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

ENT : 2016 TIME ALLOWED : 1.30 HOURS SR. NO.

TOTAL MARKS : 100

QUESTION - BOOKLET

GENERAL INSTRUCTIONS

- * Read instructions given below carefully for solving this question paper.
- 1. This question paper has 90 questions. Each question carries 1 mark.
- 2. Last two descriptive questions are compulsory. They carry 5 marks each.
- 3. There is a separate answer-sheet to write the answers. Each question has four options. Options are ABCD out of the four any one of the options is the correct answer. Shade the correct answer in the answer-sheet.

Example : If the correct answer for Q. NO 6. is **B**, then record your answer as follows:

Question No. 6



4. Answer recorded in any other from will not be considered. Such answers will be marked 'zero'.

Example :



- 5. Answer should be written using a pencil only. Blue or black ball pen or ink-pen will not be accessed.
- 6. Answers once marked cannot be changed or rewritten.
- 7. Any kind of cancellation or answers recorded marked in more than one circle will not be considered.
- 8. The exam has limited time, in case you are not able to solve a question, kindly solve the next question. If time permits you can try to solve the unsolved questions.
- 9. Essay must be written at the back portion of the Answer paper.
- 10. Result of this examination will be displayed on the Notice Board.
- 11. Do not write or mark anything on the question paper.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO DEFENCE CAREER ACADEMY DCA Entrance Examination - 2016 P.T.O.

Q. 1 to 10 : Read the following passage carefully and answer the questions given at the end of it by choosing correct alternative answer.

PASSAGE - I

The last half of my life was spent at one of the painful epochs of human history, during which the world seemed to be getting worse; where past victories which had seemed to be definitive have turned out to only temporary. When I was young, victorian optimism was taken for granted. It was thought that freedom and prosperity would spread gradually throughout the world through an orderly process, and it was hoped that crueltly, tyranny, and injustice would continually diminish. Hardly anyone was haunted by the fear of great wars. Hardly anyone thought of the nineteenth century as a brief interlude between past and future barbarism.

- 1. The author felt sad about the latter part of his life because
 - a) He was nistalgic about his childhood
 - b) The world had not become prosperous
 - c) The author had not won any further victories
 - d) The world was painfully disturbed during that period of time
- 2. The victories of the past
 - a) Brought permanent peace and prosperity
 - b) Ended cruelty, tyranny and injustice
 - c) Proved to be temporary events
 - d) Filled men with a sense of pessimism
- 3. The word 'definitive' used in the passage means :
 - a) Defined
 - b) Final
 - c) Temporary
 - d) Incomplete
- 4. During the Victorian age people believed that:
 - a) Strife would increase
 - b) There would be unlimited freedom
 - c) Wars would be fought on a bigger scale
 - d) Peace would prevail and happiness would engulf the whole world
- 5. "A brief interlude between past and future barbarism" can be interpreted as:
 - a) A short period of time between past and future acts of savagery
 - b) A short interlude between two great events
 - c) An interval between cruel wars
 - d) A dramatic performance during wars

DEFENCE CAREER ACADEMY

Entrance Examination - 2016

P.T.O.

PASSAGE - II

Work expands so as to fill the time available for its completion. The general recognition of this fact is shown in the proverbial phrase, 'It is the busiest man who has time to spare. 'Thus, an elderly lady at leisure can spend the entire day writing a postcard to her niece. An hour will be spent in finding the postcard, another hunting for spectacles, half an hour to search for the address, an hour and a quarter in composition and twenty minutes in deciding whether or not to take an umbrealla when going to the pillar box in the street. The total effort that would occupy a busy man for three minutes, all told, may in this fashion leave another person completely exhausted after a day of doubt, anxiety and toil.

- 6. What happens when the time to be spent on some work increases?
 - a) The work is done smoothly.
 - b) The work is done leisurely.

a) A busy man

- c) The work consumes all the time.
- d) The work needs additional time.
- 7. Explain the sentence: 'Work expands so as to fill the time available for its completion'
 - a) The more work there is to be done, the more the time needed.
 - b) Whatever time is available for a given amount of work, all of it will be used.
 - c) If you have more time, you can do more work.
 - d) If you have some important work to do, you should have some additional time.

b) A man of leisure

- 8. Who is the preson likely to take more time to do work?
- c) An elderly person d) An exhaustd person What is the total time spent by the elderly lady in writing a postcard? 9. a) Three minutes b) Four hours and five minutes c) Four hours and five minutes d) A full day 10. What does the expression 'Pillar box' stand for? a) A box attached to the pillar b) A box in the pillar c) Box office d) A pillar-type post box * Instruction : Fill in each of the numbered blanks in the following passage with the most suitable word out of the alternatives (below the passage) given against each number. The skin's words enemy is the sun. If you aviod 11....... you can12....... to prolong appearance of certain lines and wrinkles that is all about. 11. a) extra exposure to the sun b) much d) excessive c) additional 12. a) aid b) help c) assist d) make 13. a) handsomeness of the b) luxury c) beauty d) suppleness c) shall d) will 14. a) can b) may b) dampness d) moisture 15. a) water c) wetness DEFENCE CAREER ACADEMY 2 **Entrance Examination - 2016**

Instruction : Against each key word are given some suggested meanings. Choose the word or phrase which is nearest in meaning to the key word.

16.	Histrionic			
	a) hypersensitive		b) overdramatic	
	c) historically importan	t	d) inactive	
17.	Fiasco			
	a) festival	b) failure	c) ridiculous plan	d) misfortune
18.	Amoral			
	a) loving	b) immoral	c) uninvolved	d) highly ethical
19.	Virile			
	a) athletic	b) pompous	c) manly	d) boastful
20.	Ameliorate			
	a) to appease	b) to make excuses	c) to humiliate	d) to improve
Inst	ruction :Pick out the wo	ord opposite or nearly s	o in the meaning of	the given words.
21.	Genuine			
	a) rotten	b) bogus	c) unsound	d) impure
22.	Militant			
	a) religious	b) spiritual	c) combative	d) pacifist
23.	Unruly			
	a) curious	b) obedient	c) intelligent	d) indifferent
24.	Ruthless			
	a) militant	b) might	c) majestic	d) merciful
25.	Erudite			
	a) ignorant	b) unknown	c) illiterate	d) unfamiliar
*	Instruction : In the se	ction 5 sentence are giv	en. Each sentence ha	s three parts. Read each
	sentence to find out whether there is an error. If you find and one of the parts (a, b, c), then			
	the number of that pa which stands for "No	rt is your answer. If a servor?	sentence has no errol	r, then your answer is'd'

26. My answer (a) / is different (b) / than yours. (c) / No error (d).

b) -5

- The chairman welcomed (a) / all the guests and (b) / gave an outline of the activities performing 27. by the company. (c)/ No error (d).
- 28. Why did people (a) / so much annoyed even at little provocation (b) / is a matter of investigation (c) / No error (d)
- 29. The success of our efforts depend upon the (a) / number of people who (b)/ actually use the new methods. (c) / No error (d)
- 30. You should inform (a) / your superiors about all those events which is (b) / directly related to your work. (c) / No error (d)
- 31. Value of $-\sqrt{25}$
 - a) 5

c) <u>+</u> 5

d) $-\sqrt{5}$

DEFENCE CAREER ACADEMY 3 Entrance Examination - 2016

P.T.O.

32.	The non - terminating recurring form of the number 0.0002 is				
	a) 2.00	b) $0.2\overline{0}$	c) $0.0002\overline{0}$	d) $0.0002\overline{0}$	
33.	3. Area of a parallelogram =				
	a) Sum of parallel sides	\times hight	b) base \times height		
	c) side ²		d) height × height		
34.	$(a+b)^3 = [a^3 + b^3 + 3ab]$	(a+b)]			
	a) True	b) False	c) a & b both	d) None of these	
35.	Area of triangle =				
	a) base \times height		b) 2 base \times height		
	c) $\frac{1}{2} \times \text{base} \times \text{height}$		d) base + $\frac{1}{2}$ height		
36.	$\sqrt[3]{1} = ?$				
	a) 0	b) 3	c) 3 × 1	d) 1	
37.	Area of a trapezium $= \dots$				
	a) $\frac{1}{2} \times \text{base} \times \text{height}$				
	b) $\frac{1}{2} \times$ sum of lengths of parallel sides \times height				
	c) $\frac{1}{2}$ × product of lengths of parallel sides × height				
	d) $\frac{1}{2}$ × product of lengths of parallel sides + height				
38.	Area of the circle =				
	a) 2 π γ	b) $\pi \gamma^2$	c) 2 $\pi \gamma^2$	d) $2\pi^2\gamma$	
39.	$(a+b)^2 = \dots +$	$2ab + b^2$			
	a) $(ab)^2$	b) a ²	c) 2a ² b	d) b ²	
40.	$(a-b)^2 = a^2 - 2ab + \dots$				
	a) b ²	b) a ²	c) ab	d) ab ²	
41.	$(a + b + c)^2 = \dots$				
	a) $a^2 + b^2 + c^2 + 2ab + 2$	bc + 2ca	b) $a + b + c + 2ab^2 + b^2$	$2bc^2 + 2ca^2$	
	c) $a^2 + b^2 + c + 2ab + 2bc + 2ca$ d) $a^2 + b^2 + c^2 + 2ab^2 + 2bc^2 + 2b$		$+ 2bc^2 + 2ca^2$		
42.	$\left[(4)^2 \right]^3 = ?$				
	a) 4 ⁵	b) 4 ⁶	c) 4 ¹	d) 4 ⁻¹	
43.	$(a + b)^3 = \dots$				
	a) $a^3 + b^3 + 2ab (a + b)$ b) $a^3 + b^3 + 3ab (a + b)$				
	c) $a^2 + b^2 + 3ab(a + b)$		d) $a^3 + b^3 + 3ab (a + b)^2$		
*	DEFENCE CAREE	R ACADEMY 4	Entrance Exam	ination - 2016 P.T.O.	

44.	What would be value of	x if x + 1 = 6.				
	a) 3	b) 4	c) 5	d) 6		
45.	A sack contains 20 kg of rice. How many such sacks are required to fill in 460 kg. of rice.					
	a) 230	b) 23	c) 46	d) 64		
46.	3\sqrt{343} =					
	a) 49	b) 36	c) 12	d) 7		
47.	Compound Interest =					
	a) Amount + Principal	a) Amount + Principal b) Amount × Principal				
	c) Amount – Principal		d) Amount ÷ Principa	al		
48.	Discount = Marked price	ce + selling price.				
	a) True	b) False	c) a & b both	d) None of these		
49.	Volume of the cylinder	=				
	a) πγh	b) $\pi\gamma h^2$	c) $\pi^2 \gamma h$	d) $\pi\gamma^2 h$		
50.	50. P is a point on the circle with centre O. l (OP) = 3.5. Which of the following segments of g					
	length can be the chord	of the circle?				
F 1	a) 8 cm	b) 5 cm	c) 8.5 cm	d) 9 cm		
51.	Iotal surface area of a c	y linder =				
	a) $2\pi\gamma (h + \gamma)^2$	b) $2\pi\gamma$ (h + γ)	c) $2\pi\gamma$ (h+ γ) ³	d) $2\pi\gamma^2$ (h+ γ)		
52.	Rajendra purchased a P	endrive for Rs. 1000 and	sold for Rs. 1250 wha	t his profit percent ?		
	a) 20 %	b) 25 %	c) 45 %	d) 80 %		
53.	53. Volume of cone = $\frac{1}{3} \pi \gamma^2 h$					
	a) True	b) False	c) a & b both	d) None of these		
54.	Total surface area of a cone = $\pi \gamma (1 + \gamma)$					
	a) True	b) False	c) Correct	d) None of these		
55.	Volume of sphere =					
	a) $\frac{4}{3}\pi\gamma^2$	b) $\frac{4}{3}\pi\gamma^3$	c) $\frac{4}{3}\pi\gamma$	d) $\frac{4}{3}\pi\gamma^4$		
56. The perpendicualr line drawn through the midpoint of the side of a triangle is called triangle				riangle is called of the		
	a) angle bisector	b) perpendicualr bisecto	or c) altitude	d) median		
57.	$15\text{m}^3 \div 5 \text{ m}$					
	a) 3m ²	b) 3m	c) 3m ³	d) 3		
58.	A cuboid has	edges.				
	a) 3	b) 6	c) 9	d) 12		
*	DEFENCE CAREE	R ACADEMY 5	Entrance Exam	ination - 2016 P.T.O.		

59.	$(-38988)y^2 \div (-114)$			
	a) -342y ²	b) -343y ²	c) 342y ³	d) \pm 342y ³
60.	How many litres of war it in one second?	ter will flow through a tap	in two and half hours,	if 25 ml water flows through
	a) 450	b) 4500	c) 225	d) 3750
61.	Biodiversity is importa	nt for the of living	things.	
	a) existence	b) decomposition	c) protection	d) growth
62.	The newton is the unit	of		
	a) Velocity	b) Pressure	c) Mass	d) Force
63.	is natural fi	bre.		
	a) Nylon	b) Rayon	c) Cotton	d) Polythene
64.	metal exist i	n the liquid state.		
	a) Zinc	b) Silver	c) Bromine	d) Mercury
65.	is least p	olluting fuel for vehicle		
	a) CNG	b) Petrol	c) Diesel	d) Coat
66.	Dead vegetation Conve	ert into coal by		
	a) Sublimation	b) Decomposition	c) Carbonisation	d) Vapourisation
67.	The process of ensure continuity of life on the earth			
	a) photosynthesis		b) Reproduction	
	c) Respiration		d) excretion	
68.	The unit of loudness of	f sound is		
	a) Joule	b) Erg	c) Decibel (dB)	d) Newton
69.	is a good	d conductor.		
	a) Wood	b) Rubber	c) Plastic	d) Copper
70.	Plants take	from the soil.		
	a) Mineral	b) CO ₂	c) Sunlight	d) O ₂
71.	Malaria caused by			
	a) Virus	b) protozoa	c) Bacteria	d) Fungi
72.	is a nitrog	en fixing algae.		
	a) Yeast	b) Volvox	c) Nostoc	d) Rhizobium
73.	is a main co	omponent of coal.		
	a) Nitrogen	b) Oxygen	c) Hydrogen	d) Carbon
74.	is a synthe	tic fibre.		
	a) Cotton	b) Wool	c) Silk	d) Polyester
*	DEFENCE CAREE	R ACADEMY 6	Entrance Exam	nination - 2016 P.T.O.

75. metal is constituent of haemoglobin.

- a) Potassium b) Zinc c) Sodium d) Iron
- Direction : Each of the following problems, contains four Problem Figures marked A,B,C, and D and five Answer Figures marked (a), (b), (c), (d). Select a figure from amongst the Answer Figure which will continue the same series as given in the Problem figures.



Direction : In the following question find the correct alternative to replace the question mark:

81.	Question figures :	$\begin{array}{c} \Delta \\ 0 \\ 0 \\ 0 \\ \end{array}$?		
	Answer figures :	$ \begin{array}{c c} \Box \\ \Box \\ \bullet \\$	$ \begin{array}{c} \Box \\ O \\ \Delta \end{array} \\ c \end{array} $			
82.	Anuj started walking por right and then towards t	sitioning his back towar he left again. In which o	ds the sun. After sometim direction is he going now	ne, he turned left, then turned		
	a) North or South	b) East or West	c) North or West	d) South or West		
83.	It was Monday on the fi	irst day of the year 1998	8. What day was on 8th J	January 1998?		
	a) Tuesday	b) Wednesday	c) Thursday	d) Monday		
Dire	Direction : Qs. 84 and 85 : In a month, a sports competition started on the first Tuesday and ended on the fourth Tuesday, the 25th. Based on this data, answer the questions below :					
84.	When did the sports con	mpetition begin ?				
	a) 5	b) 3	c) 2	d) 4		
85.	What was the day on the	e 13th?				
	a) Thursday	b) Saturday	c) Wednesday	d) Friday		
Dire	Direction : Identify the wrong term in the given series:					
86.	(69-96) (48-84) (37-7	73) (26-63)				
	a) (37-73)	b) (69-96)	c) (26 - 63)	d) (15-51)		
Direction : If the above alphabets are arranged in an ascending or descending order, which will be the middle ?						
87.	B, D, G, K, P, V, ?					
	a) Z	b) A	c) B	d) C		
Direction : Find the missing term in the series :						
88.	LLLKKK, LLKKK	KL, LLKKLL, ?				
	a) LLLKKK	b) KKKLLL	c) KKLLKL	d) KLLLKK		
×	DEFENCE CAREE	R ACADEMY	B Entrance Exam	nination - 2016 P.T.O.		

Direction : Knowledge of blood relations.

- 89. A family has a man, his wife, their four sons and their wives. The family of every son also has 3 sons and one daughter. Find out the total number of male members in the whole family.
 - a) 4 b) 8 c) 12 d) 17
- 90. Pointing towards a boy, Veena said, "He is the son of my grandfather." How is that boy related to Veena?

	a) Uncle	b) Brother	c) Cousin	d) Data inadequate
*	Descriptive question	(Compulsory)		
[)	Write an essay on any	one of the following.		10 M
	a) Mobile Games : Affe	ecting children		
	b) My favourite Sport's	man		
		****	**	



P.T.O.