) 9　　　　4) 8

59. Each angle of a square is a ................
   1) Right angle　　　　2) Acute angle　　　　3) obtuse angle　　　　4) None of these

60. In figure is cut in to two parts then it is ...................
   1) not symmetrical　　　　2) symmetrical　　　　3) conical　　　　4) None of these

61. Which of the number is prime number (4, 11, 9, 12)
   1) 4　　　　2) 9　　　　3) 12　　　　4) 11

62. An angle whose measure is more than $90^0$ is called.................
   1) acute angle　　　　2) right angle　　　　3) obtuse angle　　　　4) straight angle

63. Angles are measured with a ....................
   1) scale　　　　2) rounder　　　　3) set-sqares　　　　4) protractor

64. Which of the Number is divisible by 5 (23, 45, 82, 134)
   1) 23　　　　2) 82　　　　3) 45　　　　4) 134

65. A Car started from Solapur at 4 :00 am and reached Mumbai at 10:00 am. How long did the journey take?
   1) 13 hours　　　　2) 12 hours.　　　　3) 6 hours.　　　　4) 4 hours.

66. Find common factor of 25 and 40
   1) 10　　　　2) 10.5　　　　3) 20　　　　4) 5

67. All the factors of 35 are .....................
   1) 1,7,5,35　　　　2) 5,35　　　　3) 0,1,35　　　　4) 1,2,5,35

Direction : Find out the proper number for the given example.

68. Sixty - Five thousand :-
    1) 6900     2) 65000     3) 690     4) None of these

69. Which is the following is property of rectangle ?
    1) Every angle is $60^0$        2) Every sides are equal
    3) opposite side are equal      4) No sides are equal

70. Write the numbers in ascending order. 720, 235, 374
    1) 720, 235, 374   2) 235, 374, 720   3) 720, 374, 235   4) None of these

71. Multiply : 13 × 13
    1) 164      2) 144      3) 169      4) 141

72. Below situation is raleated to find out : How much can be filled in a bottle?
    1) perimeter     2) volume     3) area     4) None of these

73. divide : 14 ÷ 5
    1) 3.8      2) 2.8      3) 4.8      4) 5.8

74. The volume of a cube = .................
    1) $l$ × b × h    2) $l$ × $l$ × $l$    3) $l$ × b    4) b × $l$

75. Item = shampoo, Quantity = 2, Rate = Rs. 55 per bottle, price = ?
    1) 100 Rs.     2) 101 Rs.     3) 120 Rs.     4) 110 Rs.

# PART - II GAT

* **Q.76. to78 : Read the following passage carefully and answer the questions choosing the correct option.**

   Spring is the season of renewal, when new green can be seen on the trees and the lawns of parks, spring flowers have blossomed in a riot of scent and a rainbow of colours. House shake out their dust and housewives go about in a flurry of activity. Woollens begin to disappear, the light cottons begin to come back. Lazy lizards came out of their winter sleep and go back to their job of fly-hunting.

76. The spring season is usually a
    1) time for regeneration      2) time to plant saplings
    3) period of plenty        4) festive time

77. According to the passage, when spring comes, it brings with it
    1) a riot of green colours      2) increased activity
    3) excessive movement       4) disorganised enthusiasm

78. According to the passage, the lazy lizards come out to
    1) bask in the Sun        2) catch flies
    3) hunt for a mate        4) adore the spring time

One day Naina woke up early in the morning. Naina looked through the window and saw something on the windowsill. Naina saw two grey - coloured pigeons. The pigeons near building a nest the pigeons felt that the windowsill was a safe place for their nest. It was interesting to watch the pigeons everyday soon the nest was ready, though the nest looked rather untidy. However the pigeons seemed comfortable in the nest.

79.   _____ woke up early in the morning.
      1) Meena               2) Raina              3) Naina              4) Saina
80.   Naina  saw two grey - coloured. _____
      1) Parrots             2) Birds             3) Peacocks           4) Pigeons
81.   The pigeons were _____
      1) Playing together    2) fighting          3) building a nest    4) dancing happily
82.   Besides _____, the pigeons seemed comfortable.
      1) untidy nest         2) tidy nest         3) pleasant company  4) neat and clean nest
83.   Though the nest looked rather untidy _____, the pigeons seemed comfortable.
      1) otherwise           2) orelse            3) however            4) till
*   **Direction : Identify the Noun from the following and tick**
84.   1) sour                2) tall              3) green              4) wasp
85.   1) polite              2) jog               3) deep               4) rude
*   **Direction : Identify the plural forms.**
86.   cherry : —————
      1) cherrys             2) cherries          3) cherryes           4) cherry's
87.   wolf : —————
      1) wolfs               2) wolfes            3) wolves             4) wolvies
88.   Mouse : ____
      1) mouses              2) mice              3) mouss              4) meuse
*   **Direction : Fill in the blank's with choosing the currect options .**
89.   This pair of jeans _____ very expensive.
      1) is                  2) are               3) was                4) were
90.   Jack _____ waiting for Ted near the library.
      1) am                  2) can               3) was                4) ware
*   **Direction : Identify the word opposite in meaning.**
91.   Far  ✕ ——— —
      1) new                 2) Away              3) Near               4) Nearby
92.   Deep ✕ ———
      1) Bottom              2) Shallow           3) Thin               4) Thick

93. Before × ——————
   1) Close                2) Open                3) Thin                4) After

* **Direction : Identify the correct spelling.**

94. 1) Descriptive          2) Descreptive         3) Discriptive         4) None of these
95. 1) Sirvey              2) Sarvey              3) Surve               4) Survey
96. 1) negateve            2) negetive            3) negative            4) nagetive

* **Direction : Write the masculine / feminine gender of these nouns.**

97. Nephew = _____
   1) niece               2) empress             3) mare                4) vixon

98. Lion = ————
   1) tigress             2) vixon               3) lioness             4) sheep

99. Emperor = ____
   1) empress             2) lioness             3) vixon               4) niece

* **Direction : Identify the Pronoun.**

100. 1) me                 2) so                  3) but                 4) out

101. In a cetain code, TOGETHER is written as PQEGRJCT. In the same code, PAROLE will be written as

   1) NCPQJG              2) NCQPJG              3) RCPQJK             4) RCTQNG

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

102. 1) Nerves             2) Auricle             3) Artery              4) Valve

* **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. 462, 420, 380, (......), 306
   1) 322                2) 332                 3) 342                 4) 352

104. The twon of Paranda is located on Green Lake. The town of Akram is west of Paranda. Tokhada is east of Akram but west of Paranda. Kakran is east of Bopri but west of Tokhada and Akaram. If they are all in the same district, which town is the farthest west?

   1) Paranda            2) Kakran              3) Akram               4) Bopri

* **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. Genuine : Authentic : : Mirage : ?
   1) Image              2) Transpiration       3) Reflection          4) Illusion

106. 'Adjustment to environment' is called
   1) Adaptation         2) Mimicry             3) hibernation         4) aestivation

107. Birds can fly due to light body weight. This is due to.
    1) holow bones     2) hard bones     3) soft bones     4) cylindrical bones

108. _____ grow above the ground:
    1) Root system     2) Shoot system     3) Seedling     4) Leaves

109. There are _____ bones in human body.
    1) 202     2) 203     3) 205     4) 206

110. When no force acts on a body, it must be _____
    1) moving     2) at rest     3) either B or C     4) in uniform motion

111. Which of the following is a simple machine?
    1) Tumbler     2) Spoon     3) Can     4) Bucket

112. Earth pulls every object towards it with a force called.
    1) Friction     2) Gravity     3) Tension     4) Collision

113. The disease that can be spread through contaminated water.
    1) diphtheria     2) diarrhoea     3) malaria     4) tetanus

114. The bones of our body form the ........... system.
    1) muscular     2) nervaus     3) skeletal     4) digestive

115. A mango plant grows from a ........
    1) stem cutting     2) bud     3) seed     4) layering

116. ............... keep the birds warm while flying at high altitudes.
    1) Beaks     2) Claws     3) Feathers     4) Hollow bone

117. Webbed feet is an adaptation of:
    1) aerial birds     2) reptilian birds     3) aquatic birds     4) ostrich

118. .............. maintains balance in a monkey
    1) Tail     2) Hands     3) legs     4) Head

119. Which of the following cannot change in a physical change
    1) volume     2) pressure
    3) chemical composition     4) temperature

120. Which of the following is an example of a mixture?
    1) Air     2) $CO_2$     3) $H_2O$     4) Sugar

121. Asteroids are found between the orbits of
    1) saturn and jupiter     2) mars and jupiter
    3) the earth and mars     4) Mars and Saturn

122. The planet known as the "Earth's Twin" is
    1) jupiter     2) saturn     3) venus     4) mercury

123. What makes the universe?
    1) million of galaxies     2) millions of stars     3) earth     4) satellites

124. From which word does the monsoon taken?
    1) latin     2) arabic     3) english     4) none of these

125. Which of the following is tropical rain forest ?
    1) western ghats forest     2) sahara derest5     3) jaisalmer     4) bikaner

126. River yangtze flows in

    1) south amerika     2) australia     3) china     4) africa

127. Which of the following is the smallest continent?

    1) africa     2) asia     3) australia     4) antarctica

128. The jobs of contract workers are

    1) temporary     2) permanent     3) both (1) and (2)     4) none of these

129. The shopkeeper are given a licence by

    1) state government     2) municipal corporation     3) central government     4) court

130. Who was aryabhate ?

    1) mathematician     2) 300 logiest     3) archaeologist     4) none of these

131. Which was the first asian country to launch an artificial satellite?

    1) south korea     2) china     3) japan     4) india

132. Where did ice-hockey originate ?

    1) US.     2) canada     3) U.K     4) russia

133. In which of the following sports or games are cues used?

    1) golf     2) billiards     3) hockey     4) table tennis

134. Which cartoon character was created by walt disney ?

    1) batman     2) spider man     3) mickey mouse     4) He-man

135. Which region is called 'the land of the midnight sun'

    1) Egypt     2) Norway     3) Rome     4) Moscow

136. Darjeeling is situated in —————————

    1) Assam     2) Bihar     3) West Bengal     4) Rajasthan

137. Which is the national animal of our country.

    1) Tiger     2) Loin     3) Peacock     4) Shekharu

138. "World Water Day" is observed on

    1) 4th March     2) 16th March     3) 22nd March     4) 27th March

139. Who win 2018 Dadasaheb Phalke Award.

    1) Dharmendra     2) Vinod Khanna     3) Sakshi Kapoor     4) Kader Khan

140. World Homeopathy Day is observed on

    1) March 25th     2) March 31st     3) April 6th     4) April 10th

141. Weight is considered as

    1) energy     2) pull     3) push     4) force

142. Moon has less

    1) Gravitational force 2) light          3) air          4) gasses

143. Which of the following is not the management category of roads in India?

    1) National Highways 2) State Highways      3) Border Roads      4) District Highways

144. Which organization Construct and Manages the Border Road?

    1) Border Roads Development Board          2) National Highway Authority of India

    3) State Government where Border lies          4) Defence Ministry

145. Who established Mughal Empire in India?

    1) Akbar          2) Babar          3) Shahjahan          4) Aurangzeb

146. How many numbers of Red Balls are in Snooker?

    1) 13          2) 15          3) 17          4) 20

147. "Magnus Carlsen" is a player of which among the following sports / game?

    1) Cricket          2) Carrom          3) Chess          4) Tennis

148. In which year, sikkim become a part of Inida.

    1) 1972          2) 1975          3) 1977          4) 1980

149. The National Human Rights Commission is formed in the year.

    1) 1990          2) 1993          3) 1995          4) 1997

150. The secretary-General of UNO is Appointed by the ........

    1) World Bank          2) Trusteeship Coucil      3) Security Council    4) General Assembly

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