

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



**ENTRANCE EXAMINATION - IX**  
**DEFENCE CAREER ACADEMY,**  
**CHH. SAMBHAGJINAGAR**

**As an ISO 9001 : 2008 - Certified**

**SET  
A**

**ENT : 2024-25**

**Sr. No.**

**TIME : 2.00 Hrs.**

**MAXIMUM MARKS : 100**

**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 100 items (Questions). Each item comprises four responses (Answers). 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.

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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.
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 100 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**

1. The mid Value of a class interval is called its
 

a) class limit	b) Width	c) class mark	d) Range
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2. The perimeter of a circle having area 154 Sq. cm is
 

a) 22 cm	b) 44 cm	c) 88 cm	d) 66 cm
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3. The additive identity for integer is
 

a) 0	b) 1	c) - 1	d) Does not exist
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4. The Value of  $(125)^{\frac{1}{3}}$ 

a) $\frac{1}{3}$	b) $\frac{1}{5}$	c) 3	d) 5
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5. Associative property of multiplication of integer
 

a) Exist	b) Does not exist	c) Holds without 0	d) None of these
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6. 72% of 25 student are good in math's. How many are not good in mathematics
 

a) 18	b) 7	c) 15	d) 9
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7. If ABC is an equilateral triangle of side a, Then its area is equal to
 

a) $\frac{\sqrt{3}}{4}a^2$	b) $\frac{\sqrt{3}}{2}a$	c) $\sqrt{3}a$	d) $\frac{\sqrt{3}}{5}a$
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8. If angle A and angle C are two opposite. Angle of a parallelogram, Then
 

a) angle A > angle C	b) angle A = angle C	c) angle A < angle C	d) None of these
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9. The length of the diagonal of a rhombus are 16 cm and 12 cm respective find the length of each of its sides.
 

a) 30 cm	b) 10 cm	c) 20 cm	d) 28 cm
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10. If the mode of a distribution is 12 and the mean is 3. Then the median is
 

a) 8	b) 36	c) 4	d) 6
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11. If the mean of the following data is 8 then find the value of x. 2, 4, 8, 6, x, 5
 

a) 17	b) 23	c) 48	d) 25
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12. Which least number should be subtracted from 108245 So as to get a perfect Square?
 

a) 3	b) 4	c) 5	d) 6
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13. The smallest natural number by which 1296 must be divided to get a perfect Cube is
 

a) 16	b) 6	c) 60	d) 26
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14. A Sum amount of ₹.4,410 after two year at 5% compound interest per annum. What is the principal.
 

a) ₹. 8,000	b) ₹. 4,100	c) ₹. 4,000	d) ₹. 4,200
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15. I purchased 1 dozen pencils at the rate of 5 paise per dozen Pencil. For how much should I shell a pencil to make 20% Profit.
 

a) 4 paise	b) 10 paise	c) 6 paise	d) 8 paise
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16. What will you get when you subtract  $3x - 4y - 7z$  from the sum of  $x - 3y + 2z$  and  $-4x + 9y - 11z$ ?
 

a) $-6x + 10y - 2z$	b) $6x + 10y - 2z$	c) $-6x - 10y - 2z$	d) $-6x + 10y + 2z$
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17. Find the area of a rhombus having Perimeter 80 cm and one diagonal 24 Sq.cm
 

a) 354 Sq. cm	b) 364 Sq. cm	c) 384 Sq. cm	d) 480 sq. cm
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18. What is the value of  $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$  ?
 

a) $\frac{1}{29}$	b) $\frac{1}{9}$	c) $\frac{1}{5}$	d) 29
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36. A certain sum of money amount to  $\frac{5}{4}$  of itself in 5 year. Find the rate percent per annum.  
 a) 2.3%      b) 4%      c) 5%      d) 3%

37. The ratio of number of boys and girls in a school is 4:3. If there are 480 boys in the school, Find the number of girls in the school.  
 a) 360      b) 336      c) 300      d) 367

38. The ratio of Two number is 3:8 and their difference is 115. What is the largest number.  
 a) 188      b) 186      c) 184      d) 200

39.  $\frac{1}{35}$  is what part of  $\frac{2}{7}$ ?  
 a)  $\frac{1}{10}$       b)  $\frac{3}{10}$       c)  $\frac{1}{5}$       d) 10

40. If  $a:b = 2:3$  and  $b:c = 4:5$ . The ratio  $a:b:c$  is equal to  
 a) 4:6:5      b) 12:8:15      c) 8:12:15      d) 2:3:4

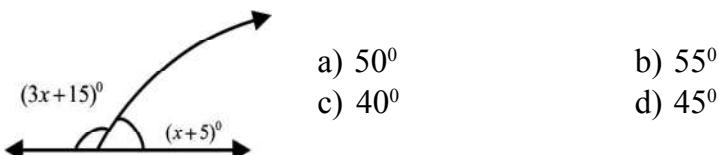
41. Find the Value of  $\frac{3a(a-2b)}{5a(\frac{2a}{b}-a)}$ , When  $a = 3$  and  $b = 2$   
 a)  $\frac{-3}{2}$       b)  $\frac{-3}{5}$       c)  $\frac{-4}{3}$       d)  $\frac{-2}{3}$

42. If  $a = 4$ ,  $b = 5$ ,  $c = -2$ , Then find the Value of  $\frac{2a+3b-4c}{8a+9b-10c}$   
 a)  $\frac{97}{31}$       b)  $\frac{31}{33}$       c)  $\frac{33}{31}$       d)  $\frac{31}{97}$

43. In School there are 1200 Student. If the percentage of boys in a school is 60% then find the number of girls.  
 a) 500      b) 480      c) 280      d) 300

44. Radha earn 22% of her investment. If she earns ₹ 187, Then how much did she invest  
 a) ₹ 900      b) ₹ 750      c) ₹ 850      d) ₹ 800

45. In the given figure, find  $x$



\* **Identify the correct Article:**

46. I meditate for \_\_\_ hour daily. Which article will be suitable to fill this blank? –  
 a) A      b) An      c) The      d) None of the above

47. Football is \_\_\_ most popular sport in the world. Which article will be suitable to fill this blank? –  
 a) A      b) An      c) The      d) None of the above

48. We should read \_\_\_ Bhagavad Gita. Which article will be suitable to fill this blank? –  
 a) A      b) An      c) The      d) None of the above

49. My mother says that we should have faith in God. Here 'faith' is –  
 a) an abstract noun      b) a proper noun      c) a common noun      d) a collective noun

50. 'Knowledge' is the example of –  
 a) abstract noun      b) proper noun      c) common noun      d) collective noun

51. Temple, mosque and church are the examples of –  
 a) abstract noun      b) proper noun      c) common noun      d) collective noun

52. Which noun below is a material noun? –  
 a) Gold      b) fruit      c) river      d) film

53. Which noun below is a collective noun? –  
 a) pack      b) dog      c) deer      d) lion

\* **Identify the correct synonym for underlined word:**

54. My mother is cooking delicious food items. Here the underlined word can be replaced by –  
 a) bland      b) insipid      c) tasty      d) none

55. Let's begin the task. Here the underlined word can be replaced by –  
 a) stop      b) cease      c) start      d) none

56. She picked up the chain. Here the underlined word can be replaced by –  
 a) dropped      b) gave up      c) grabbed      d) none

57. Introduce yourself in brief. Here the underlined word can be replaced by –  
 a) short      b) direct      c) lengthy      d) none

58. She looked at the dog mutely. Here the underlined word can be replaced by –  
 a) loudly      b) noisily      c) silently      d) none

\* **Choose correct question Tag :-**

59. I am late again,  
 a) amn't I?      b) aren't I?      c) am I?

60. The weather won't improve if we sit here and look out the window,  
 a) will we?      b) will it?      c) won't it?

\* **Read the following passage carefully:**

Our ancestors had great difficulty in getting books. Now, our difficulty is what to read. There are books and books but our hours of reading are very few. Therefore, choice becomes essential. We should be very careful about what we read. There are books which poison our lives by suggesting evils. We should keep them at arm's length.

We should read only those books which have stood the test of time. Such books are our great classics like the Ramayana and the Gita. They contain the wisdom of our sages and saints. They have appealed mankind from generation to generation. Reading of such books has ennobling influence on our mind and character. It gives us spiritual enjoyment. These books give us instruction with entertainment. They represent our ancient culture. They set before us high ideals to follow. They are our best friends, best guides and the best treasure.

\* **Now answer the following questions by choosing correct options:**

61. We should be selective because  
 a) there is a great number of books available to us      b) there is scarcity of books  
 c) there are only bad books in the market      d) none of the above

62. We should avoid those books which  
 a) cost high price      b) come in paperback  
 c) corrupt our lives by suggesting evils      d) come in more than one volume.

63. The books which have stood the test of time are called....  
 a) great books      b) rare books      c) biographies      d) classics.

64. What is /are special quality/qualities of classics?

a) They affect our mind in a good way      b) They teach us something great and also entertain us.  
 c) They help us in our spiritual growth      d) All the above.

65. An expression in the passage which means 'good effect' is

a) Spiritual enjoyment      b) Ennobling influence  
 c) high ideals      d) Very careful.

66. 4, 9, 20, 43, ?

a) 90      b) 84      c) 96      d) 95

67. Find out the wrong term in the series : 1, 2, 6, 21, 84, 445, 2676

a) 2      b) 6      c) 21      d) 84

68. Find out the wrong term in the series : 3, 6, 9, 22.5, 67.5, 236.25, 945

a) 6      b) 9      c) 22.5      d) 67.5

69. Find the odd man out

a) 32 : 15      b) 86 : 42      c) 56 : 26      d) 74 : 36

70. Find the odd man out

a) Microphone      b) Microscope      c) Spectacles      d) Telescopes

71. Which is the most reactive metal?

a) Sodium      b) Calcium      c) Iron      d) Potassium

72. Identify the metal which is stored submerged in kerosene.

a) Iron      b) Sodium      c) Aluminium      d) Sulphur

73. The good conductor of electricity is

a) Graphite      b) Diamond      c) Phosphorus      d) Carborundum

74. Which one of the following is the purest form of carbon?

a) Charcoal      b) Coke      c) Fullerene      d) Carbon black

75. Which of the following elements is a metalloid?

a) Lead      b) Tin      c) Silicon      d) Barium

76. Robert Hooke used the term Cell in the year

a) 1645      b) 1655      c) 1665      d) 1675

77. An ostrich egg is a

a) Tissue      b) Organ System      c) cell      d) Organ

78. Cell wall is the characteristic feature of

a) Animals      b) Plants      c) viruses      d) None

79. Which of the following is not found in animal cell ?

a) Nucleus      b) Cell wall      c) Mitochondria      d) Plasma membrane

80. The thread-like structures present in the nucleus are

a) Nucleolus      b) Chromosomes      c) Genes      d) Ribosomes

81. Which city plans India's first retail Municipal Green Bond for Solar Plant  
 a) Indore                    b) Chandigarh                    c) Ahmedabad                    d) Kochi

82. Uttarakhand government appoints whom as its Brand Ambassador  
 a) Prasson Joshi            b) Kumar Manglam Birla            c) Amitabh Bachchan            d) Neeraj Chopra

83. Recently IAS officer Preeti Sudan has been appointed as a member of which organization  
 a) NBFC                    b) SEBI                            c) CBSE                            d) UPSC

84. What is the length of Tennis court  
 a) 78 Feet                    b) 71 Feet                            c) 50 Feet                            d) 80 Feet

85. Which sport was played in the movie Lagaan  
 a) Cricket                    b) Football                            c) Hockey                            d) Boxing

86. First Indian in British Parliament was  
 a) Dadabhai Naroji            b) Bal Gangadhar Tilak            c) Rajendra Prasad                    d) Mahatma Gandhi

87. First Param Vir Chakra winner was  
 a) Somnath Sharma            b) Dalbir Singh Suhag            c) Sam Manekshaw                    d) K.M. Cariaapa

88. Capital of Mauritius is  
 a) Warsaw                    b) Port Louis                            c) Pretoria                            d) Havana

89. Who founded YouTube along with Steve Chen and Jawed Karim  
 a) Jack Dorsey                    b) Pierre Omidyar                    c) Chad Hurley                            d) Jerry Yang

90. Headquarter of UNICEF is located in  
 a) New York                    b) Washington                            c) Nairobi                            d) Paris

91. .... were composed on Freedom struggle of 1857.  
 a) Music                            b) Songs                            c) Powada                                    d) Bhajans

92. In 1802, Peshwa ..... signed the subsidiary alliance with the British.  
 a) Bajirao I                    b) Bajirao II                            c) Peshwa Madhavrao                    d) Peshwa NanaSaheb

93. In 1848, Lord Dalhousie rejected the adoption policy and annexed the state of .....  
 a) Pune                            b) Kolhapur                            c) Satara                                    d) Sangali

94. Bahadur Shah who led the revolt was imprisoned at .....  
 a) Nepal                            b) Rangoon                            c) Sri Lanka                                    d) Andaman

95. Gandhiji visited Chaparan .....  
 a) to see the plight of Indigo planters                    b) to see the progress of Indigo plantation  
 c) to see the management of Indigo plantation                    d) None of the above

96. Which revolt was popular in Maharashtra in 1940?  
 a) The Koli                            b) The Bastar                            c) The Warli                                    d) Birsa Movement

97. The farmers started the no tax movement in the district of .....  
 a) Gorakhpur                            b) Kheda                                    c) Solapur                                    d) Amravati

98. Who set up Asiatic Society of Bengal?  
 a) William Jones                            b) Henry Thomas Colebrook  
 c) Nathaniel    d) All of these

99. The idea of widow remarriage was advocated by .....  
 a) Dayanand Saraswati                    b) Jyotirao Phule                            c) Periyar    d) Pandita Ramabai

100. The Satyashodhak Samaj association was founded by .....  
 a) Mumtaz Ali                            b) Periyar                                    c) Jyotirao Phule                                    d) B.R. Ambedkar