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2014

TEST BOOKLET

Paper - VI
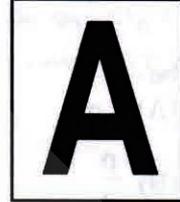
Time allowed : 3 hours

Full marks : 200

Answer *all* the question

Questions are of equal value

Serial No.......................................

Ticket No. :

Signature of the Candidate :

INSTRUCTIONS

Candidates should read the following instructions carefully before answering the questions :

1. This booklet consists of 12 pages including this front page. Verify the Page Nos. and Test Booklet Series on each page and bring at once to the Invigilator's notice and discrepancy.

2. Answer will have to be given in the Special Answers-Sheet supplied for the purpose.

3. Before you proceed to mark the Answer-Sheet in response to various items in the Test Booklet, you have to fill in some particulars in the Answer-Sheet as per instructions sent to you in the Admit Card. *Do not fold the Answer-Sheet as this will result in error in your marks.*

4. All questions are of multiple-choice answer-type. You will find your probable answers **(A)**, **(B)**, **(C)** and **(D)** against each question. Find out which of the four answers appears to you to be correct or the best. Now darken the oval corresponding to the letter of the selected answer in the Answer-Sheet with **Black Ball Point Pen** as per instructions printed on the reverse of the Admit Card and in the Answer-Sheet.

5. If more than one oval is encoded for a particular answer, it will be treated as a wrong answer.

6. **There will be negative marking for wrong answers; 2/3 mark will be deducted for each wrong answer.**

7. There are blank pages at the end of this booklet for Rough Work.

8. *The Special Answer-Sheet should be handed over to the Invigilator before leaving the Examination Hall. You are permitted to take away the used Test Booklet after completion of the examination.*

9. Candidates are not *allowed* to use *Calculator* in the Examination Hall.

[Please Turn Over]

1. The interest on a principal for n years at r% simple interest per annum is $\dfrac{pnr}{25}$, then the principal will be –
   (A) 2 p
   (B) $\dfrac{p}{2}$
   (C) $\dfrac{p}{4}$
   (D) 4p

2. A dishonest dealer defrauds his seller and buyer by using forged weights to the extent of 20%. His true gain percent is –
   (A) 20%
   (B) 40%
   (C) 44%
   (D) 50%

3. A seller after allowing 20% commission to his customer on the marked price of the article makes 20% profit. If the cost price of an article is Rs. x, its marked price will be –
   (A) Rs. 2x
   (B) Rs. $\dfrac{3x}{2}$
   (C) Rs. $\dfrac{x}{2}$
   (D) Rs. $\dfrac{5x}{3}$

4. The H.C.F. and L.C.M. of three numbers are 6 and 420. If two numbers be 12 and 30, the third number will be –
   (A) 21
   (B) 18
   (C) 42
   (D) 70

5. A rational number between $-\dfrac{2}{3}$ and $\dfrac{1}{4}$ is
   (A) $\dfrac{5}{12}$
   (B) $-\dfrac{5}{12}$
   (C) $\dfrac{5}{24}$
   (D) $-\dfrac{5}{24}$

6. The present population of a town is 24,000. If it increase at the rate of 5% per annum, what will be its population after 2 years ?
   (A) 26,400
   (B) 26,460
   (C) 24,460
   (D) 26,640

7. If the compound interest on a sum for 2 years at $12\dfrac{1}{2}$% per annum is Rs. 510, the simple interest on the same sum at the same rate for the same period of time is –
   (A) Rs. 400
   (B) Rs. 450
   (C) Rs. 460
   (D) Rs. 480

8. A shopkeeper gains Re. 1 on each pen and loses 40 paise on each pencil. He sells 45 pens and some pencils losing Rs. 5 in all. How may pencils does he sell ?
   (A) 120
   (B) 125
   (C) 130
   (D) 135

9. The ratio of bus and train fares from Kolkata to Burdwan is 3 : 4. If the train fare increases by 20% and bus fare by 10% then what will be new ratio of bus and train fares ?
   (A) 2 : 3
   (B) 3 : 4
   (C) 11 : 16
   (D) 13 : 20

10. $999 \frac{98}{99}$ x 99 is equal to –
    (A) 99899
    (B) 99989
    (C) 99999
    (D) 98999

11. A clock takes 10 seconds to strike at 6 O'clock. How much time will it take to strike at 12 O'clock ?
    (A) 20 seconds
    (B) 22 seconds
    (C) 23 seconds
    (D) 24 seconds

12. The average marks of boys in a class is 52 and that of girls is 42. The average marks of boys and girls combined is 50. What is the percentage of boys in the class ?
    (A) 70%
    (B) 75%
    (C) 80%
    (D) 82%

13. The average of first 51 natural numbers is 26. What is the average of first 50 natural numbers ?
    (A) 24
    (B) 24.5
    (C) 25
    (D) 25.5

14. The ratios of the quantities of first and second liquid in two mixtures are 2 : 3 and 5 : 4 respectively. In what ratio these two mixtures are to be mixed to have a new mixture of the two liquids with equal quantities ?
    (A) 2 : 3
    (B) 3 : 5
    (C) 4 : 7
    (D) 5 : 9

15. A man sold a store for Rs. 423 and incurred a loss of 6%. At what price should it be sold as to earn a profit of 8%
    (A) Rs. 450
    (B) Rs. 454
    (C) Rs. 486
    (D) Rs. 586

16. $\sqrt[3]{2}$ x $\sqrt[4]{2}$ x $\sqrt[12]{32}$ is equal to –
    (A) 2
    (B) $\sqrt{2}$
    (C) $2\sqrt{2}$
    (D) $4\sqrt{2}$

17. 4.669 ÷ 2.3 is equal to
    (A) 2.3
    (B) 2.03
    (C) 2.003
    (D) 2.0003

18. $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$ is equal to –
    (A) $\frac{61}{144}$
    (B) 29
    (C) $\frac{144}{61}$
    (D) None of the above

19. The mean proportion between 9 and 16 is
   (A) 12.5
   (B) 12 ✓
   (C) 5
   (D) None of the above

20. Two numbers are in the ratio 3 : 5. If each number is increased by 10, the ratio becomes 5 : 7. The sum of the numbers is –
   (A) 8
   (B) 16
   (C) 35
   (D) 40 ✓

21. If 2A = 3B = 4C then A : B : C is equal to
   (A) 2 : 3 : 4
   (B) 4 : 3 : 2
   (C) 6 : 4 : 3 ✓
   (D) 3 : 4 : 6

22. Which of the following numbers is not a perfect square ?
   (A) 7056
   (B) 3969
   (C) 5478 ✓
   (D) 4624

23. What least number must be added to 15370 to make it a perfect square ?
   (A) 4
   (B) 6 ✓
   (C) 8
   (D) 9

24. $\sqrt[3]{\dfrac{-512}{729}} = ?$

   (A) $-\dfrac{7}{9}$

   (B) $-\dfrac{8}{9}$ ✓

   (C) $\dfrac{7}{9}$

   (D) None of the above

25. By what least number should 648 be multiplied to get it a perfect cube ?
   (A) 3
   (B) 6
   (C) 9 ✓
   (D) 8

26. By what least number should 1536 be divided to get it a perfect cube ?
   (A) 3 ✓
   (B) 4
   (C) 6
   (D) 8

27. A number is first increased by 10% and then reduced by 10%. The number –
   (A) does not change
   (B) decrease by 1% ✓
   (C) increase by 1%
   (D) none of the above

28. A can do a piece of work in 25 days and B can finish it in 20 days. They work together for 5 days and then A leaves. In how many days will B finish the remaining work ?
   (A) 8
   (B) 9
   (C) 10
   (D) 11 ✓

29. A cistern can be filled by two taps A and B in 12 hours and 16 hours respectively. The full cistern can be emptied by a third tap C in 8 hours. If all the taps are turned on at the same time, in how much time will the empty cistern be filled up completely ?
   (A) 44 hours
   (B) 48 hours ✓
   (C) 52 hours
   (D) 56 hours

30. Which of the following is vulgar fraction ?

(A) $\dfrac{3}{10}$

(B) $\dfrac{13}{10}$

(C) $\dfrac{10}{3}$ ✓

(D) none of the above

31. By what number should $(-8)^{-1}$ be multiplied to get 10^{-1} ?

(A) $\dfrac{4}{5}$

(B) $-\dfrac{5}{4}$

(C) $-\dfrac{4}{5}$ ✓

(D) none of the above

32. A tree 6 m tall, cast a 4 m long shadow. At the same time a flag pole cast a 50 m long shadow. How long is the flag pole ?

(A) 50 m

(B) 75 m ✓

(C) $33\dfrac{1}{3}$ m

(D) none of the above

33. 12 workers take 4 hours to complete a job. How long would it take 15 workers to complete the job ?

(A) 2 hrs. 40 min.

(B) 3 hrs. 12 min.

(C) 3 hrs. 24 min. ✓

(D) 3 hrs. 30 min.

34. Which one of the following is correct ?

(A) $-\dfrac{3}{4} < -\dfrac{7}{16} < \dfrac{5}{-12} < \dfrac{9}{-24}$ ✓

(B) $\dfrac{9}{-24} < \dfrac{5}{-12} < \dfrac{-7}{16} < \dfrac{-3}{4}$

(C) $\dfrac{-7}{16} < \dfrac{9}{-24} < \dfrac{5}{-12} < \dfrac{-3}{4}$

(D) $\dfrac{5}{-12} < \dfrac{-3}{4} < \dfrac{-7}{16} < \dfrac{9}{-24}$

35. Which of the following numbers is divisible by 3 ?

(A) 24357806

(B) 35769812

(C) 83479560 ✓

(D) 3336433

36. Which of the following numbers is divisible by 11 ?

(A) 3333333

(B) 1111111

(C) 22222222 ✓

(D) none of the above

37. The greatest number which divides 134 and 167 leaving 2 as remainder in each case is

(A) 14

(B) 17

(C) 19

(D) 11 ✓

38. The smallest number which when diminished by 3 is divisible by 11, 28, 36 and 45 is

(A) 1257

(B) 1260

(C) 1263

(D) none of the above ✓

39. The HCF of two numbers is 145 and their LCM is 2175. If one of the number is 725, the other number is –
    (A) 290
    (B) 435
    (C) 5
    (D) none of the above

40. Three bells toll at intervals of 9, 12, 15 minutes. If they start tolling together, after what time will they next toll together ?
    (A) 1 hour
    (B) $1\frac{1}{2}$ hours
    (C) $2\frac{1}{2}$ hours
    (D) 3 hours

41. Which of the following is the correct order ?
    (A) 2.2 < 2.02 < 2.002 < 2.222
    (B) 2.002 < 2.02 < 2.2 < 2.222
    (C) 2.02 < 2.22 < 2.002 < 2.222
    (D) none of the above

42. If $\frac{2}{3}$rd of A = 75% of B = 0.6 of C then A : B : C is equal to
    (A) 8 : 9 : 10
    (B) 9 : 8 : 10
    (C) 6 : 5 : 8
    (D) none of the above

43. P is greater than q by 60% and greater than R by 30%. The ratio of q and R is –
    (A) 1 : 2
    (B) 2 : 1
    (C) 13 : 16.
    (D) 16 : 13

44. The income from a bus in every trip, is Rs. 100. If the bus fare increases by 50% and the number of passengers decreases by 20% then the income in every trip is –
    (A) Rs. 120
    (B) Rs. 80
    (C) Rs. 130
    (D) Rs. 110

45. Successive discounts of 10% and 20% is equivalent to
    (A) 30%
    (B) 28%
    (C) 24%
    (D) 21%

46. The number 5416*6 is a perfect square, the '*' marked digit is
    (A) 5
    (B) 6
    (C) 4
    (D) 9

47. A train crosses a telegraph post in 9 seconds and a bridge 21 seconds. If the length of the bridge is 260m, then the length of the train is
    (A) 250 m
    (B) 220 m
    (C) 200 m
    (D) 195 m

48. Average weight of some students is 55 kg.; of them average weight of 20 students is 60 kg. and average weight of remaining students is 51 kg. What is the number of students ?
    (A) 30
    (B) 35
    (C) 40
    (D) 45

49. There is a rebate of 15%, if electric bills are paid in due time. A man enjoyed a rebate of Rs. 54 by paying the bill in time. What was his electric bill ?
(A) Rs. 300
(B) Rs. 330
(C) Rs. 360
(D) Rs. 400

50. A student wrote 54 instead of 45 by mistake. As a result he got the average of 5 numbers as 52. What is the correct average of the numbers ?
(A) 48
(B) 48.8
(C) 50
(D) 50.2

51. If KITE = 45. What is WILD ?
(A) 72
(B) 40
(C) 48
(D) 29

52. If WOMAN = 69. What is MAN ?
(A) 53
(B) 28
(C) 50
(D) 29

53. If JAPAN is coded as QZKZM then AMERICA is?
(A) ZYOPQRZ
(B) ZPQYLTM
(C) MPOYQZ
(D) ZNVIRXZ

54. If EAGLE is coded as FBHMF then VULTURE is ?
(A) TSFRJP
(B) WVMUVSF
(C) RPFTJE
(D) TSFJGF

55. If 'Parrot' is known as 'Eagle', 'Eagle' is known as 'Peacock', 'Peacock' is known as 'Swallow', 'Swallow' is known as 'Sparrow', then India's National Bird is known as –
(A) Sparrow
(B) Peacock
(C) Swallow
(D) None of the above

56. If 'LINGER' is 123456 and 'FORCE' is 56789 then 'FIERCE' will be –
(A) 345667
(B) 456678
(C) 556789
(D) None of the above

57. If 'MACHINE' is coded as 13-1-3-8-9-14-5' then 'DANGER' is to be coded as –
(A) 6-1-13-14-6-8
(B) 5-1-14-13-5-8
(C) 4-1-14-7-5-18
(D) 4-1-14-8-6-18

58. 'Zebra' is written as 2652181 then how will 'Cobra' be written ?
(A) 3252181
(B) 3152181
(C) 3352281
(D) 3352181

59. If, Lawyer : Court, Beautician : Parlour, then Waiter : ?
(A) House
(B) Kitchen
(C) Restaurant
(D) Garage

60. If, India : Delhi : Rupee, the USA : ? : Dollar
(A) London
(B) New York
(C) Colorado
(D) Washington, D.C.

61. If, Paschim Banga : Kolkata, Tamilnadu : Chennai then Goa : ?
(A) Hyderabad
(B) Marma Gao
(C) Vishakhapatnam
(D) Panaji

62. If, Mass : Kilogram, Work : Joule, then Force : ?
(A) Hectare
(B) Litre
(C) Newton
(D) Pound

63. If, Power : Watt, Pressure : Pascal, then Current : ?
(A) Volt
(B) Ampere
(C) Horse power
(D) None of the above

64. If, Dog : Kennel, Horse : Stable, then Hare : ?
(A) Sty
(B) Poultry
(C) Burrow
(D) Cave

65. If, Frog : Amphibian, Whale : Mammal then Crocodile : ?
(A) Rodent
(B) Reptile
(C) Human being
(D) Mammal

66. If, Flock : Sheep, Herd : Cow, then Litter : ?
(A) Puppy
(B) Kitten
(C) Cub
(D) Wolf

67. If, Assign : Allot, Abduct : Kidnap, then Dissipate : ?
(A) Squander
(B) Scarcity
(C) Edge
(D) Proud

68. If, Horse : Colt, Cow : Calf, then Deer : ?
(A) Puppy
(B) Cub
(C) Teddy
(D) Fawn

69. If, Glucometer : Diabetes, Ammeter : Current, then Odometer : ?
(A) Blood pressure
(B) Pressure
(C) Speed
(D) Earth quake

70. If, Traveller : Journey, then Sailor : ?
(A) Ship
(B) Crew
(C) Voyage
(D) Water

71. If, ACE : GIK : : ?
(A) KMO : QSU
(B) ACD : FHI
(C) ABD : FGI
(D) GHI : LMN

72. If, MN : OP : : ?
(A) AB : PQ
(B) RS : TV
(C) AD : HF
(D) QR : ST

73. Given set is (224, 15, 4) which is the similar set
(A) 10, 6, 5
(B) 24, 16, 0
(C) 63, 8, 3
(D) none of the above

74. Given set is (24, 21, 12) which is the similar set
    (A) 95, 90, 65
    (B) 85, 80, 50
    (C) 60, 70, 40
    (D) 45, 55, 65

75. Choose the letter which is different from others
    (A) B
    (B) F
    (C) L
    (D) G

76. Choose the one which is different from the rest
    (A) 3
    (B) 81
    (C) 512
    (D) 2187

77. Choose the one which is different from the rest
    (A) Lioness
    (B) Tigress
    (C) Seamstress
    (D) Colt

78. Find the odd pair out
    (A) Chair : Sofa
    (B) Tree : Stem
    (C) Face : Eye
    (D) Plant : Flower

79. Find the odd pair out
    (A) Principal : School
    (B) Artist : Troupe
    (C) Soldier : Brigade
    (D) Singer : Choir

80. Find the odd one out in the list
    (A) 370
    (B) 371
    (C) 415
    (D) 153

81. Find the odd number out of the rest
    (A) 15
    (B) 267
    (C) 63
    (D) 143

82. Find the odd number out of the rest
    (A) 527
    (B) 356
    (C) 639
    (D) 246

Answer to question nos. 83 & 84 on the following statement :

Six girls are sitting in a circle. Sonia is sitting opposite to Radhika, Poonam is sitting at right of Radhika, but left of Deepti. Monica is sitting at left of Radhika. Kamini is sitting at right of Sonia and left of Monica. Now Deepti and Kamini, Monica and Radhika, mutually exchange their position.

83. Who will be sitting opposite to Sonia ?
    (A) Radhika
    (B) Monica
    (C) Kamini
    (D) Sonia

84. Who will be sitting at left of Deepti ?
    (A) Sonia
    (B) Monica
    (C) Radhika
    (D) Poonam

85. Starting from a point, Krishna walked 12m North, he turned right and walked 10m, he again turned right and walked 12m, then he turned left and walked 5m. How far is he now and in which direction from starting point ?
    (A) 27m towards East
    (B) 5m towards East
    (C) 10m towards West
    (D) 15m towards East

86. If 18th February, 2009 is Friday, then what will be the day of 18th February, 2011 ?
    (A) Sunday
    (B) Monday ✓
    (C) Tuesday
    (D) Wednesday

87. Sreedham and Sachidananda are ranked 7th and 11th respectively from top in a class of 31 students. What will be their respective ranks from the bottom in the class ?
    (A) 20th and 24th respectively
    (B) 24th and 20th respectively
    (C) 25th and 21st respectively ✓
    (D) None of the above

88. Find the missing number in the series 4, 5, 12, 39, 160, ___ ?
    (A) 226
    (B) 452
    (C) 565
    (D) 805 ✓

89. Identify the missing number in the series 2, 3, 12, 37, 86, 167 ?
    (A) 204
    (B) 258
    (C) 288 ✓
    (D) 402

90. The missing number in the Series 225, 289, ?,. 441 is
    (A) 361 ✓
    (B) 383
    (C) 375
    (D) 386

91. Which one is not a leap year ?
    (A) 1990 ✓
    (B) 1948
    (C) 2000
    (D) 2012

92. Which is the odd number out in this series – 33792, 8448, 2148, 528, 132, 33, 825
    (A) 2148 ✓
    (B) 8448
    (C) 528
    (D) 132

93. The ratio between present age of X and Y is 5 : 3 respectively. The ratio between X's age 4 years ago and Y's age 4 years hence is 1 : 1. What will be the ratio between X's age 4 years hence and Y's 4 years ago ?
    (A) 1 : 3
    (B) 2 : 1
    (C) 3 : 1 ✓
    (D) 4 : 1

94. Pointing to another woman, a woman said "Her brother's father is the only son of my grand father". How is the woman related to another woman ?
    (A) Mother ✓
    (B) Aunt
    (C) Sister
    (D) Daughter

95. If P is the wife of Q and R is the mother of S and Q. What is R to P ?
    (A) Mother
    (B) Sister
    (C) Mother-in-law ✓
    (D) Aunt

96. If 8th February, 2005 was Tuesday, what was the day the 8th February, 2004 ?
    (A) Tuesday
    (B) Monday
    (C) Sunday ✓
    (D) Wednesday

97. Many business offices are locate in building having two to eight floors. If a building has more than three floors, it has a lift.

Conclusions :

(A) All floors may be reached by lift

(B) Only floors above third floor have lift

(C) Seventh floor has no lift

(D) Second floor has lift

98. Propositions : –

Some garnets are stones

Some stones are diamond

No diamond is a gem.

Conclusions :   i)   Some gems are pearls

ii) Some gems are diamond

iii) No gem is a diamond

iv) No gem is a garnet

Options –

(A) Only (i) and (ii) follows

(B) Only (iii) and (iv) follows

(C) Only either (i) or (iv) and either (ii) or (iii) follows

(D) Only (iii) and either (i) or (iv) follows

99. A statement is given followed by four alternative arguments. Which is the most appropriate ?

Is it necessary that professional education should be job oriented ?

Arguments :

i)   Yes, the aim of professional education is to prepare for earning

ii) Yes, professionally educated person should stand on his own feet after completion of education

iii) No, professional education should be pleasure of knowledge gaining

iv) No, professional education is a passport for higher research only.

Options –

(A) Arguments (iii) and (iv) are strong

(B) Argument (i) is strong

(C) Arguments (i) and (ii) are strong

(D) Argument (iv) is strong

100. By logic which of the action follows from the statement

Youngsters are often found staring at obscene posters

Courses of Action –

i)   Youngsters should be punished and penalised if they are found doing so.

ii) Any display of such material should be banned.

Options –

(A) Only (i) follows

(B) Only (ii) follows

(C) Neither (i) nor (ii) follows

(D) Action (ii) partially follows