

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



**ENTRANCE EXAMINATION - IX**  
**DEFENCE CAREER ACADEMY,**  
**AURANGABAD.**

As an ISO 9001 : 2008 - Certified

**SET**  
**1**

ENT : 2023

TIME : 2.00 Hrs.

Sr. No.

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**

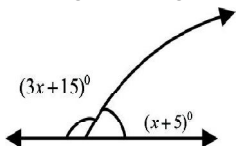
11. The Answer Sheet contains 100 counts, each subdivided in four { (a) (b) (c) (d)} subdivisions for indicating the correct choice of answers. After having selected the correct choice from the test Booklet, you should indicate that choice by completely blackening the respective circle, DO NOT merely 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
2. The perimeter of a circle having area 154 Sq. cm is
  - a) 22 cm
  - b) 44 cm
  - c) 88 cm
  - d) 66 cm
3. The additive identity for integer is
  - a) 0
  - b) 1
  - c)  $-1$
  - d) Does not exist
4. The Value of  $(125)^{\frac{1}{3}}$ 
  - a)  $\frac{1}{3}$
  - b)  $\frac{1}{5}$
  - c) 3
  - d) 5
5. Associative property of multiplication of integer
  - a) Exist
  - b) Does not exist
  - c) Holds without 0
  - d) None of these
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
7. If ABC is an equilateral triangle of side a, Then its altitude is equal to
  - a)  $\frac{\sqrt{3}}{4}a$
  - b)  $\frac{\sqrt{3}}{2}a$
  - c)  $\sqrt{3}a$
  - d)  $\frac{\sqrt{3}}{5}a$
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
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
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
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
12. Which least number should be subtracted from 108245 So as to get a perfect Square?
  - a) 3
  - b) 4
  - c) 5
  - d) 6
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
14. A Sum amount to C 4,410 after two year at 5% compound interest per annum. What is the principal.
  - a) C 8,000
  - b) C 4,100
  - c) C 4,000
  - d) C 4,200
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
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)  $-6x + 10y + 2z$
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
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

19. What is the number of possible outcomes in throwing two dice Simultaneously?  
 a) 6                                      b) 12                                      c) 36                                      d) 4
20. Two coins are tossed simultaneously. The probability of getting at most one head is  
 a)  $\frac{1}{2}$                                       b)  $\frac{3}{4}$                                       c)  $\frac{2}{3}$                                       d) 1
21. If 15 worker can build a wall in 48 hr. How many worker will be worker will be required to do the same work in 30 hours.  
 a) 15                                      b) 14                                      c) 24                                      d) 30
22. If  $\frac{a}{b} - \frac{b}{a} = 2$  then  $a^3 - b^3 =$   
 a) 1                                      b) -1                                      c) 0                                      d) 2
23. At what distance does the point (12, 5) lie from the origin?  
 a) 17                                      b) 7                                      c) 13                                      d) 60
24. In a triangle, if two of the angle are complementary then the measure of the third angle is  
 a)  $40^\circ$                                       b)  $45^\circ$                                       c)  $75^\circ$                                       d)  $90^\circ$
25. If the exterior angle of a triangle is  $60^\circ$  and the interior opposite angle are in the ratio 1:3 angle are in then the angle of the triangle are  
 a)  $15^\circ, 45^\circ, 110^\circ$                       b)  $120^\circ, 10^\circ, 50^\circ$                       c)  $120^\circ, 45^\circ, 15^\circ$                       d)  $60^\circ, 90^\circ, 30^\circ$
26. What is the alternate name of a pie chart  
 a) Pietograph                              b) Histogram                              c) Circle chart                              d) None of these
27. Line  $l$  is perpendicular to line  $m$  and  $m$  is perpendicular to line  $n$ . Then the lines  $l$  and  $n$  are  
 a) parallel to each other                      b) Intersecting  
 c) Perpendicular to each other                      d) None of the above
28. If a transversal intersect two parallel lines. Then the consecutive interior angle on the same side of the transversal  
 a) Complementary                              b) Supplementary                              c) Equal                                      d) None of these
29. If by selling, a bed sheet for C 75 a man losses 4% for what amount should he sell it, so as to gain 20%  
 a) C 90                                      b) C 75.95                                      c) C 95.25                                      d) C 93.75
30. If the cost price of 15 table be equal to selling price of 20 tables. find the loss %  
 a) 30                                      b) 28                                      c) 25                                      d) 20
31. A man sold his cow for C 7920 and gained 10%. What will be the cost price of cow  
 a) C 8000                                      b) C 7200                                      c) C 8500                                      d) C 9000
32. Find the average of 9,11,13, 15, and 17  
 a) 13                                      b) 15                                      c) 12                                      d) 14
33. Find the average of 2 kg, 200 g and 500 g?  
 a) 800 g                                      b) 200 g                                      c) 900 g                                      d) 500 g
34. 30 Pens and 75 Pencils were purchase for C 510. If the average price of a pencil was C 2.00. Find the average price of a pen.  
 a) C 15                                      b) C 12                                      c) C 16                                      d) C 18
35. If C 1 becomes C 9 in 60 year at Simple Interest. Find the rate percent per annum.  
 a)  $3\frac{1}{3}\%$                                       b)  $33\frac{1}{3}\%$                                       c)  $3\frac{3}{4}\%$                                       d)  $13\frac{1}{3}\%$

36. A certain sum of money amount to  $\frac{5}{4}$  of itself in 5 year. Find the rate percent per annume.  
 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 or 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  $\frac{3a(a-2b)}{5a(2a-a)}$ , 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 C 187, Then how much did she invest  
 a) C 900                      b) C 750                      c) C 850                      d) C 800
45. In the given figure, find x  
  
 a) 50°                      b) 55°  
 c) 40°                      d) 45°

**\*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 on 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) silver                      b) food                      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
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.



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. Cariappa
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 Nanaasaheb
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