Armed Force Preparatory Institute

Admission Test

Year 2019 – (Nashik Centre)

A

TEST BOOKLET SERIES

Test Booklet

Serial No.: Series 2. Set A
Date: 26th May 2019

Maximum Marks: **100**
Time: **2 hrs.**

General Instructions

- **DO NOT OPEN THE BOOKLET UNLESS ASKED TO DO SO. IF FOUND DISOBEYING, YOUR CANDIDATURE WILL BE CANCELLED.**
- **CALCULATORS, MOBILE PHONE OR ANY ELECTRONIC DEVICE IS NOT PERMITTED INSIDE THE EXAMINATION HALL.** If caught possessing any of the aforementioned item, your candidature will be disqualified.
- Immediately after commencement of the examination, check for unprinted, torn or missing pages. If any discrepancy is found, please bring it to the notice of the invigilator and ask for replacement.
- Enter your correct roll number on the Answer sheet.
- Do not write anything in the booklet. You could be disqualified if found disobeying.
- The TEST BOOKLET contains 100 questions, each carrying ONE mark. THERE IS NO NEGATIVE MARKING SYSTEM. There are four choices to every question. Please select the correct response and record it in the answer sheet provided.
- ROUGH SHEETS will be provided separately, if required.

OMR Instructions

- BEFORE BEGINNING YOUR EXAMINATION, FILL YOUR PARTICULARS CLEARLY IN BLOCK LETTERS.
- RECORD THE ANSWER BOOKLET CODE CLEARLY IN THE DESIGNATED SPACE
- USE BALL POINT PEN ONLY (BLACK OR BLUE)
- Make sure that your answer sheet is SIGNED by the INVIGILATOR on duty.
- Observe the diagram alongside for the correct method of recording the answer in the OMR sheet.
- Make sure you record ONE response for each answer.
- DO NOT PUT ANY STRAY MARKS IN THE ANSWER SHEET.
- If in any case you record a wrong option please refer to the diagram beside to rectify the recording mistake. In the example alongside A was the wrong option which has been rectified to C.
- After COMPLETION of the EXAMINATION, PLEASE HAND OVER THE ANSWER SHEET AND QUESTION PAPER TO THE INVIGILATOR.
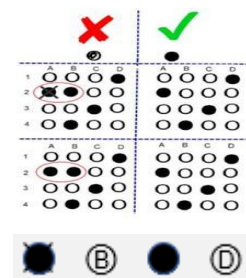
Directions (Q.1 - 5): Read the passage and answer the following questions.

It is said that once three old men set out on a journey together. One of them was bald, the second was a philosopher and the third was a barber. At nightfall they decided that each one of them should sit for watch, turn by turn. The barber was to keep watch first of all, the philosopher after that and the bald man last of all. So, the philosopher and the bald man went to sleep and the barber was on watch. For some time, he kept awake but, in the end, he felt tired of it and he thought of some diversion, as otherwise it was difficult for him to pass time. Then he took out the razor from his box and shaved the head of the philosopher. At the fixed time he woke up the philosopher and went to sleep. When the philosopher got up and felt his head all over, he was startled and said in surprise, "it was my turn but this wretched fellow has awakened the bald man".

Q-1. Why did the philosopher get up?

(a) He realised that his head was being shaved off

(b) It was his turn to keep watch

(c) He was awakened by the barber

(d) He had a bad dream

Q-2. Who went to sleep first?

(a) The Philosopher and the barber

(b) The barber and the bald man

(c) The bald man and the philosopher

(d) The barber

Q-3. Why did the barber shave off the head of the philosopher?

(a) The barber was jealous of the philosopher

(b) The barber wanted to pass his time

(c) The barber wanted the philosopher to keep watch

(d) The barber was feeling drowsy

Q-4. Which one of the following is the correct sequence decided upon the three to keep watch turn by turn?

(a) Barber-bald man-philosopher

(b) Bald man-philosopher-barber

(c) Barber-philosopher-bald man

(d) Bald man-barber-philosopher

Q-5. Which one of the following statements is not correct?

(a) All the three men decided to keep watch one by one

(b) The barber woke up the bald man

(c) The head of the philosopher was shaved off

(d) The philosopher was startled on feeling his head all over

Directions (Q. 6-8): in the following questions, the first and last parts of the sentence are numbered 1 and 6. The rest of the sentence is split into four parts and named P, Q, R and S. These four parts are not given in their proper order. Read the sentence and find out which of the combination is correct.

Q-6.1. In order to judge the inside of others, study your own (P) and though one has one prevailing passion (Q) for, men, in general are very much alike (R) yet their operations are very much the same (S) and another has another 6. and whatever engages or disgusts, pleases or offends you in others, will engage, disgust, please or offend others in you.

(a) QPSR (b) PQRS (c) RQPS (d) PRQS

Q-7.1. There are thousands of us ((P) former school and college friends ((Q) by some of our ((R) at the careers chosen ((S) who are surprised 6 and their success in these fields.

(a) SRQP (b) RQSP (c) PQSR (c) SPQR

Q-8.1. When you ponder over (P) that the only hope (Q) you will realize (R) of world peace lies (S) the question deeply 6. In the United Nations

(a) QRSP (b) PSQR (c) SQPR (d) RSPQ

Directions (Q.9-11): Choose the correct form of verb from the given choice:

Q-9. Each of the boys ……… intelligent (a) were (b) has (c) are (d) is

Q-10. The Governor with his secretary …….. landed. (a) has (b) have (c) are (d) were

Q-11. Ram and Shyam ……. here. (a) was (b) are (c) is (d) been

Directions (Q. 12 - 14) Choose the word opposite in meaning to the given word out of the given alternatives

Q-12. Zenith (a) heighted (b) nadir (c) tall (d) major

Q-13. Dejected (a) elated (b) down (c) disappointed (d) serious

Q-14. Haughty (a) proud (b) warm (c) humble (d) boisterous

Directions (Q. 15 - 17): Choose the correct word to complete the sentences from the given choice

Q-15. Neither of the girls got …… answers right. (a) these (b) there (c) his (d) their

Q-16. Halt! ……… goes there? (a) how (b) what (c) whom (d) who

Q-17. The cadets jumped …….. the wall. (a) of (b) off (c) into (d) in

Directions (Q. 18-20): Choose the correct synonym for the given words from the given alternatives

Q-18. Valour (a) fruitless (b) fatal (c) courage (d) fearful

Q-19. Obstinate (a) changing (b) alter (c) stubborn (d) dominant

Q-20. Zealous (a) enthusiastic (b) scared (c) modernistic (d) fortified

Q-21. In a reaction between zinc and hydrochloric acid, the changes accompanying a reaction are
(a) evolution of gas and heat
(b) evolution of steam
(c) formation of precipitate
(d) formation of dazzling white light

Q-22. Setting of cement is an example of
(a) precipitation reaction
(b) exothermic reaction
(c) endothermic
(d) physical change

Q-23. The chemical formula of lead sulphate is
(a) Pb_2SO_4
(b) $Pb(SO_4)_2$
(c) $PbSO_4$
(d) $Pb_2(SO_4)_3$

Q-24. The process of evaporation causes
(a) dryness
(b) cooling
(c) heating
(d) none of the above

Q-25. At high altitudes, the boiling point of liquids
(a) increases
(b) decreases
(c) remains the same
(d) none of the above

Q-26. During evaporation, particles of a liquid changes into vapour from
(a) from the surface
(b) from the bulk
(c) from the bottom
(d) from all over the liquid

Q-27. 14 elements after actinium are called
(a) lanthanides
(b) actinides
(c) d-block elements
(d) p-block elements

Q-28. Soaps are formed by saponification of
(a) alcohols
(b) glycosides
(c) simple esters
(d) carboxylic acids

Q-29. Which instrument is used for measuring electric potential?
(a) ammeter
(b) galvanometer
(c) voltmeter
(d) potentiometer

Q-30. The change in the focal length of human eye is caused due to
(a) ciliary muscles
(b) pupil
(c) cornea
(d) iris

Q-31. Lens which is thin at center and thick at edges is
(a) convex lens
(b) biconvex lens
(c) both A and B
(d) concave lens

Q-32.Which of the following is the odd one out?
(a) petroleum
(b) hydro electricity
(c) coal
(d) CNG

Q-33.Strength of magnetic field is defined as
(a) no. of field lines passing through surface
(b) electric field lines passing the loop
(c) current through surface
(d) no. of electrons passing a specific point per unit time

Q-34. The amount of light entering the human eye is controlled by
(a) ciliary muscles
(b) pupil
(c) cornea
(d) iris

Q-35. Acceleration is defined as the rate of change of
(a) velocity
(b) displacement
(c) distance
(d) speed

Q-36.The resistance of a conductor is directly proportional to:
(a) its area of cross-section
(b) density
(c) melting point
(d) length

Q-37.SI unit of charge is
(a) newton
(b) coulomb
(c) pascal
(d) omega

Q-38. In optics an object which has higher refractive index is called
(a) optically rarer
(b) optically denser
(c) optical density
(d) refractive index

Q-39. Phagocytic activity is exhibited by
(a) ribosome
(b) vacuole
(c) lysosome
(d) ER

Q-40. ………… are considered non-living and are host dependent for their survival.
(a) bacteria
(b) viruses
(c) mycoplasma
(d) protozoa

Q-41. …………… is a fresh water sponge.
(a) sycon
(b) hyalonema
(c) spongella
(d) chalina

Q-42. Bleeding gums/scurvy is due to the deficiency of …………
(a) Vit-C
(b) Vit-D
(c) Vit - A

(d) Vit - E

Q-43. Space between ……………. is filled by vitreous humor
(a) lens, cornea
(b) lens, retina
(c) sclera, choroid
(d) choroid, retina

Q-44. Nucleons was discovered by………………
(a) Robert Brown
(b) Boveri
(c) Palade
(d) Fontana

Q-45. For $ax^2 + bx + c = 0$, which of the following statement is wrong?
(a) If $b^2 – 4ac$ is a perfect square, the roots are rational.
(b) If $b^2 = 4ac$, the roots are real and equal.
(c) If $b^2 – 4ac$ is negative, no real roots exist.
(d) If $b^2 = 4ac$, the roots are real and unequal.

Q-46. If equation $9x^2 + 6px + 4 = 0$ has equal roots, then both roots are equal to
(a) $\pm\dfrac{2}{3}$ (b) ± 3

(c) $\pm\dfrac{3}{2}$ (d) 0

Q-47. The sum of two digits and the number formed by interchanging its digit
is110. If ten is subtracted from the first number, the new number is 4 more than 5
times of the sum of the digits in the first number. Find the first number.
   (a) 46
   (b) 48
   (c) 64
   (d) 84

Q-48. A bag contains 3 red and 2 blue marbles. A marble is drawn at random. The
probability of drawing a bluemarble is:
(a) 3/5
(b) 2/5
(c) 0/5
(d) 1/5

Q-49. What are the total outcomes when we throw three coins?
(a) 4
(b) 5
(c) 8
(d) 7

Q-50. If three coins are tossed simultaneously, then the probability of getting at least two heads, is
(a) 1/4
(b) 3/8
(c) 1/2
(d) 1/8

Q-51.The first and last term of an A.P. are 1 and 11. If the sum of its terms is 36, then the number of terms will be
(a) 5
(b) 6
(c) 7
(d) 8

Q-52. If the sum of three consecutive terms of an increasing A.P. is 51 and the product of the first and third of these terms is 273, then the third term is
(a) 13
(b) 9
(c) 21
(d) 17

Q-53. What should come in the blank?
Mode= (…………..) –2 (mean)
(a) 3 (median)
(b) 4 (median)
(c) 2 (median)
(c) 5 (median)

Q-54. A toy is in the form of a cone mounted on a hemisphere of common base radius 7 cm. The total height of the toy is 31 cm. Find the total surface area of the toy.
(a) 465
(b) 912
(c) 769
(d) 858

Q-55. Exterior angles of any polygon sum up to
(a) 90°
(b) 180°
(c) 270°
(d) 360°

Q-56. In a cumulative frequency polygon, frequencies are plotted against
(a) mid-point
(b) upper class boundaries
(c) class limits
(d) frequency distribution

Q-57. Data presented in form of frequency data is known as
(a) grouped data
(b) ungrouped data
(c) secondary data
(d) calculated data

Q-58. From the choices given below mark the co-prime numbers
(a) 2, 3
(b) 2, 4
(c) 2, 6
(d) 2, 110

Q-59. $(16)^{3/4}$ is equal to
(a) 2
(b) 4
(c) 8
(d) 16

Q-60. A rational number equivalent to $\dfrac{5}{7}$ is
(a) $\dfrac{15}{17}$
(b) $\dfrac{25}{27}$
(c) $\dfrac{10}{14}$
(d) $\dfrac{10}{27}$

Q-61. The value of $\dfrac{1}{\sqrt{10}}$ when $\sqrt{10} = 3.162$ is
(a) 0.3162
(b) 31.62
(c) 0.03162
(d) 316.2

Q-62. If $\sin \theta = \cos \theta$ then value of $\operatorname{cosec} \theta =$
(a) 2
(b) 1
(c) $2/\sqrt{3}$
(d) $\sqrt{2}$

Q-63. Which one of the following is correct such that $0° \leq \theta \leq 90°$
(a) $1/\sec \theta > 1$
(b) $1/\sec \theta < 1$
(c) $\sec \theta = 0$
(d) $1/\cos \theta < 1$

Q-64. Given that $\sin A = ½$ and $\cos B = 1/\sqrt{2}$ then the value of (A+B) is
(a) 30°
(b) 45°
(c) 75°
(d) 15°

Q-65. $9sec^2\theta$ -9 $tan^2\theta$ is equal to
(a) 1
(b) -1
(c) 9
(d) -9

Q-66. If sec θ+ tan θ=x, then tan θ is
(a) $(x^2 + 1)/x$
(b) $(x^2 - 1)/x$
(c) $(x^2 + 1)/2x$
(d) $(x^2 - 1)/2x$

Q-67. The slant height of a right circular cone is 10 m and its height is 8 m. Find the area of its curved surface.

(a) 30 $^\pi$ m²

(b) 40$^\pi$ m²

(c) 60$^\pi$ m²

(d) 80$^\pi$ m²

Q-68. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:
(a) 720
(b) 900
(c) 1200
(d) 1800

Q-69. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:

(a) 15

(b) 16

(c) 18

(d) 25

Q-70. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are:

(a) 39, 30

(b) 41, 32

(c) 42, 33

(d) 43, 34

Q-71. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

(a) $\dfrac{10}{21}$

(b) $\dfrac{11}{21}$

(c) $\dfrac{2}{7}$

(d) $\dfrac{5}{7}$

Q-72. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:

(a) 50 km

(b) 56 km

(c) 70 km

(d) 80 km

Q-73. A man standing at a point P is watching the top of a tower, which makes an angle of elevation of 30° with the man's eye. The man walks some distance towards the tower to watch its top and the angle of the elevation becomes 60°. What is the distance between the base of the tower and the point P?

(a)   43 units

(b)   8 units

(c)   12 units

(d)   Data inadequate

Q-74. A can lay railway track between two given stations in 16 days and B can do the same job in 12 days. With help of C, they did the job in 4 days only. Then, C alone can do the job in:

(a) $9\dfrac{1}{5}$ days

(b) $9\dfrac{2}{5}$ days

(c) $9\frac{3}{5}$ days

(d) 10

Q-75. Where did the PM Modi inaugurate the L&T's howitzer gun-manufacturing unit?
(a) Nagpur
(b) Surat
(c) Amravati
(d) Cuttack

Q-76. Which player has won the for ICC Cricketer of the Year, the ICC Men's Test Player of the Year and the ICC ODI Player of the Year for his performances in 2018?
(a) Rohit Sharma
(b) Virat Kohli
(c) Tim Paine
(d) Steve Smith

Q-77. Name the satellite which was made by the students and was recently launched by ISRO?
(a) Microsat-R
(b) Cartosat-2
(c) Kalamsat
(d) SmallSat

Q-78. Who is current Secretary General of the United Nations?
(a) Javier Perez de Cuellar
(b) Kofi Annan
(c) Ban-Ki-Moon
(d) Antonio Guterres

Q-79. The FIFA World Cup 2022 will be hosted in
(a) China
(b) France and Germany
(c) Qatar
(d) Canada, Mexico, and United States

Q-80. Aditya Prateek Singh Sisodia, is better known by his stage name
(a) Shaan
(b) YoYo Honey Singh
(c) Badshah
(d) KK

Q-81. When was the first meeting of the India's constituent assembly held?
(a) 2nd Sept 1946   (b) 9th Dec 1946   (c) 26th Nov 1949   (d) 26th Jan 1950

Q-82. If any elected representative in Lok Sabha, Rajya Sabha or any local self-government body resigns the re-election is conducted for that seat, this is called as…
(a) General elections   (b) Midterm elections   (c) By-elections   (d)Central elections

Q-83. Who was first to land in India for trade?
(a) Dutch   (b) British   (c) Portuguese   (d) American

Q-84. The leading capitalists in Britain formed East India company on –
(a) 30 Dec. 1600   (b) 31st Nov. 1600   (c) 31st Dec. 1600   (d) 30 Nov. 1600

Q-85. Dutch were residents of –
(a) France   (b) Holland   (c) America   (d) Rome

Q-86. Arrange the following events of Indian freedom movement in correct sequence beginning from the earliest
1. Second round table conference
2. Communal award
3. Poona Pact
4. Simon commission codes
(a) 1,2,3,4   (b) 4,3,2,1   (c) 4,1,2,3   (d) 3,2,1,4

Q-87. Consider the following statements
1.Morley-Minto reforms ended the official majority in state legislative assemblies.
2. Despite the Government of India Act. 1909 the non-officials were elected to local bodies indirectly.
Which of the statements given above is/are correct?
(a) Only 1   (b) Only 2   (c) Both 1 & 2   (d) Neither 1 nor 2

Q-88. No Indian 'shall by reason only of his religion, place of birth, descent, colour or any of them, be disabled from holding any office of employment under the company.' This was a pledge first given by the
(a) Charter act of 1813   (b) Charter act of 1833
(c) Queen's proclamation of 1858   (d) Indian civil service act of 1861

Q-89.Statement I - In the 19th century, India was the largest British colony.
Statement-II - India became a big market for British manufactured goods and a field of investment for foreign capital in the 19th century.
Codes:
    (a) both the statements are individually true and statement II is the correct explanation of statement I
    (b) both the statements are individually true, but statement II is not the correct explanation of statement I
    (c) statement I is true, but statement II is false
    (d) statement I is false, but statement II is true

Q-90. Which of the following statements with regard to the 5th Report is/are correct?

1. It was submitted to the British Parliament in 1813 for consideration
2. It became the basis of intense parliamentary debates on the nature of the East India company's rule in India
3. It was primarily in the economic conditions of the urban and industrial centres of India
Codes:
(a) 1 and 3   (b) 1 and 2   (c) only 2   (d) all of these

Q-91. Earthquake (Shock) waves are
(a) Infrasonic waves   (b) Ultrasonic waves   (c) Ultraviolet waves   (d) Infrared waves

Q-92. With reference to soil conservation, consider the following practices:
1. Crop rotation   2. Sand fences   3. Terracing   4. Wind breaks
Which of the above are considered appropriate methods for soil conservation in India?
(a) 1, 2 and 3 only   (b) 2 and 4 only   (c) 1. 3 and 4 only   (d) 1,2,3and 4

Q-93. Following are the characteristics of an area in India:
1. Hot and humid climate   2. Annual rainfall 200 cm.
3. Hill slopes up to an altitude of 1100 m   4. Annual range of temperature 15°C to 30°C.
Which one among the following crops are you most likely to find in the area described above?
(a) Mustard   (b) Cotton   (c) Pepper   (d) Virginia tobacco

Q-94. With reference to the mineral resources of India, consider the following pairs:
1. Copper   :   Jharkhand
2. Nickel   :   Orissa
3. Tungsten   :   Kerala
Which of the pairs given above is/are correctly matched?
(a) 1 and 2 only   (b) 2 only   (c) 1 and 3 only   (d) 1, 2 and 3

Q-95. Which one of the following planets has largest number of natural satellites or moons?
(a) Jupiter   (b) Mars   (c) Saturn   (d) Venus

Q-96. Damodar is a tributary of river
(a) Hooghly   (b) Ganga   (c) Padma   (d) Swaranrekha

Q-97. Consider the following countries:
1. Australia   2. Namibia   3. Brazil   4. Chile
Through which of the above does the Tropic of Capricorn pass?
(a) 1 only   (b) 2, 3 and 4   (c) 1, 2 and 3   (d) 1,2,3 and4

Q-98. In the structure of planet Earth, below the mantle, the core is mainly made up of which one of the following?
(a) Aluminum   (b) Chromium   (c) Iron   (d) Silicon

Q-99. Which one of the following pairs is not correctly matched?

City		River
(a) Berlin	:	Rhine
(b) London	:	Thames
(c) New York	:	Hudson
(d) Vienna	:	Danube

Q-100. Consider the following crops:

1. Cotton   2. Groundnut   3. Maize   4. Mustard

Which of the above are Kharif crops?

(a) 1 and 2   (b) 1,2 and 3   (c) 3 and 4   (d) 1,2,3 and 4