SET - A

# ALL INDIA SAINIK SCHOOLS ENTRANCE EXAMINATION: 2020

## MATHS, ENGLISH, GENERAL SCIENCE, SOCIAL STUDIES AND INTELLIGENCE

**CLASS – IX** 0007415

Time: 3 Hrs Max. Marks: 400

Name in Full ..... Roll No. .....

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## INSTRUCTIONS

1. This question paper contains FIVE sections and you have to answer all questions in the OMR answer sheet. Section "A" Mathematics contains 50 questions of 4 marks each. Section "B" English, Section "C" General Science, Section "D" Social Studies, and Section "E" Intelligence contain 25 questions each with 2 marks per question.

2. There is only one correct answer for each question. Darken only one bubble for each question. If you darken more than one bubble, your answer will be treated as wrong.

3. Evaluation of OMR answer sheet will be done on a computer. Ensure no unnecessary markings are made on the OMR answer sheet. Do not fold or attempt to deface the OMR answer sheet. OMR sheets with multiple folds or defaced OMR sheet will not be evaluated.

4. Rough work must be done on the additional two sheets only and NOT on the OMR answer sheet.

5. Write your answer in Blue/Black ink only. Do not use pencil.

6. There are total **28** pages in the question paper including two pages for the rough work

## SECTION-A
## MATHEMATICS

1. The value of $\left(-\frac{3}{2}\times\frac{4}{5}\right)+\left(\frac{9}{5}\times\frac{-10}{3}\right)-\left(\frac{1}{2}\times\frac{3}{4}\right)$?

   (a) $\left(-\frac{503}{40}\right)$ (b) $\left(-\frac{203}{40}\right)$

   (c) $\left(-\frac{403}{40}\right)$ (d) $\left(-\frac{303}{40}\right)$

2. The abscissa of a point is its distance from the

   (a) Origin (b) X-Axis (c) Y-Axis (d) None

3. What is the value of $m$, if $\left(\frac{2}{9}\right)^{3}\times\left(\frac{2}{9}\right)^{-6}=\left(\frac{2}{9}\right)^{2m-1}$

   (a) $m=1$ (b) $m=-2$

   (c) $m=-1$ (d) $m=2$

4. "If a number when divided by 4 leaves remainder 2 or 3", then which one is the correct statement ?

   (a) The number is not a perfect square
   (b) The number is a perfect square
   (c) The number is a prime number
   (d) None of these

5. The value of $\frac{\sqrt{0.2304}+\sqrt{0.1764}}{\sqrt{0.2304}-\sqrt{0.1764}}$

   (a) 15 (b) 16 (c) 5 (d) 150

6. Three numbers are in the ratio 2 : 3 : 4. The sum of their cubes is 33957. The numbers are

   (a) 16, 24 and 32 (b) 12, 18 and 24
   (c) 14, 21 and 28 (d) 18, 27 and 36

7. Find the least square number divisible by each one of 8, 9 and 10:-

   (a) 360 (b) 36 (c) 3600 (d) $3.6 \times 10^2$

8. If $\overline{148101a095}$ is a multiple of 11, where $a$ is a digit, the value of $a$ is

(a) 0 (b) 4 (c) 1 (d) 2

9. Find the value of A and B in

$$\begin{array}{r} B\ A \\ \times B\ 3 \\ \hline 5\ 7\ A \\ \hline \end{array}$$

(a) A = 5 and B = 2 (b) A = 5 and B = 5

(c) A = 2 and B = 2 (d) A = 2 and B = 5

10. Find the value of Z for which the number 471Z8 is divisible by 9.

(a) 4 (b) 5 (c) 7 (d) 8

11. If the area of an equilateral triangle is $64\sqrt{3}$ cm$^2$, then the side of the triangle is _____

(a) $18\sqrt{3}$ cm (b) 9 cm (c) 16 cm (d) $3\sqrt{2}$ cm

12. The value of $\frac{4m^2 - a^2 + 2ab - b^2}{2m + a - b}$ is

(a) $(2m - a + b)$ (b) $(2m - a - b)$

(c) $(2m + a + b)$ (d) $(2m + a - b)$

13. The ratio between the speeds of two trains A and B is 3 : 5 . If train B runs 300km in 4 hours, the speed of train A will be

(a) 40 km/h (b) 60km/h (c) 30 km/h (d) 45 km/h

14. Two years ago, Dilip was three times as old as his son and two years hence, twice his age will be equal to five times that of his son. The present age of son and Dilip are

(a) 14, 38 years (b) 16, 40 years (c) 12, 36 years (d) None

15. The probability of getting a 7 in a single throw of a dice is:

(a) 1 (b) 0 (c) 1/6 (d) ½

16. A's income is 60% more than that of B. By what percent is B's income less than A's ?

(a) 37% (b) 37.5% (c) 36.5% (d) 36%

17. By joining (–3, 2), (–3, –3) and (–3, 4), which of the following is obtained?

(a) A triangle
(b) A straight line parallel to x- axis
(c) A straight line parallel to y- axis
(d) A straight line passing through origin

18. The number of times a particular observation occurs in a given data is called its
(a) Frequency (b) Range (c) Mean (d) none of these

19. By selling 33 m of cloth, a draper loses an amount equal to the selling price of 3 m of cloth. Find his gain or loss percent.

(a) gain $8\frac{1}{3}$ % (b) loss $8\frac{1}{3}$ % (c) gain 7% (d) loss 7%

20. Three cubes of metal whose edges are 6 cm, 8 cm and 10cm respectively are melted to form a single cube. The edge of the new cube is _____.
(a) 24 cm (b) 20 cm (c) 18 cm (d) 12 cm

21. Find the single discount equivalent to two successive discounts of 20% and 10%

(a) 25% (b) 30% (c) 28% (d) 10%

22. Which of the following is not a case of direct variation?

(a) Number of sheets of some kind are increased when their total weight is increased
(b) More quantity of petrol is required to travel more distance with a fixed speed
(c) More fees would be collected if number of students increase in a class
(d) Time taken will be less, if number of workers is increased to complete the same work.

23. If $a+b+c=9$ and $ab+bc+ca=23$, then the value of $a^2+b^2+c^2$ equals to

(a) 35 (b) 81 (c) 127 (d) 217

24. On dividing 200 into two parts, $\frac{1}{3}$ of the first part and $\frac{1}{2}$ of the second part are equal. The larger of the parts is _____

(a) 80 (b) 120 (c) 40 (d) 150

25. On selling a fan for Rs 810, Sunil gains 8%. For how much did he purchase it?

(a) Rs 700 (b) Rs 675 (c) Rs 650 (d) Rs 750

26. Find the value of x: $3^{2x} \times 3^{x+3} \times 3^{4-x} = (\sqrt{3})^{10}$

(a) -1 (b) 0 (c) 1 (d) 2

27. $\sqrt[3]{\frac{(-a^6 X\, b^3 X\, c^{21})}{c^9 X\, a^{12}}}$ = _____

(a) $\frac{-bc^3}{a^2}$ (b) $\frac{bc^4}{a^2}$ (c) $\frac{-ab^4}{c^2}$ (d) $\frac{-bc^4}{a^2}$

28. If $n$ is a perfect cube, then every prime factor of 'n' occurs _____

(a) One time (b) Two times (c) Three times (d) Four times

29. Find the greatest number of four digits which is a perfect square.

(a) 9800 (b) 9864 (c) 9999 (d) 9801

30. If the ratio of the ages (in years) of $x$ and $y$, 8 years ago is 7 : 6, then which of the following can be the sum of their ages 8 years from now?

(a) 82 (b) 97 (c) 75 (d) 94

31. The age of the boy is one-fifth of the age of his mother and sum of the ages of the son and the mother is equal to the age of the father. After 15 years, the sum of the ages of the son and his mother will be four-third of his father's age. Find the ratio of the present ages of son, mother and father respectively.

(a) 1:5:7 (b) 2:10:10 (c) 1:5:6 (d) 2:8:9

32. The ratio of the income of P and Q is 5 : 4. The ratio of expenditure is 4 : 3. The saving of P is more than that of Q by $16\frac{2}{3}\%$. What % of his income does P spend?

(a) $53\frac{2}{3}\%$ (b) $53\frac{1}{3}\%$ (c) $54\frac{1}{3}\%$ (d) $51\frac{2}{3}\%$

33. Mohan invested a sum of Rs. 12,500 at 12% per annum compound interest. He received an amount of Rs. 15,680 after x year. Then the value of x is _____

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

34. Find the compound interest on Rs 1, 25,000 for 9 months at 8% per annum, compounded quarterly.

(a) 7551 (b) 7651 (c) 7650 (d) 7655

35. Pipe A can fill a tank in 12 hours and pipe B can empty the tank in 18 hours. Both pipes are opened at 6 AM and after some time, pipe B is closed and tank is full at 8 PM. At what time was the pipe B closed?

(a) 10 AM (b) 8 AM (c) 9 AM (d) 11 AM

36. A car covers 300 kms at a constant speed. If its speed was 10 kmph more, it would have taken 1 hour less to travel the same distance. Find the speed of the car.

(a) 60 kmph (b) 50 kmph (c) 40 kmph (d) 75 kmph

37. Two trains are travelling in opposite direction with speed of 25 m/s and 30 m/s respectively. If the length of one train is 300 m and that of the other train is 250 m, then find the time taken by the trains to cross each other.

(a) 8 s (b) 10s (c) 12 s (d) 14s

38. The sum of the digits of a two digit number is 9. If 27 is subtracted from the number then the digits get reversed. Find the number.

(a) 81 (b) 72 (c) 36 (d) 63

39. There are some four-wheelers and six-wheelers in a garage. The total number of wheels of these vehicles is 120. The number of four-wheelers is 3/2 times the number of six-wheelers. Find the number of six-wheelers in the garage.

(a) 20 (b) 5 (c) 15 (d) 10

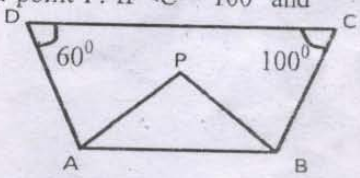
40. What is the minimum interior angle possible for a regular polygon?

(a) $60^0$ (b) $75^0$ (c) $90^0$ (d) None

41. What is the number of diagonals in a hexagon?

(a) 4 (b) 6 (c) 9 (d) 10

42. In the adjacent figure, the bisectors of <A and <B meet at a point P. If $<C = 100^0$ and $<D = 60^0$ find the measure of <APB.




(a) $60^0$ (b) $70^0$ (c) $90^0$ (d) $80^0$

43. A square and a rectangle each have a perimeter of 40 m. The difference between areas of the two figures is $9m^2$. What are the possible dimensions of the rectangle?

(a) 13m, 7m (b) 14m, 6m (c) 108m, 1m (d) 15m ,5m

44. In a parallelogram ABCD, AB = 6 cm, BC = 5cm and AC = 7cm. Find the perpendicular distance between $\overline{AB}$ and $\overline{CD}$.

(a) $6\sqrt{6}cm$ (b) $12\sqrt{6}cm$ (c) 5cm (d) $2\sqrt{6cm}$

45. Some cubic metres of earth is dug out to sink a well which is 16 m deep and which has a radius of 3.5 m. If that amount of earth when taken out is spread over a rectangular plot of dimensions 25 m x 16 m, what is the height of the platforms so formed?

(a) 1.54 m (b) 1.50 m (c) 1.52 m (d) 1.53 m

46. What is the difference between the total surface area and curved surface area of a cylinder whose radius is equal to 10cm?

(a) $200\pi$ cm$^2$ (b) $300\pi$ cm$^2$ (c) $100\pi$ cm$^2$ (d) $10\pi$ cm$^2$

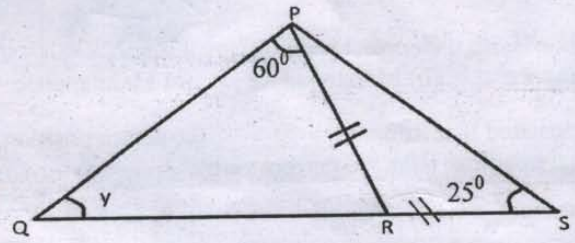
47. The mean of six numbers is 15. If 2 is taken away from every number, the new mean would be

(a) 13 (b) 4 (c) 17 (d) 8

48. The sides of the triangle are 45cm, 60cm and 75 cm. Find the length drawn to the longest side from its opposite vertex

(a) 27 cm (b) 21 cm (c) 39 cm (d) 36 cm

49. In the following figure, find the value of Y




(a) $50^0$ (b) $65^0$ (c) $60^0$ (d) $70^0$

50. A cylindrical tank has a capacity of 5632 $m^3$. If the diameter of its base is 16m, find its depth.

(a) 28 m (b) 25 m (c) 16 m (d) 29 m

## SECTION B
## ENGLISH

51. Candidates must _____the general conditions for admission.
(a) do (b) prepare (c) satisfy (d) create

52. He resorts _____ sharp practice in his dealings.
(a) at (b) to (c) in (d) for

53. .....English is an international language.
(a) No article
(b) The
(c) A
(d) An

54. The word **'Industrious'** means.

(a) Working in industry (b) Labour in factory
(c) Hard working (d) Laid back

55. Choose the correct order to make the sentence below meaningful:-

**Wear/these/people/almost/a/majority/of/days/a watch**
**1 2 3 4 5 6 7 8 9**

(a) 456731928 (b) 457613829
(c) 456792318 (d) 456731289

56. Select the word closest in meaning to "Mortal"
(a) Recurrent (b) Trivial (c) Fatal (d) Eternal

57. Mark the word with the correct spelling
(a) Maintenance (b) Maintennance (c) Maintanance (d) Maintainance

58. The coach insisted that Ronaldo_____ the centre position, even though he's too short for that position. (Use the correct verb)

(a) play (b) played (c) plays (d) none of these

59. _____ King of Scotland saw _____spider trying to climb up to _____ ceiling of the cave. (Use Articles)

(a) The, a, the (b) A, a, the (c) No article, a, no article (d) The, a, no article

60. Raju relishes not only Chinese_____continental food. (Use appropriate Conjunction)

(a) also (b) but (c) but also (d) rather

61. You must learn.....English every day to improve it. (Use appropriate determiner)

(a) a few (b) a little (c) a lot of (d) none of these

62. Arrange the jumbled words to form a meaningful sentence

**most/inventor/world/Thomas/Alva/Edison/the/in/is/remarkable/the**

(a) The remarkable inventor in the most world is Thomas Alva Edison.
(b) Thomas Alva Edison is the most remarkable inventor in the world.
(c) Is the most remarkable inventor in the world Thomas Alva Edison.
(d) In the world most remarkable inventor is Thomas Alva Edison.

***Read the following passages and answer the questions that follow:***

The moon's role in causing tides is much more high and important than that of the Sun. The reason is that the moon enjoys more proximity to the earth than the sun. As such its force is greater than that of the sun in attracting the surface water. Tides are of immense importance. In trade, navigation and fishing, tides are very useful. During the high tide, the water depth near the coast goes up and helps big ships to reach the ports. Kandla port in Gujarat and Diamond Harbour in West Bengal owe their very existence to the tides only. The significance of both London and Kolkata also depends on the tides. Tides also keep the harbours clear of refuse and mud brought down by rivers and thus they do not allow the harbours to be silted. Commonly, the tidal rivers are navigable. For the purpose of generating electricity, tidal waves are harnessed. Tides do not allow the sea water to be frozen by keeping the sea water in motion. Tides are also made use by the fishermen for sailing into the sea and returning to the harbour. In countries like Canada, U.K., France and Japan, tidal power stations are set up.

63. Why does the moon play a greater role than the sun in causing tides?

(a) The moon is closer to the earth as compared to the sun.
(b) The moon has greater gravitational pull.
(c) The moon shines in night.
(d) None of the above.

64. How are tides useful for the economy of the country?

(a) Tides bring treasure of sea with them.
(b) During high tides, big ships can reach the ports thus opening new vistas for business.
(c) Tides destroy enemies of the country.
(d) None of the above.

65. How are tides useful in cold countries?

(a) They bring fish for eating.
(b) They bring water for drinking.
(c) They don't allow sea water to be frozen.
(d) They keep the port silted.

66. How can tides solve the power problem of the world?

(a) Electricity is being produced through tidal waves.
(b) Tidal waves keep the steamers in motion.
(c)Tidal waves melt the ice and save power.
(d) None of the above.

67. Which word in the passage means 'to bring under control'?
(a) Proximity (b) Silted (c) Immense (d) Harness

68. She plays better than _____ do. (Choose appropriate pronoun)
(a) I (b) my (c) may (d) myself

69. I _____ in a school in Delhi since 2017. (Choose appropriate form of tense)
(a) has studied (b) has been studying (c) have been studying (d) will study

70. There isn't any smog in the Highlands of Scotland, ____? (Choose appropriate question tag)
(a) aren't it (b) isn't it (c) is there (d) there isn't

71. Choose the best meaning of the Idiom **"to play to the gallery"**

(a) to watch the play with interest (b) to enact the play in the gallery
(c) to endeavour to gain cheap popularity (d) to sit comfortably

72. The speckled tortoise walks steadfastly towards his goal? (Choose the adverb)
(a) speckled (b) steadfastly (c) towards (d) goal

73. I wrote an article for the school magazine. (Change from active to passive voice)

(a) An article for the school magazine I had written.
(b) An article was written by me for the school magazine.
(c) I have written an article for the school magazine.
(d) The school magazine and an article I wrote for.

74. Empty vessels _____ much noise. (Select the correct form of verb)

(a) make (b) are making (c) have made (d) makes

75. Gullible (Choose the word with opposite meaning)
(a) trusting (b) cynical (c) clever (d) resourceful

## SECTION: C
## GENERAL SCIENCE

76. The metal present in Chlorophyll is:-

(a) Iron (b) Calcium (c) Oxygen (d) Magnesium

77. Name the gas present in LPG:-

(a) Hydrogen (b) Oxygen (c) Methane (d) Butane

78. Which gas is used to replace CFC?

(a) HCFC (b) RCFC (c) DHFC (d) HHFC

79. The first Menstrual flow at puberty is termed:-

(a) Menopause (b) Menstruation (c) Puberty flow (d) Menarche

80. Which among the following statement is incorrect about all organelles?

(a) They are found in all Eukaryotic cells.
(b) They are found in Multi cellular organisms only
(c) They coordinate to produce new cell.
(d) They are small sized and mostly internal.

81. The boy is pulling a cart by a force of 100N. The frictional force experienced by the cart is 20 N. The force causing the motion of the cart is :-

(a) 100 N (b) 120 N (c) 80 N (d) 5 N

82. The cans used for storing food are made by electroplating:-

(a) Silver onto iron (b) Chromium onto iron (c) Gold onto iron (d) Tin onto iron

83. The impression of an image does not vanish immediately from the retina. It persists for :-

(a) $(1/60)^{th}$ of a second (b) $(1/12)^{th}$ of a second
(c) $(1/6)^{th}$ of a second (d) $(1/16)^{th}$ of a second

84. The Sun appears to rise in the East and set in the West because:-

(a) Earth rotates from East to West on its axis.
(b) Earth rotates from West to East on its axis.
(c) The Sun is at the centre of universe.
(d) None of these.

85. Pressure is equal to

(a) Area / force on which it acts (b) Force / area on which it acts
(c) Volume / force on which it acts (d) Force / volume on which it acts

86. An ultrasound equipment works at a frequency

(a) Higher than 20,000 Hz (b) Higher than 10,000 Hz
(c) Lower than 20,000 Hz (d) Lower than 10,000 Hz

87. When electrodes are immersed in water and electricity is passed, the bubbles formed on the negative terminal is actually _____ gas.

(a) Hydrogen (b) Carbon dioxide (c) Oxygen (d) Nitrogen

88. If light falls perpendicularly on a plane mirror, the angle in which light will be reflected is _____

(a) 45 degrees (b) 90 degrees (c) 180 degrees (d) 360 degrees

89. All non-living things are known as .....

(a) Biotic Resource
(b) Exhaustible Resource
(c) Abiotic Resource
(d) Human Resource

90. Malarial parasite is carried by

(a) Culex mosquito (b) Male anopheles mosquito
(c) Female anopheles mosquito (d) Aedes mosquito

91. Internal fertilisation does not occur in
(a) Dog (b) Cow (c) Parrot (d) Frog

92. Regeneration is observed in

(a) Planaria (b) Spyrogyra
(c) Yeast (d) Amoeba

93. Rapid combustion is

(a) When gas burns, it produces heat and light
(b) When material suddenly burst into flames
(c) When there is evolution of heat
(d) None of these

94. A student is carrying out distillation process in a lab. Water is boiling in distillation flask. Water that is collected in the receiver flask is refrigerated and ice cubes are formed. Ice cubes are then kept outside the refrigerator and they start melting. Arrange following phases of water in ascending order of their total (PE + KE ) energy considering that the mass of water remains the same.

(i) Water collected in the receiving flask
(ii) Water boiling in the distillation
(iii) Steam passing through the delivery tube
(iv) Ice cubes formed in the refrigerator

(a) (iv), (iii), (ii), (i) (b) (iv), (i), (ii), (iii)
(c) (iii), (iv), (ii), (i) (d) (iv), (i), (iii), (ii)

95. The different samples of $CO_2$ were found to contain carbon and oxygen in the same ratio of their mass. This illustrates

(a) Law of conservation of mass (b) Law of definite proportions
(c) Law of multiple proportions (d) Law of reciprocal proportions

96. An atlas of India is drawn by taking scale 100cm = 50,000km. The actual distance between the city of Bhopal and Cochin is 1,500 km, the distance between the two places in the atlas will be _____ cm.
(a) 3 (b) 1 (c) 10 (d) 2

97. Both sound and light waves can be propagated through

(a) Vacuum (b) Air (c) Both (a)and ( b) (d) None of the above

98. A man stands in front of a mirror and finds that his image is larger than himself. The mirror is a _____ mirror.

(a) Convex (b) Concave (c) plane (d) Both (a) and (b)

99. Each lung is enclosed in a double membrane called as pleura. The membrane which covers the surface of each lung is

(a) Visceral pleura (b) Lung pleura (c) Peritoneal pleura (d) Parietal pleura

100. Nitrogenous waste products are eliminated mainly as _____

(a) Urea in tadpole and ammonia in adult frog

(b) Ammonia in tadpole and urea in adult frog

(c) Urea in tadpole and adult frog

(d) Urea in tadpole and uric acid in adult frog

## SECTION: D
## SOCIAL STUDIES

101. Who granted East India Company the sole right to trade with the East ?

(a) Robert Clive (b) Queen Elizabeth I

(c) John Richardson (d) Queen Elizabeth II

102. The first Indian woman to become President of the Indian National Congress was:-

(a) Sarojini Naidu (b) Kamla Nehru

(c) Kasturba Gandhi (d) Begum Rokeya Shakhawat Hossain

103. Land covered with grass shrubs on which animals can graze freely is known as:-

(a) Fallow land (b) Overgrazing (c) Pasture (d) Agricultural land

104. Name of the first country in the world to develop hydroelectricity.

(a) Norway (b) Pakistan (c) India (d) Switzerland

105. Breeding of fish in specially constructed tanks and ponds is known as:-

(a) Agriculture (b) Sericulture (c) Pisciculture (d) Viticulture

106. Ahmedabad is referred as the _____ of India.

(a) Ruhr (b) Manchester (c) Boston (d) Chicago

107. How many members are nominated by the President to the Rajya Sabha ?

(a) 233 (b) 12 (c) 22 (d) 250

108. The Industrial Revolution started in_____ around 1750.

(a) France (b) Britain (c) Russia (d) None of these

109. The British conquest of Bengal began with the Battle of_____.

(a) Buxar (b) Plassey

(c) Seringapatam (d) Saraighat

110. The architect of New Delhi was_____

(a) Edwin Lutyens & H Baker (b) King George V

(c) Lord Lytton (d) Queen Elizabeth.

111. The existence of more than one level of government is known as

(a) Federalism (b) Secularism (c) Marginalism (d) Communalism

112. Money Bill is introduced

(a) Only in Rajya Sabha (b) Only in Lok Sabha

(c) In both the Houses (d) By the Speaker of Rajya Sabha

113. In which state of India is the "Jim Corbett National Park" situated?

(a) Uttarakhand (b) Gujarat (c) Assam (d) Uttar Pradesh

114. Which state of India is the highest producer of Jute?

(a) Assam (b) West Bengal (c) Bihar (d) Odisa

115. A form of government where people enjoy equal political right, elect their ruler and hold them accountable is known as:-.

(a) Secular (b) Democratic (c) Socialist (d) Republic

116. In order to prevent religion based exclusion and discrimination of 'lower castes', the Indian Constitution bans

(a) Untouchability (b) Religious practices

(c) Religion (d) Religious institutions

117. Sustainable development seeks to prevent _____.

(a) Wastage of resources (b) Pollution (c) Loss of biodiversity (d) All of these

118. Of the earth's total water resources, the fresh water easily accessible for our use is

(a) More than 90% (b) 50% (c) 1% (d) Less than 1%

119. These are made to protect our natural vegetation and wild life

(a) National Park (b) Wildlife sanctuaries

(c) Biosphere reserves (d) All of these

120. The largest producer and exporter of mica in the world is

(a) Australia (b) India (c) USA (d) Russia

121. Resources which can be renewed or reproduced are known as .....

(a) Exhaustible Resource (b) Non renewal source

(c) Renewal source (d) Useful Resource

122. The Act on the "Protection of Women from Domestic violence" finally became a law in the year:-

(a) 2003 (b) 2004 (c) 2005 (d) 2006

123. Right to Information (RTI) act guarantees people's right to

(a) Know governmental proceedings (b) Get universal primary education

(c) Speak out their discontent freely (d) Hold meetings and public gathering

124. At the village level, the judicial functions are performed by the

(a) Nyaya Panchayat (b) Gram Panchayat (c) District Judge (d) Munsif

125. Many of India's most important mining and industrial centre are located in

(a) Jamshedpur (b) Rourkela (c) Bokaro (d) All of these

## SECTION E
## INTELLIGENCE

### ILLUSTRATION SET

Below are given examples of the type of questions that you may find in the test. The given examples are just suggestive and given for practice and your understanding. Now, look at these examples carefully and understand how they are solved.

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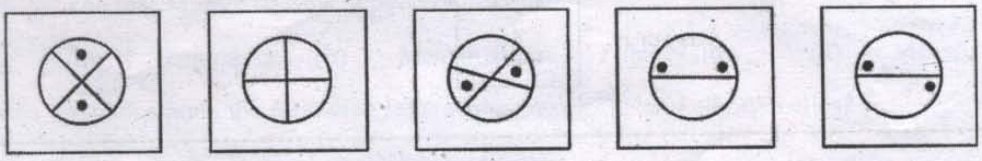
**A. EXAMPLE** There are five sets of figures in which 4 share a common property and make a group whereas one of them is different. Find out which figure is different from the other four.



A B C D E

Out of the above figures **A, B, C, D & E** except figure **'B'** all figures have two black dots in the figure and thus form one group. Figure **'B'** stands out as it does not have any black dot in it. So, the right answer is **'B'** which is written in the answer box.

Answer is [ B ]

In a similar manner you may be asked to choose the set of alphabets or number which differ from their group. Try to understand the logic how they are grouped and solve the problem.

**B. EXAMPLE** Given below, some numbers are arranged in a particular sequence but one of the number is missing. Find the missing number from the given choices to complete the series.

21 31 41 51.....

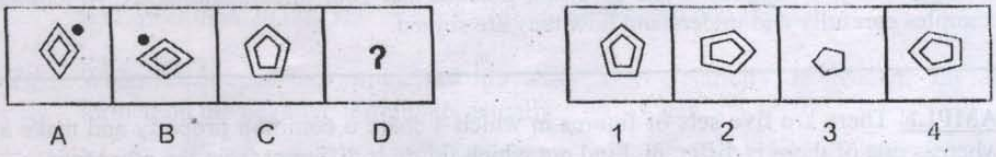
(A) 81 (B) 51 (C) 61 (D) 71 (E) 60

In the above series, there is a gap of ten numbers between the first number and the second consecutive number. To continue the series, the missing number would be **61**. Therefore choice **'B'** is the correct answer to be written in the answer box.

Answer is [ C ]

In a similar manner you may be asked to choose the set of given options to complete the series for alphabets or figures. You have to grasp the sequence logic and solve the given problems.

C. **EXAMPLE** Figures **'A'** and **'B'** have a particular relationship. Establish the similar relationship between figures **'C'** and **'D'** by choosing right figure amongst the four alternatives **1, 2, 3, 4** which would replace the question mark in **figure 'D'.**




Answer is 4

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**Now solve the following questions as directed. For a question or a group of questions certain additional instructions are given. Please read those and answer accordingly.**

**Choose the letters group that best represents a relationship similar to the one expressed in the original pair of letters group in the following questions from 126 to 129:-**

126. FILM : ADGH :: MILK : ?

(a) ADGF (b) HDGE (c) HDGF (d) HEGF

127. EIGHTY : GIEYTH :: OUTPUT : ?

(a) TUOTUP (b) TUOUTP (c) UTOPTU (d) UOTUPT

128. CAT is to DDY as BIG is to

(a) CLL (b) CLM (c) CML (d) CEP

129. Bag is related to Luggage in the same way as Ship is related to……?

(a) Coal (b) Stock (c) Cargo (d) Weight

**Directions: Questions 130 and 131**

**Which number completes the second pair in the same way as the first pair**

130. 3 : 243 :: 5 : _____ ?

(a) 425 (b) 465 (c) 546 (d) 3125

131. 6:24::5: ?

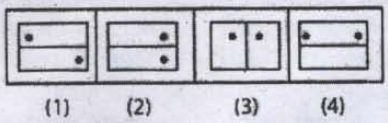
(a) 23 (b) 20 (c) 26 (d) 22

132. Find the missing character from among the given alternatives.

| | | |
|---|---|---|
| A2 | C4 | E6 |
| G3 | I5 | ? |
| M5 | O9 | Q14 |

(a) J15 (b) K8 (c) K15 (d) L10

133. Choose the figure, which is different from others




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

134. Arrange the following words as per order in the dictionary.

1. Live 2. Litter 3. Little 4. Literacy 5.Living

(a) 3,4,2,1,5 (b) 3,2,4,5,1, (c) 4,3,5,2,1, (d) 4,2,3,1,5

135. In a certain code, TEACHER is written as VGCEJGT. How is CHILDREN written in that code?

(a) EJKNEGTP (b) EGKNFITP (c) EJKNFGTO (d) EJKNFTGP

136. If 30th January 2003 was Thursday, what was the day on 2nd March, 2003?

(a) Sunday (b) Monday (c) Saturday (d) Tuesday

137. In the following series, how many KGN occur in such a way that 'G' is in the middle and 'K' and 'N' are adjacent to it on both sides?

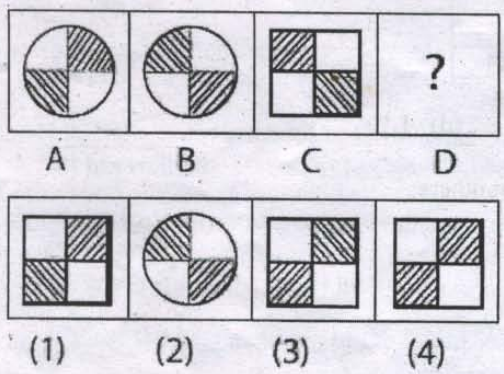
A K G L M N D Q K G C S N G K T G K G N D Z P U X G K E

(a) 5 (b) 5 (c) 1 (d) 2

138. Which word can't be formed by using the letters of the DISTRIBUTION word? Find that word.

(a) TRUST (b) SITUATION (c) TUITION (d) DISTURB

139. Select the figure from the answer set that would come in place of the question mark (?)




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

140 If Maya is the only daughter of Richa's grandmother's brother, how is Maya' daughter realtd to Richa?

(a) Niece (b) Cousin (c) Aunt (d) Mother

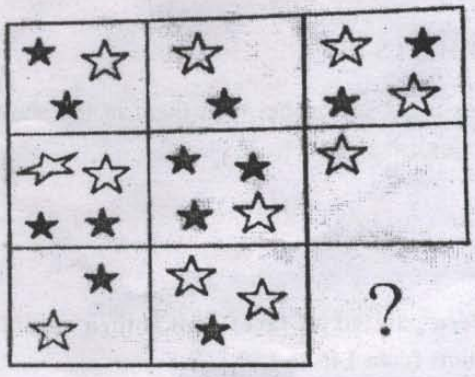
141 It is 3 O'clock in a watch and it is rotated by 10 degrees in a manner such that if the minute hand points towards the North-East, then hour hand will point towards which direction?

(a) South (b) South West (c) North West (d) South East

142 Which one does not belong to the group?

(a) 63 (b) 65 (c) 84 (d) 91

143. Which square should replace the question mark?




(a) 

(b) 

(c) 

(d) 

144. Village 'W' is 20 kms to the north of village 'X'. Village 'Y' is 18 kms to the east of village 'X'. Village 'Z' is 12 kms to the west of village 'W'. If Mannu starts from village 'Y' and goes to village 'Z' via village 'W', in which direction is he from his starting point?

(a) North-West (b) South (c) North-East (d) East

145. If the 7th day of a month is 3 days earlier than Friday, what day will it be on the 19th day of the month?

(a) Monday (b) Sunday (c) Wednesday (d) Friday

146. Gaurav said to Tarun, "That boy playing with the football is the younger of the two brothers of the daughter of my father's wife". How is the boy playing football related to Gaurav ?

(a) Son (b) Brother (c) Cousin (d) Brother-in-law

**Directions: - Study the following arrangement of the English alphabet and answer the question given below in question no.147:**

F J M P O W R N B E Y C K A V L D G X U H Q I S Z T

147. Which of the following pairs of letters has as many letters between them in the above arrangement as there are between them in the English alphabet.

(a) AI (b) EL (c) LS (d) MO

**Directions: - A solid cube of each side 4 cm has been painted all faces. If it is then cut into cubical blocks each of side 2 cm, answer the questions from 148 to 150.**

148. How many cubes are there in all of a edge 2 cm?

(a) 2 (b) 4 (c) 8 (d) 16

149. How many cubes have no face painted?

(a) 0 (b) 2 (c) 4 (d) 8

150. How many cubes have only one face painted?

(a) 0 (b) 2 (c) 4 (d) 8