AISSEE – 2019

Section – A (Mathematics)

1. A student multiplied 7236 by 65 instead of multiplying by 56. By how much was his answer greater than the correct answer?

   (a) 87555   (b) 65124

   (c) 72360   (d) 65000

2. Simplify: $1 + \left[\frac{1}{2} + \frac{1}{3} + \frac{1}{6}\left(\frac{3}{4} - \frac{1}{3}\right)\right]$

   (a) $\frac{30}{37}$ (b) $\frac{37}{30}$

   (c) $\frac{15}{37}$ (d) $\frac{15}{30}$

3. Find the perimeter of the following figure –

   (a) 15 cm   (b) 15 cm²

   (c) 16 cm   (d) 25 cm²

4. A floor is 5 m long and 4 m wide. A square carpet of side 3 cm is laid on the floor. Find the area of the floor that is not carpeted

   (a) 21 m²   (b) 29 cm²

   (c) 11 m²   (d) 21 m²

5. Find out the smallest number which is divisible by 6, 12, 18 ---

   (a) 360   (b) 180

   (c) 120   (d) 60

6. Which of the following measures of angles given can be those of isosceles triangle –

   (a) 90, 45   (b) 60, 30

   (c) 120, 40   (d) 90, 50

7. The length of a rectangle is 5 cm more than its breadth. If the perimeter of the rectangle is 50 cm than what is the area?

   (a) 150 cm²   (b) 250 cm²

   (c) 900 cm²   (d) 800 cm²

8. 12 persons can finish a piece of work in 15 days. In how many days will be same work be completed by 20 persons?

   (a) 15 days   (b) 9 days

   (c) 30 days   (d) 20 days

9. The LCM of two prime numbers is –

   (a) difference   (b) product

   (c) sum   (d) None

10. In a School of 1000 students, 330 come by bus, 400 come walking and the remaining are dropped by parents. What is the percentage of students that do not ride the bus to school?

    (a) 67%   (b) 27%

    (c) 50%   (d) 33%

11. A train from Station A to Station B covers a distance of 616 km at a uniform speed of 112 km/hr. It Halts at Station B for 1 hour before starting back. How much time will it take to complete the journey and reach back to station A (i.e. from A to B and back)?

    (a) 11 hours

    (b) 12 hours 45 minutes

    (c) 12 hours

    (d) 5 hours 30 minutes

12. A table was sold at 16% loss for Rs. 3,360. Find the cost price of the table.

(a) Rs. 4,000   (b) Rs. 3,392

(c) Rs. 3,600   (d) Rs. 4,296

13. There are 17 rooms in a school; every room has two fans and four LED bulbs. How many switches are required for the school if every fan required a switch and one switch is required for every two bulbs?

(a) 34   (b) 68

(c) 102   (d) 17

14. The product of two decimal numbers is 12-194. If one of them is 4-69 what the other number is?

(a) 7 - 6   (b) 2 - 6

(c) 9 - 8   (d) 4 - 8

15. Rahul purchases a chair for Rs. 600 and uses Rs. 200 for repairs. If he sells it for Rs. 1,000 then he has –

(a) No profit no loss

(b) 25% loss

(c) 25% profit

(d) Cannot be calculated

16. The temperature dropped 15 degree Celsius in the last 30 days. If the rate of temperature drop remains the same, how many degrees will be temperature drop in the next ten days?

(a) 10 degrees   (b) 5 degrees

(c) 20 degrees   (d) 15 degrees

17. From a basket of mangoes when counted in twos there was one extra, counted in threes there were two extra, counted in fours there were three extra, counted in fives there were four extra, counted in sixes there were five extra But counted in sevens there in the basket?

(a) 119   (b) 110

(c) 111   (d) 126

18. Which of the following two digit number when added to 27 gets reversed?

(a) 27   (b) 24

(c) 47   (d) 70

19. The ratio of income to expenditure of Radha is 7-5. If she saves Rs. 2,000 a month, what is her annual income?

(a) Rs. 1,44,000   (b) Rs. 60,000

(c) Rs. 95,000   (d) Rs. 84,000

20. The ratio of the length to breadth of a rectangular lawn is 5 : 3. It costs Rs. 3,200 to fence it at the rate of Rs. 2 a meter. What would be the cost of developing the lawn at the rate of Rs. 10 per square meter?

(a) Rs. 18,00,000   (b) Rs. 15,000,000

(c) Rs. 19,00,000   (d) Rs. 21,00,000

21. A, B and C divide an amount amongst themselves in the ratio of 4:7:9 respectively. If B's share in the amount is Rs. 2,989 what is the total amount?

(a) Rs. 9,820   (b) Rs. 8,540

(c) Rs. 2,720   (d) Rs. 8,640

22. The average age of a class of 40 students in 18 years. When the teachers age is also included to calculate the average age becomes 19 years. What is the teacher's age?

(a) 59 years   (b) 69 years

(c) 49 years   (d) 39 years

23. What is the greatest number which when divides 3026 and 5053 leaves remainders 11 and 13 respectively?

(a) 15   (b) 30

(c) 45   (d) 60

24. Ravi purchased a chair a Rs. 500 and sold it at Rs. 550. What was his gain or loss per cent?

(a) 10%   (b) 20%

(c) 30%   (d) 40%

25. A certain distance is being covered in 28 hours by walking with a speed of 5 km/h. If the speed is increased by 2 km/h then in how much time the same distance will be covered?

(a) 30 hours   (b) 15 hours

(c) 20 hours   (d) 25 hours

26. A piece of wire $\frac{7}{8}$ meter long broke into two pieces. One piece was $\frac{1}{4}$ meter long. How long is the other piece?

(a) $\frac{4}{8}$ m   (b) $\frac{5}{8}$ m

(c) $\frac{6}{8}$ m   (d) $\frac{7}{8}$ m

27. What is the missing number in the sequence 2, 5, 10, 14, 18, 23, 26, 32,….?

(a) 33   (b) 34

(c) 36   (d) 37

28. 30 men can do a piece of work in 16 days. In how many days 8 men can do the same work?

(a) 30 days   (b) 40 days

(c) 50 days   (d) 60 days

29. Ram, Shyam and Mohan runs at speed of 75, 50 and 30 m/minutes respectively. After how much time will they meet together for the first time running with the same speed?

(a) 5 hours   (b) 2 hours

(c) 3 hours   (d) $\frac{5}{2}$ hours

30. Represents 26 kg 5 gram using concept of decimals –

(a) 26-05 kg   (b) 26-005 kg

(c) 26-5 kg   (d) 26-0005 kg

31. At what rate, a sum of Rs. 6,000 will amounts to Rs. 7,800 in 5 years?

(a) 3%   (b) 4%

(c) 5%   (d) 6%

32. What will be the depth of a cubical pond whose volume is 729 m³?

(a) 9 m   (b) 6 m

(c) 8 m   (d) 5 m

33. Evaluate: 3 x 7 + 4.6÷ 3.7 + 45÷5 x 4 + 49

(a) 101   (b) 103

(c) 99   (d) 35

34. In what time a train whose length is 100 m moving with a speed of 60 km/hr crosses a platform whose length is 150 m?

(a) 15 sec   (b) 14 sec

(c) 18 sec   (d) 20 sec

35. Ashu takes 12 days to complete the work. Pranav takes 10 days to complete the same work. Ashu, Pranav and Ramu take 5 days to complete the same work. How many days will Ramu take to complete the same work?

(a) 70 days   (b) 90 days

(c) 60 days   (d) 50 days

36. The LCM of two numbers is 28 times of their HCF. The sum of their LCM and HCF is 1740. If one number is 240 then what is the other number?

(a) 420   (b) 460

(c) 500   (d) 380

37. Four clocks rings at the time interval of 6s, 8s, 12s and 18s respectively. If they ring together at 12 am then how many times will they ring together within the time span of 6 minutes?

(a) 6 times   (b) 4 times

(c) 7 times   (d) 5 times

38. What is the least multiple of 23 which when divided by 18, 21 and 24 leaves remainders 7, 10 and 13 respectively?

(a) 1240   (b) 3013

(c) 2364   (d) 7628

39. A milkman has two cans of milk containing 75 litres and 45 litres of milk respectively. What will be the measure of largest vessel that can measure the milk of the two cans exactly?

(a) 12 litres   (b) 18 litres

(c) 15 litres   (d) 10 litres

40. A table was purchased at Rs. 1,000 and was sold at Rs. 800. What was gain or loss% in this transaction?

(a) 5%   (b) 10%

(c) 20 %   (d) 30%

41. The average weight of 6 boys gets increased by 5 kg if a boy with weight 20 kg is replaced by a new boy. What is the weight of new boy?

(a) 41 kg   (b) 50 kg

(c) 65 kg   (d) 49 kg

42. A man covers a distance of 40 km. He covers first 10 km at 10 km/h, second 10 km at 20 km/h, third 10 km at 30 km/h and last 10 km at 40 km/h. What is the average speed of man?

(a) 18-2 km/h   (b) 19-2 km/h

(c) 19-0 km/h   (d) 16-2 km/h

43. If area of rectangular garden of 5 m breadth is 300 sq. m, then what will be the length of garden?

(a) 60 m   (b) 70 m

(c) 80 m   (d) 90 m

44. If the square of a number is added to the square of 28 the result is 1808. What is the number?

(a) 66   (b) 50

(c) 32   (d) 16

45. Cost of a dozen pens is Rs. 180 and cost of 8 ball pens is Rs. 56. The ratio of the cost of a pen to the cost of a ball pen is?

(a) 15 : 7   (b) 180 : 56

(c) 1 : 1   (d) 8 : 15

46. A truck requires 108 litres of diesel for covering a distance of 594 km. How much diesel will be required by the truck to cover a distance of 1650 km?

(a) 3000 litres   (b) 103 litres

(c) 300 litres   (d) 65 litres

47. Find the simple interest on Rs. 5,000 at the rate of 7 ½ % for a period of 3 years –

(a) Rs. 5,000   (b) Rs. 6,125

(c) Rs. 2,000   (d) Rs. 1,125

48. The angles of a triangle are in the ratio of 1: 2 : 3. Find the values of the angles –

(a) 30, 60, 90   (b) 15, 45, 120

(c) 60, 60, 60   (d) 45, 45, 90

49. One number exceeds another number by 36. The sum of numbers is 48 then the numbers are –

(a) 40, 08   (b) 36, 12

(c) 42, 06   (d) 32, 16

50. At which one of the following times is the angle between the hands of a clock exactly one straight angle?

(a) 12 am   (b) 12 pm

(c) 9:15 am   (d) 6 am

Section B - (General Knowledge)

51. Out of the following list of Param Vir Chakra (PVC) Awardees who was awarded with PVC during Kargil War?

(a) Lt. Col. Ardeshir Burzorji Tarapore

(b) Lt. Arun Khetarpal

(c) Capt. Vikram Batra

(d) Maj. Somnath Sharma

52. Which state among the following has adopted Sanskrit as its one of the official languages?

(a) Himachal Pradesh

(b) Uttarakhand

(c) Rajasthan

(d) Uttar Pradesh

53. Who is the current Vice-President of India?

(a) Shri Narendra Modi

(b) Shri Venkaiah Naidu

(c) Shri Arun Jaitley

(d) Shri Ram Nath Kovind

54. A medical practitioner specializing in children and their diseases –

(a) Geologist.

(b) Pediatrician

(c) Cardiologist

(d) Neurologist

55. A group of stars is called a –

(a) Solar system

(b) Constellations

(c) Planets

(d) Comets

56. Which gas when solidified is commonly known as Dry ice?

(a) Carbon monoxide

(b) Nitrous oxide

(c) Carbon Dioxide

(d) Hydrogen peroxide

57. The members of the Rajya Sabha can have a maximum tenure of how long?

(a) Five years

(b) Six years

(c) Seven years

(d) Two years

58. P. Gopichand is associated with which sport?

(a) Badminton

(b) Cricket

(c) Football

(d) Hockey

59. Which of the following company does not sell mobiles?

(a) Apple

(b) BSNL

(c) HP

(d) Sony

60. A vehicle capable of travelling over land and water is called –

(a) Hovarcraft

(b) Rovercraft

(c) Mowercraft

(d) Car

61. The space programme of Government of India is looked after –

(a) ISBT

(b) NTRO

(c) NABARD

(d) ISRO

62. The Motto of the Indian Navy is –

(a) Sarvatra Sarv uttama Suraksha

(b) Sham No Varuna

(c) Valour and Wisdom

(d) Nabha Sprsasham Deeptam

63. Which is the largest gland in human body?

(a) Salivary gland

(b) Lungs

(c) Liver

(d) Stomach

64. Who has written 'Sare Jahan Se Achha"?

(a) Rabindra Nath Tagore

(b) Bankim Chandra Chatterjee

(c) Muhammad Iqbal

(d) Subash Chandra Bose

65. Which is the deepest Ocean?

(a) Indian Ocean

(b) Arctic Ocean

(c) Antarctic Ocean

(d) Pacific Ocean

66. Who fixes the salaries and the allowances of the Speaker of Lok Sabha?

(a) Council of Minister

(b) President

(c) Parliament

(d) Judge of Supreme Court

67. Which article of Constitution provides Indian citizen 'Right to Equality'?

(a) Article 12

(b) Article 13

(c) Article 17

(d) Article 14

68. 1024 kilobytes is equal to -

(a) 8 Bits

(b) 1 Megabyte (MB)

(c) 1 Gigabyte (GB)

(d) 1 Byte

69. Hirakund dam is built on the river?

(a) Cauvery

(b) Mahanadi

(c) Krishna

(d) Sutlej

70. Deficiency of Iodine causes?

(a) Goiter

(b) Malaria

(c) Cataract

(d) Scurvy

71. Who is known as 'Iron man' of India?

(a) Jawaharlal Nehru

(b) Mahatma Gandhi

(c) Sardar Patel

(d) Subhash Chandra Bose

72. Which among of the following is not an Indian sport?

(a) Kabbadi

(b) Kho-Kho

(c) Hockey

(d) Rugby

73. Those who study things that were made and used in the past these people are called ….

(a) Biologist

(b) Archaeologists

(c) Geologist

(d) Doctor

74. What is the ratio of width to the length of National Flag of India?

(a) 4 : 5

(b) 2 : 3

(c) 1 : 1

(d) 5 : 6

75. Where is Wagah-Border located?

(a) Longewala Rajasthan

(b) Moreh, Manipur

(c) Rann of Kutch, Gujarat

(d) Amritsar, Punjab

Section C - (English)

Directions (76 - 77): Choose the most appropriate option given against each question.

76. Which word means nearly the same as "Scream"?

(a) find   (b) stop

(c) sell   (d) shout

77. Which word means nearly the same "happy"?

(a) condition   (b) disgusted

(c) Content   (d) ambitious

Directions (78 to 80): choose the appropriate options to complete the sentences.

78. The men are working. Their …….. are at home.

(a) wife   (b) husbands

(c) husband   (d) wives

79. Rahul works less …… than Mohan.

(a) carefully   (b) more careful

(c) careful   (d) careful as

80. It ……... all day long yesterday.

(a) was rained   (b) raining

(c) rained   (d) has rained

Directions (81 to 82): Rearrange the following words/groups of words to make meaningful sentences. Choose the correct sequence given in the options.

81. quite happy (a)/ was (b)/ the first prize (c)/ to receive (d)

(a) BADC   (b) ABCD

(c) DCBA   (d) BACD

82. protect (a)/ we must (b)/ natural resources (c)/ our (d)

(a) ABCD   (b) BADC

(c) DCBA   (d) DCAB

Directions (83 to 84): Choose the appropriate option to fill in the blanks.

83. One who leads an austere life –

(a) Ruler   (b) Auditor

(c) Ascetic   (d) Carpenter

84. A person who presents a radio – television programme.

(a) Director   (b) Actress

(c) Actor   (d) Anchor

85. Pick the gender of 'Lad' –

(a) Lass   (b) Queen

(c) Woman   (d) Dame

86. Choose the gender of 'Fox' –

(a) Filly   (b) Goose

(c) Witch   (d) Vixen

87. ……… Always stood third in her class (supply the correct pronoun)

(a) You   (b) They

(c) He   (d) She

88. All the candidates should bring ….. own pen (supply the correct pronoun)

(a) Everyone   (b) They

(c) Nobody   (d) Their

89. Experience is the ……… Teacher (supply the correct adjective)

(a) Better   (b) Good

(c) Best   (d) Great

90. ……… a beautiful scene it is ! (Pick up the correct adverb)

(a) What   (b) How

(c) Always   (d) Never

91. Did you apply ……… this post? (Supply the correct preposition)

(a) To   (b) All

(c) For   (d) of

92. You should take care …… your health (supply the correct preposition)

(a) Of   (b) In

(c) At   (d) Of

93. He is rich ……….. He is not happy (supply the correct conjunction)

(a) Of   (b) In

(c) At   (d) To

94. Work hard …… you will fail (supply the correct conjunction)

(a) Yet   (b) Though

(c) Because   (d) But

95. The child ………… for two hours (select the correct form of verb)

(a) Has been sleeping

(b) Have been sleeping

(c) Has slept

(d) Will sleep

Directions (96 to 100): Read the following passage and answer the questions –

From far out in space, Earth looks like a blue ball. Since water covers three-fourths of the Earth's surface, blue is the colour we see most. The continents look brown, like small islands floating in the huge, blue sea. White clouds wrap around the Earth like a light blanket. The Earth is shaped like a sphere, or a ball. It is 25,000 miles around! It would take more than a year to walk around the whole planet. A spaceship can fly around the widest part of the sphere in only 90 minutes.

Even though spaceships have travelled to the Moon, people cannot visit the Moon without special suits. The Moon has no air or water. Plants and animals can't live there either. Astronauts first landed on the Moon in 1969. After that, there were six more trips to the Moon. They brought back Moon rocks, which scientists are still studying. There are holes, or craters, all over the Moon's surface,. Scientists believe that meteorites smashed into the Moon millions of years ago and formed the craters.

The Sun is the closest star to Earth. A star is a hot ball of burning gas. The Sun looks very big because it is so close. But the Sun is just a medium sized star. Billions of far-away stars are much bigger than our Sun. The burning gases from the Sun are so hot that they warm the Earth from 93 million miles away! Even though the Sun is always glowing, the night here on Earth is dark. That's because the Earth rotates, or turns around, every 24 hours. During the day, the Earth faces the Sun. Then we see light. During the night, the Earth turns away from the sun. Then it faces the darkness of space. Each day we learn more about the Earth, the Moon, and the Sun.

96. Why is blue the colour we see most when looking at Earth from outer space?

(a) Because most of the Earth is covered in land

(b) Because the Sun's rays make the Earth look blue

(c) Because most of the Earth is covered in water

(d) Because clouds wrap around the Earth

97. What does 'formed' mean?

(a) hit   (b) made

(c) broke   (d) stopped

98. What causes daylight on Earth?

(a) The full Moon causes daylight.

(b) Daylight is caused by the Earth facing away from the Sun.

(c) The heat of Sun's rays causes daylight.

(d) Daylight is caused by the Earth facing towards the Sun.

99. Which of the following sentences BEST describes the Sun?

(a) The Sun looks small because it is so far from Earth.

(b) The Sun is a ball of burning gases that gives the Earth heat and light.

(c) The Sun is a small star.

(d) The Sun is not as hot as it looks.

100. Why did the astronauts bring rocks back from the Moon?

(a) Because they didn't know if they would return to the Moon ever again.

(b) Because they wanted to prove that they went to the Moon.

(c) Because they wanted to remember how the Moon looked

(d) Because they wanted to study them and learn more about the Moon.

Section – D (Reasoning)

101. If you see the problem figure in the mirror, which figure out of the four figures A, B, C and D will be the mirror image of figure 'X' –
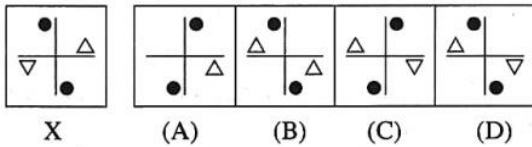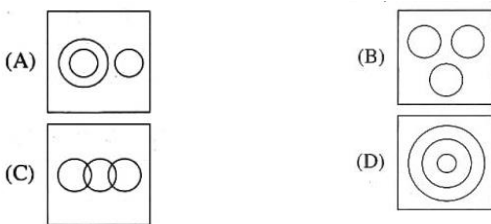

(a) a   (b) b

(c) c   (d) d

102. Choose the word which is least like the other words in the group –

(a) PICTURE

(b) POSTER

(c) BOOK

(d) SCENERY

103. Which of the following diagram indicates the best relation between Travelers, Train and Bus?

104. If CAR is to PETROL, then TELEVISION is to …………..

(a) ANTENNA

(b) TRANSMISSION

(c) ENTERTAINMENT

(d) ELECTRICITY

105. Which figure among the four figures A, B, C and D would replace the question mark in figure 'X'?
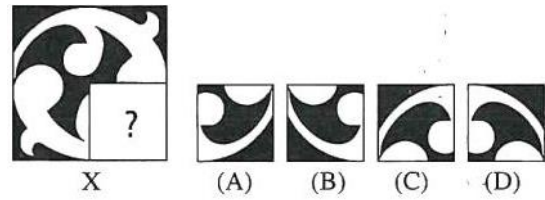
(a) a   (b) b

(c) c   (d) d

106. A class of boys stands in a single line. One boy is nineteenth in order from both the ends. How many boys are there in the class?

(a) 27   (b) 37

(c) 38   (d) 39

107. If you fold the transparent paper along the dotted line Figure 'X' which alternative figure from A, B, C and D would you get?
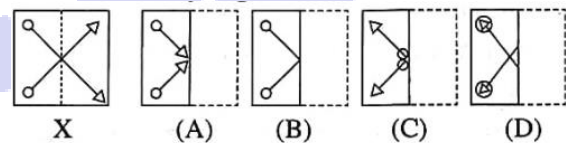
(a) a   (b) b

(c) c   (d) d

108. If SCHOOL is to EDUCATION then BANK is to ………?

(a) ATM   (b) CHEQUE

(c) LOAN   (d) LOCKER

109. If the given word is seen in mirror, which alternative would resemble its mirror image?

SHARE

(A) ƎЯAHƧ   (B) ƎЯAHƧ

(C) ƧAHЯƎ   (D) ƎƧAHƧ

110. Choose the alternative that resembles the water image of the given alpha-numeric series below-

HR26420

(A) OS◁▷◁SЯH
(B) HЯSৎৎSO
(C) OS◁▷◁SЯH
(D) HЯSৎৎSH

111. Choose the word which is least like the other words in the group.

(a) EARTH   (b) SUN
(c) MERCURY   (d) JUPITER

112. Which figure among the four alternatives A, B, C and D would replace the question mark in figure 'X'?
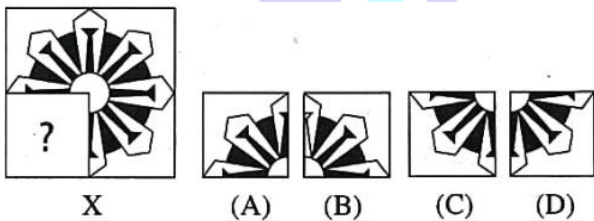
(a) a   (b) b
(c) c   (d) d

113. If all directions are rotated clockwise by 90° angle i.e. north is changed to West, East to North and to on, then what will come in place of North West?

(a) SOUTH – WEST
(b) NORTH – EAST
(c) SOUTH – EAST
(d) EAST – WEST

114. Choose the word which can be formed from the given word –

INFRASTRUCTURE

(a) RUPTURE
(b) SCULPTURE
(c) FRACTURE
(d) VULTURE

115. If you see the problem figure in the mirror along the dotted line, which figure out of the four figures A, B, C and D will be the mirror image of figure 'X'?
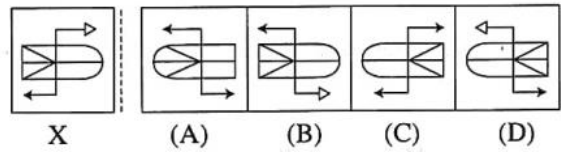
(a) a   (b) b
(c) c   (d) d

116. Choose the word which is least like the other words in the group –

(a) STUDENT   (b) LAWYER
(c) MECHANIC   (d) ENGINEER

117. If you see the problem figure 'X' in the mirror, which figure out of the four figures A, B, C, and D will be the mirror image of it –
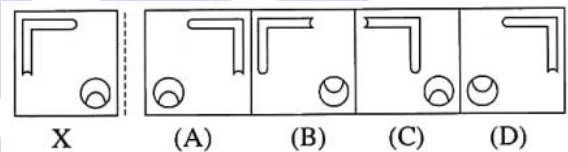
(a) a   (b) b
(c) c   (d) d

118. If '+' means '÷' means '-' means 'x' and 'x' means '+', then what would be the answer of the equation? 12 + 6 ÷ 3 – 2 x 8 =

(a) -2   (b) 2
(c) 4   (d) 8

119. Figure 'X' is embedded in any one of the four alternative figures A, B, C or (D) Find the alternative which contains figure 'X' as its part –
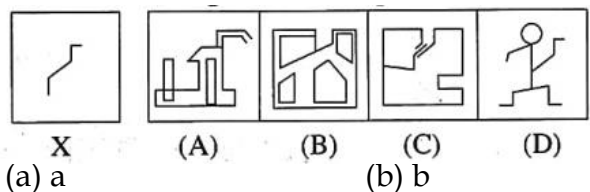
(a) a   (b) b

(c) c   (d) d   (c) 46   (d) 43

120. If '÷' means 'x', 'x' means '+', '+' means '-' and '-' means ÷, then what would be the answer of the equation?

16 x 3 + 5 – 2 ÷ 4 =?

(a) 9   (b) 10

(c) 19   (d) None of these

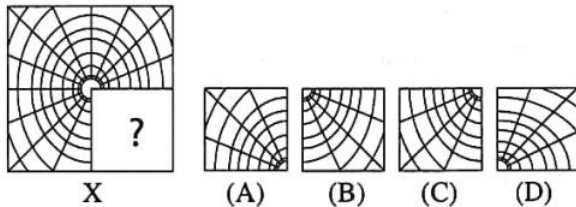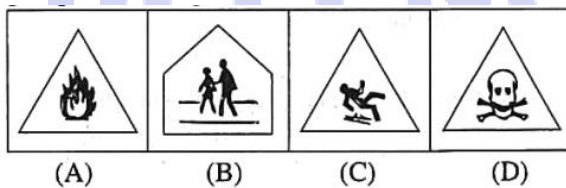121. Nitin ranks eighteenth from the top in a class of 49 students. What is his rank from the last?

(a) 18   (b) 19

(c) 31   (d) 32

122. Which figure among the four alternatives A, B, C and D would replace the question mark in figure 'X'?

(a) a   (b) b

(c) c   (d) d

123. Find out the figure which does not belong to the group of other figures –

(a) a   (b) b

(c) c   (d) d

124. Find the missing number in the number series given below – 06, 11, 21, 36, 56, ?

(a) 42   (b) 51

(c) 81   (d) 91

125. Find the missing number that has same relation to 26 as 37 has to 19. 19 : 37 : 26 : ?

(a) 52   (b) 51

Hints and Solutions

Section – A (Mathematics)

1. (b) Required difference

= 7236 x (65 – 56)

= 7236 x 9

= 65124

2. (a)

$$1 \div \left\{ \frac{1}{2} + \frac{1}{3} + \frac{1}{6} \div \left(\frac{3}{4} - \frac{1}{3} \right) \right\}$$

$$= 1 \div \left\{ \frac{1}{2} + \frac{1}{3} + \frac{1}{6} \div \left(\frac{9-4}{12} \right) \right\}$$

$$= 1 \div \left\{ \frac{1}{2} + \frac{1}{3} + \frac{1}{6} \times \frac{12}{5} \right\}$$

$$= 1 \div \left\{ \frac{1}{2} + \frac{1}{3} + \frac{2}{5} \right\}$$

$$= 1 \div \left\{ \frac{15 + 10 + 12}{30} \right\}$$

$$= 1 \times \frac{30}{37}$$

$$= \frac{30}{37}$$

3. (a) Perimeter of the figure

= 1 + 4 + 4 + 0.5 + 0.5 + 2.5 + 2.5 = 15 cm

4. (c) Required area = (5 x 4) – (3 x 3)

= 20 – 9 = 11 m²

5.   6   = 2 x 3

12   = 2 x 2 x 3

18   = 2 x 3 x 3

Smallest number = 2³ x 3³

= 4 x 9 = 36

6. (a) Sum of angles of isosceles triangle

= 90º + 45º + 45º

7. (a) Let breadth of rectangle = x cm

Then,   length = (x + 5) cm

As per question,

2(x + 5 + x) = 50

2x +5 = 25

2x = 20

x = 10

Area of rectangle = (10 + 5) x 10

= 15 x 10

= 150 cm²

8. (b) Required no. of days

$$= \frac{12 \times 15}{20}$$

= 9 days

9. (b)

10. (a) Required percentage

$$= \frac{(1000 - 330)}{1000} \times 100$$

$$= \frac{670}{10}$$

= 67%

11. (c) Required time $= \frac{616}{112} + 1 + \frac{616}{112}$

= 5-5 + 1 + 5.5

= 12 hours

12. (a) Cost price of table

$$= \frac{3360}{(100 - 16)} \times 100$$

$$= \frac{3360}{84} \times 100$$

= Rs. 4,000

13. (b) Total no. of fans = 17 x 2 = 34

Total no. of LED bulbs = 17 x 4 = 68

Total no. of switches = $34 + \frac{68}{2}$

= 34 + 34 = 68

14. (b) Other number $= \frac{12.194}{4.69} = 2.6$

15. (c) Total profit = 1000 – (600 + 200)

= 1000 – 800

= Rs. 200

Required profit % $= \frac{200}{800} \times 100 = 25\%$

16. (c) Temperature drop in the next ten days

$$= \frac{15}{30} \times 10$$

= 5 degrees

17. (a)

18. (c) 47 + 27 = 74

19. (d) Annual income of Radha

$$= \frac{2000}{(7-5)} \times 7 \times 12$$

$$= \frac{2000}{2} \times 84$$

$$= Rs.\ 84,000$$

20. (b) Let length and breadth rectangular lawn are 5x and 3x meter respectively.

   As per question,

   $$2\ (5x + 3x) = \frac{3200}{2}$$

   $$2 \times 8x = 1600$$

   $$16\ x = 1600$$

   $$x = 100$$

   Required cost = (5 x 100) x (3 x 100) x 10

   $$= 500 \times 300 \times 10$$

   $$= Rs.\ 15,00,000$$

21. (b) Total amount = $\frac{2989}{7} \times (4 + 7 + 9)$

   $$= 427 \times 20$$

   $$Rs.\ 8,540$$

22. (a) Age of the teacher = 41 x 19 – 40 x 18

   $$= 779 - 720$$

   $$= 59\ years$$

23. (c)   3026 – 11 = 3015

   $$= 3 \times 3 \times 5 \times 67$$

   And   5053 – 13 = 5040

   $$= 5053 - 13 = Rs.\ 5040$$

   $$= 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 7$$

   Required greatest number = 3 x 3 x 5

   $$= 45$$

24. (a) Required profit percentage

   $$= \frac{(550-500)}{500} \times 100$$

   $$= \frac{50}{5} = 10\%$$

25. (c) Total distance = 5 x 28

   $$140\ km$$

   Require time = $\frac{140}{(5+2)}$

   $$= \frac{140}{7}$$

   $$= 20\ hours$$

26. (b) Length of other piece

$$= \frac{7}{8} - \frac{1}{4}$$

$$= \frac{7-2}{8}$$

$$= \frac{5}{8}m$$

27. (b)

28. (d) Required no. of days

   $$= \frac{30 \times 16}{8}$$

   $$= 60\ days$$

29. (d) 75 = 3 x 5 x 5

   $$50 = 2 \times 5 \times 5$$

   $$30 = 2 \times 3 \times 5$$

   `Required time = $2 \times 3 \times 5^2$

   $$= 6 \times 25$$

   $$= 150\ minute\ or\ \frac{5}{2}\ hours$$

30. (b)

31. (d) Let rate = R %

   As per question,

   $$(7800 - 6000) = \frac{6000 \times 5 \times R}{100}$$

32. (a) Depth of cubical pond = $\sqrt[3]{729}$ = 9 m

33. (a) 3 x 7 + 4 – 6 ÷ 3 – 7 + 45 ÷ 5 x 4 + 49

   $$= 110 - 9 = 101$$

34. (a) Required time taken by train3`

   $$= \frac{(100+150)}{6 \times \frac{5}{18}}$$

   $$= \frac{250}{60} \times \frac{18}{5}$$

35. (c) One day work of Ramu

   $$= \frac{1}{5} - \frac{1}{12} - \frac{1}{10}$$

   $$= \frac{12-5-6}{60}$$

   $$= \frac{1}{60}$$

   Required time taken by Ramu = 60 days.

36. (a) Let, HCF = x

   Then, LCM = 28x

   As per question,

   $$28x + x = 1740$$

   $$29x = 1740$$

$x = 60$

Other number $= \frac{60 \times 28 \times 60}{240}$

$\qquad = 420$

37. (a) $6 \rightarrow 2 \times 3$

$\qquad 8 \rightarrow 2 \times 2 \times 2$

$\qquad 12 \rightarrow 2 \times 2 \times 3$

$\qquad 18 \rightarrow 2 \times 3 \times 3$

$\qquad$ LCM $= 2^3 \times 3^2$

$\qquad\qquad = 8 \times 9 = 72$ se(c)

Total no. of ringing together of all watches

$\qquad = \frac{6 \times 60}{72} + 1$

$\qquad = \frac{360}{72} + 1$

$\qquad = 5 + 1$

$\qquad = 6$ times

38. (b)

39. (c) $75 \rightarrow 3 \times 5 \times 5$

And $\qquad 45 \rightarrow 3 \times 3 \times 5$

Required measurement $= 3 \times 5$

$\qquad = 15$ litres

40. (c) Required loss % $= \frac{(1000-800)}{1000} \times 100$

$\qquad = \frac{200}{10} = 20\%$

41. (b) Let average weight of 6 boys = x kg.

And weight of new boy = y kg.

As per question,

$6x - 20 + 7 = 6(x + 5)$

$6x - 20 + y = 6x + 30$

$\qquad$ Y = 50 kg

42. (B) Total time $= \frac{10}{10} + \frac{10}{20} + \frac{10}{30} + \frac{10}{40}$

$\qquad = 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4}$

$\qquad = \frac{12+6+4+3}{12}$

$\qquad = \frac{25}{12}$ hours

Average speed of man $= \frac{40}{25} \times 12$

$\qquad = 19.2$ km/hr

43. (a) Length of garden $= \frac{300}{5} = 60$ m

44. (c) Let number = x

As per question, $x^2 + 28^2 = 1808$

$\qquad x^2 = 1808 - 784$

$\qquad = 1021$

$\qquad x = \sqrt{1024} = 32$

45. (a) Required Ratio $= \frac{180}{12} : \frac{56}{8}$

$\qquad = 15 : 7$

46. (c) Required quantity of diesel

$= \frac{108}{594} \times 1650$

$\qquad = 300$ litres

47. (d) Simple Interest $= \frac{5000 \times 15 \times 3}{100 \times 2}$

$\qquad =$ Rs 1125

48. (a) Let three angles of triangles are x, 2x and 3x.

As per question,

$x + 2x + 3x = 180°$

$6x = 180°$

$x = 30°$

$2x = 2 \times 30° = 60°$

and $3x = 3 \times 30° = 90°$

49. (c) Let another number $= x$

Then, first number $= x + 36$

As per question,

$x + 36 + x = 48$

$2x = 12; x = 6$

First number = 6 + 36 = 42

Second number = 6

50. (d)

Section-B (General Knowledge)

51. c	52. b	53. b	54. b	55. b
56. c	57. b	58. a	59. d	60. a
61. d	62. b	63. c	64.c	65. d
66. c	67. d	68. b	69.b	70. a
71. c	72.d	73. b	74. b	75. d

Section-C (Language)

76. d	77. b	78. d	79. b	80. d

81. d	82. c	83. d	84. a	85. c
86. a	87. b	88. c	89. d	90. a
91. d	92. d	93. d	94. c	95. a
96. c	97. a	98. a	99. a	100. c

Section – D (Reasoning)

101. (c)

102. (d)

103. (c)

104. (d)

Train (Traveler) Bus

105. (a)
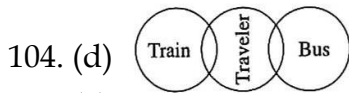
106. (b) Total no. of boys in the class

     = 19 + 19 – 1 = 37

107. (b)

108. (c)

109. (a)

110. (d)

111. (b)

112. (c)

113. (a)
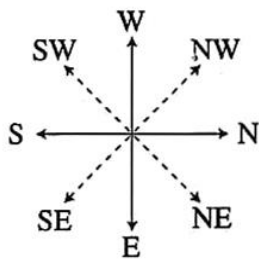
W

SW   NW

S ←   → N

SE   NE

E

114. (c)

115. (d)

116. (a)

117. (a)

118. (c) .

$$12 + 6 \div 3 - 2 \times 8$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$
$$12 \div 6 - 3 \times 2 + 8$$

= 2 – 6 + 8 = 4

119. (d)

120. (a)

16 x 3 + 5 – 2 ÷ 4

16 + 3 – 5 ÷ 2 x 4

= 19 – 10 = 9

121. (d) Nitin's rank from the last

= 49 – 18 + 1 = 32

122. (b)

123. (b)

124. (c)

6   11   21   36   56   [81]
   +5   +10   +15   +20   +25

125. (b)

`

19 : 37 :: 26 : [51]

×2 – 1   ×2 – 1