Armed Force Preparatory Institute

Admission Test

Year 2019-(Kolhapur Centre)
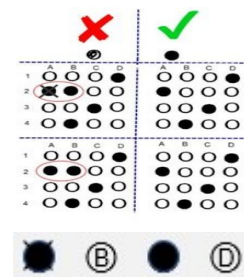
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TEST BOOKLET SERIES

Test Booklet

Serial No.: Series 1.SetA

Date 19th May2019

Maximum Marks: **100**

Time **2hrs**

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.

- BEFORE BEGINNING YOUR EXAMINATION, FILL YOUR PARTICULARS CLEARLY IN BLOCK LETTERS.
- RECORD THE TEST 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.

Direction (Q. 1-5): Read the following passage carefully answer the questions given below the passage. Certain words/phrases in the passage are given in bold to locate them while answering some of the questions.

A man may usually be known by the books he reads as a companionship of books as well as of men and one should always live in the best company, whether it be of books or of men. A good book may be among the best of friends. It is the same today that it always was and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon us in times of adversity or distress. It always receives us with the same kindness; amusing and interesting us in youth. Comforting and consoling us in age.

Q-1 "A man may usually be known by the books he reads" because

(a) books provide him a lot of knowledge

(b) The books he reads affect his thinking and character

(c) His selection of books generally reveals his temperament and character

(d) His reading habit shows that he is a scholar

Q-2. Which one of the following would be the most suitable title for the passage?

(a) books are useful for our youth

(b) books as man's abiding friends

(c) books show the reader's character

(d) the importance of books in old age

Q-3. Which of the following statement is not true?

(a) Good books as well as good men always provide the finest company.

(b) We have sometimes to be patient with a book as it may bore us

(c) A good book serves as a permanent friend

(d) A good book never betrays us

Q-4. Which of the following is opposite in meaning to the word "adversity" occurring in the passage?

(a) Progress (b) Happiness (c) Prosperity (d) Misfortune

Q-5. The statement "A good book may be among the best friend" in the middle of the passage, means that

(a) A good book can be included among the best friends of mankind

(b) Our best friends read the same good books

(c) There cannot be a better friend than a good book

(d) Books may be good friends, but not better than good man

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. When they heard the bell (P) out of his clothes (Q) as quickly (R) every boy scrambled

(S) and got into bed 6. as possible

(a) QRPS (b) PSQR (c) RQSP (d) RPSQ

Q-7. 1. The symptoms of (P) and certain other changes (Q) what is popularly called (R) serious forgetfulness, confusion (S) 'sterility' include 6. in personality behaviour.

(a) QSRP (b) PQRS (c) SRQP (d) QPSR

Q-8. 1. Paucity of funds (P) universities cannot make (Q) essentials like books (R) sufficient expenditure on (S) ordains that the 6. journals and equipment.

(a) QPRS (b) SPRQ (c) PQRS (d) QSRP

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

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

Q-10. The Governor with his aide-de-camp …….. arrived. (a) has (b) have (c) are (d) were

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

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

Q-12. Minor (a) heighted (b) big (c) tall (d) major

Q-13. Former (a) later (b) big (c) tall (d) major

Q-14. Tepid (a) lukewarm (b) warm (c) hot (d) cold

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

Q-15. Neither of the boys could express …… ideas. (a) These (b) There (c) his (d) him

Q-16. ……… goes there? (a) how (b) What (c) Whom (d) Who

Q-17. The girls got …….. respective jackets. (a) her (b) she (c) there (d) their

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

Q-18. Futile (a) fruitless (b) fatal (c) fever (d) fearful

Q-19. Adamant (a) Changing (b) Alter (c) Stubborn (d) Dominant

Q-20. Mortified (a) enthusiastic (b) scared (c) Modernistic (d) fortified

Q-21.An example of a reaction in which gas is evolved is
(a) burning of Mg ribbon in air
(b) reaction between CaO and water
(c) reaction between lead nitrate and KI
(d) reaction between limestone and HCl

Q-22. The reaction in which a precipitate is formed are known as
(a) exothermic reaction
(b) precipitation reaction
(c) endothermic reaction
(d) combustion reaction

Q-23. The number of electrons in the valence shell of an atom is equal to
(a) group number
(b) period number
(c) atomic mass
(d) atomic volume

Q-24. The non-metallic element present in the third period other than sulphur and chlorine is
(a) Oxygen
(b) Fluorine
(c) Nitrogen
(d) Phosphorus

Q-25. What is the common name of ethanoic acid?
(a) Acetic acid
(b) Formic acid

(c) Propionic acid
(d) Butanoic acid

Q-26.Which of the following is the chemical property of carbon compounds?
(a) Combustion reactions
(b) Substitution reactions
(c) Addition reactions
(d) All of the above

Q-27. Which of the following is used as a fuel in cars along with petrol?
(a) Methane
(b) Ethane
(c) Butane
(d) Ethanol

Q-28. What is used as an antiseptic to sterilize wounds and syringes in hospitals?
(a) Propanol
(b) Ethyl alcohol
(c) Butanol
(d) Methanol

Q-29.The hindrance presented by material of conductor to the smooth passing of electric current
is known as:
(a) Resistance
(b) Conductance
(c) Inductance
(d) None of these

Q-30.The image formed by retina of human eye is
(a) Virtual and erect
(b) Real and inverted
(c) Virtual and inverted
(d) Real and erect

Q-31. Reflection by rough surfaces is called
(a) regular reflection
(b) irregular reflection
(c) regular refraction
(d) irregular refraction

Q-32.What should be the core of an electromagnet?
(a) soft iron
(b) hard iron

(c) rusted iron
(d) none of above

Q-33.Which is the most popular kitchen fuel in India?
(a) LPG
(b) Kerosene
(c) Coal
(d) Firewood

Q-34. If we grasp a wire with right hand such that thumb pointed in direction of current, then curling fingers of hand will point
(a) direction of current
(b) direction of force acting
(c) direction of magnetic field
(d) none of the above

Q-35.What does the slope of a distance-time graph indicate?
(a) Time
(b) Distance
(c) Speed
(d) Displacement

Q-36. When a 40V battery is connected across an unknown resistor there is a current of 10 A in the circuit. Find the value of the resistance of the resister:
(a) 5 Ω
(b) 8Ω
(c) 4 Ω
(d) none of these

Q-37. The least distance of distinct vision for a young adult with normal vision is
(a) 25 m
(b) 20 m
(c) 25 cm
(d) 20 cm

Q-38.What is that instrument which can detect the presence of electric current in a circuit?
(a) galvanometer
(b) motor
(c) generator
(d) none of above

Q-39. Cristae are found in …………
(a) protoplasm
(b) cytoplasm
(c) mitochondria
(d) ER

Q-40…………….. is a chordate character
(a) notochord
(b) post and tail
(c) pharyngeal gills
(d) vertebrata

Q-41. Secondary growth is absent in………
(a) mango
(b) Cucurbita
(c) Maize
(d) Sunflower

Q-42. …………… is required more in girls (35g) than boys (25g)
(a) Co
(b) F
(c) K
(d) Fe

Q-43. Homeostasis is maintained by……………
(a) epithalamus
(b) hypothalamus
(c) thalamus
(d) all of these

Q-44.Most developed part of human brain is
(a) cerebrum
(b) pons
(c) thalamus
(d) medulla

Q-45. The roots of the equation $9x^2 - bx + 81 = 0$ will be equal, if the value of b is
(a) ± 9
(b) ± 18
(c) ± 27
(d) ± 54

Q-46. If the equation $x^2 - kx + 1$, have no real roots, then

(a) –2 < k < 2
(b) –3 < k < 3
(c) k > 2
(d) k < –2

Q-47. 8 girls and 12 boys can finish work in 10 days while 6 girls and 8 boys can finish it in 14 days. Find the time taken by the one girl alone that by one boy alone to finish the work.
(a) 120, 130
(b) 140, 280
(c) 240, 280
(d) 100, 120

Q-48. The probability that it will rain tomorrow is 0.85. What is the probability that it will not rain tomorrow?
(a) 0.25
(b) 0.145
(c) 3/20
(d) none of these

Q-49. What is the probability that a number selected from the numbers (1, 2, 3,.......,15) is a multiple of 4?
(a) 1/5
(b) 4/5
(c) 2/15
(d) 1/3

Q-50. The following probabilities are given; choose the correct answer for that which is not possible.
(a) 0.15
(b) 2/7
(c) 7/5
(d) none of these

Q-51. If the sum of n terms of an A.P. is then its nth term is
(a) $4n – 3$
(b) $3n – 4$
(c) $4n + 3$
(d) $3n + 4$

Q-52. If 3 times the third term of an A.P. is equal to 5 times the fifth term. Then its 8th term is
(a) 0
(b) 1
(c) 2

(d) 3

Q-53. Construction of a cumulative frequency table is useful determining the
(a) mean
(b) mode
(c) median
(d) all of the above

Q-54. If a solid, cone of base radius 'r' and height 'h' is placed over a solid cylinder having same base radius 'r' and height – 'h' as that of the cone, then the curved surface area of the shape is $\pi r\left(\sqrt{h^2+r^2}\right)+2\,\pi r h.$ Is it true?
(a) No
(b) Yes
(c) May be
(d) Cannot be determined

Q-55. Surface area of hollow cylinder with radius 'r' and height 'h' is measured by
(a) $2\pi r - h$
(b) $2\pi r + h$
(c) $\pi r h$
(d) $2\pi r h$

Q-56. Most frequent occurring observation in data is called
(a) mean
(b) median
(c) mode
(d) standard deviation

Q-57. Constructed on XY - plane, a histogram is a graph of adjacent
(a) squares
(b) circles
(c) rectangles
(d) triangles

Q-58. On simplifying $\left(\sqrt{5}+\sqrt{7}\right)^2$, we get
(a) 12
(b) $\sqrt{35}$
(c) $\sqrt{5}+\sqrt{7}$
(d) $12+2\sqrt{35}$

Q-59. The number $(3-\sqrt{3})(3+\sqrt{3})$ is
(a) an irrational number
(b) a rational number
(c) not a natural number
(d) none of these

Q-60. The rational number $0.\overline{3}$ can also be written as
(a) 0.3
(b) $\dfrac{3}{10}$
(c) 0.33
(d) $\dfrac{1}{3}$

Q-61. If the decimal representation of a number is non-terminating, non-repeating then the number is
(a) a natural number
(b) a rational number
(c) a whole number
(d) an irrational number

Q-62. If cot A = 12/5, then the value of (sin A + cos A) x cosec A is
(a) 13/5
(b) 17/5
(c) 14/5
(d) 1

Q-63. Cos 1^0 x cos 2^0 x cos 3^0 x…………..x cos 180^0 is equal to :
(a) 1
(b) 0
(c) ½
(d) -1

Q-64. If $\cos\theta = \sin\theta$, then value of θ
(a) 0
(b) 45
(c) 30
(d) 90

Q-65. Sin θ = 4/3 for some angle of θ is,
(a) True
(b) False

(c) May be true for certain cases

(d) None of the above

Q-66. The value of sin 18°/cos 72° is:

(a) 1

(b) 0

(c) -1

(d) 1/2

Q-67. The curved surface area of a cylindrical pillar is 264 m^2 and its volume is 924 m^3. Find the ratio of its diameter to its height.

(a) 3:7

(b) 7:3

(c) 6:7

(d) 7:6

Q-68. A right triangle with sides 3 cm, 4 cm and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is:

(a) 12π cm^3

(b) 15π cm^3

(c) 16π cm^3

(d) 20π cm^3

Q-69. If selling price is doubled, the profit triples. Find the profit percent.

(a) $66\frac{2}{3}$

(b) 100

(c) $105\frac{1}{3}$

(d) 120

Q-70. A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:

(a)   588 apples

(b)   600 apples

(c)   672 apples

(d)   700 apples

Q-71. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

(a) $\dfrac{1}{2}$

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

(c) $\dfrac{8}{15}$

(d) $\dfrac{9}{20}$

Q-72. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?

(a) 9

(b) 10

(c) 12

(d) 20

Q-73. Two ships are sailing in the sea on the two sides of a lighthouse. The angle of elevation of the top of the lighthouse is observed from the ships are 30° and 45° respectively. If the lighthouse is 100 m high, the distance between the two ships is:

(a) 173 m

(b) 200 m

(c) 273 m

(d)   300 m

Q-74. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?

(a)   12 days

(b)   15 days

(c)   16 days

(d)   18 days

Q-75. Who has won the Indonesia Masters 2019?
(a) Carolina Marin
(b) SainaNehwal
(c) PV Sindhu
(d) Nozomi Okuhara

Q-76. Who was honored with Bharat Ratna 2019?
(a) Kapil Dev
(b) Pranab Mukherjee
(c) K Sivan
(d) G Satheesh Reddy

Q-77. In which of the following form, data is stored in computer?
(a) Decimal
(b) Binary
(c) Hexadecimal
(d) Octal

Q-78. Who is known as the father of Internet?
(a) Chares Babbage
(b) Vint Cerf
(c) Denis Riche
(d) Martin Cooper

Q-79. What is the name of first super computer of India?
(a) Saga 220
(b) PARAM 8000
(c) ENIAC
(d) PARAM 6000

Q-80. The Defence Minister of India is
(a) Arun Jaitley
(b) Narendra Modi
(c) Nirmala Sitharaman
(d) Gen. V. K. Singh

Q-81. The constitution day is celebrated in India on ……..
(a) 26th Jan   (b) 26th Nov   (c) 26th Jul   (d) 15th Aug

Q-82. The election commission in India is established by article ………. of Indian Constitution.
(a) 321   (b) 324   (c) 327   (d) 329

Q-83. Who among the following has described the uprising of 1857 as the First Indian War of Independence?
(a) SN Sen   (b) RC Majumdar   (c) BG Tilak   (d) VD Savarkar

Q-84. The Indian National Congress was founded on
(a) 1870   (b) 1882   (c) 1885   (d) 1890

Q-85. Why did Gandhiji go to Champaran?
(a) To launch a Satyagraha Movement   (b) To launch a Non-Cooperation Movement
(c) To enquire into the grievances of the indigo cultivators (d) To fight against the zamindars

Q-86. Gandhiji's call for breaking Salt Laws was in response to the
(a) Non-Cooperation Movement   (b) Civil Disobedience Movement
(c) Khilafat Movement   (d) Quit India Movement

Q-87. Vande-Matram, the nationalist song, was a part of the book…..
(a) Durgesh Nandini   (b) Saraswati Chandra   (c) Grihadaha (d) Anand Math

Q-88. Which of the following trading Companies did not come to India before independence?
(a) Dutch   (b) French   c) American   (d) Portuguese

Q-89. Where was the Dutch Factory in India?
(a) Daman   (b) Andaman   (c) Nicobar   (d) Pullicat

Q-90. Who was the French Governor in India during first two Carnatic wars?
(a) Clive   (b) Colbert   (c) Duplex   (d) Cornwallis

Q-91. The Indian Standard Time is ahead of Greenwich Mean Time (GMT) by
(a) 3 h and 30 min   (b) 4 h and 30 min   (c) 5 h and 30 min   (d) 6 h and 30 min

Q-92. Which one, among the following, atmospheric gases, filters out most of the ultraviolet radiation of the Sun?
(a) Oxygen (b) Nitrogen (c) Helium (d) Ozone

Q-93. Which one among the following rocks does not belong to the same group?
(a) Shale (b) Limestone (c) Slate (d) Sandstone

Q-94. The Deccan Trap Formation was caused by
(a) shield eruption (b) composite eruption (c) caldera eruption (d) flood basalt eruption

Q-95. Which one among the following is a primary rock?
(a) Sedimentary (b) Igneous (c) Metamorphic (d) None of the above

Q-96. In India, which type of forest among the following occupies the largest area?
(a) Montane Wet Temperate Forest (b) Subtropical Dry Evergreen Forest
(c) Tropical Moist Deciduous Forest (d) Tropical Evergreen Forest

Q-97. When you travel in certain parts of India, you will notice red soil. What is the main reason for this colour?
(a) Abundance of magnesium (b) Accumulated humus
(c) Presence of ferric oxides (d) Abundance of phosphates

Q-98. Consider the following layers of the atmosphere
1.Troposphere 2. Stratosphere 3. Mesosphere 4. Thermosphere
Which one among the following is the correct sequence of the layers with increasing altitude from the Earth's surface?
(a) 1,2,3,4 (b) 2,1,3,4 (c) 3,2,1,4 (d) 4,2,3,1

Q-99. The "Golden Quadrilateral", which connects Delhi, Mumbai, Chennai and Kolkata passes through
(a) Amritsar, Ahmadabad, Pune, Patna (b) Jaipur, Porbandar, Hyderabad, Varanasi
(c) Vadodara, Pune, Vishakhapatnam, Varanasi (d) Nagpur, Bhopal,Surat, Amritsar

Q-100. Lake Sambhar is nearest to which one of the following cities of Rajasthan?
(a) Bharatpur (b) Jaipur (c) Jodhpur (d) Udaipur