

# Talent Search Exam. 2017

TEST  
CODE **7000**

for VII

BOOKLET **B**

Duration : 2 Hours

Max. Marks : 360

*Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.*

## INSTRUCTIONS

### A. General :

1. This booklet is your question paper containing **90 questions**. The booklet has **8 pages**.
2. The question paper contains blank space on back for your rough work. No additional sheets will be provided for rough work.
3. It is mandatory to use **Blue or Black Ball Point Pen** to darken to appropriate circle in the answer sheet.
4. Blank papers, clipboards, log tables, slide rules, calculators, cellular phones, pagers and electronic gadgets in any form are not allowed to be carried inside the examination hall.
5. Fill in the boxes provided below on this page and also write your Name and Roll Number in the space provided.
6. Do not use white-fluid or any other rubbing material on answer sheet. Before handing over the answer sheet to the invigilator, candidate should check that **Roll No, Test code and Book Code** have been filled and marked correctly. Immediately after the prescribed examination time is over, the **Answer sheet is to be returned to the invigilator**.

### B. Filling the Answer Sheet :

7. On **Side-1** of Answer Sheet write your name, Enrollment Number and Name of the centre in the respective boxes. **Do not write anything on Side-2**.
8. Put your signature space provided on the Answer Sheet affirming that you have verified this.
9. All question carry **+4 Marks** for Right Answer and **-1** for Wrong Answer.

## PROCEDURE OF FILLING UP THE ANSWERS IN ANSWER SHEET

### Wrong Filling

- B C D Tick mark
- B C D Cross mark
- B C D Half filled or semi dark
- A B C D Light filled

### Right Filling

- B C D Fully darken with Pen
- B C D Fully darken with Pen
- B C D Fully darken with Pen
- B C D Fully darken with Pen

Name of the candidate (In Capital Letters)

Enrollment Number

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I have read all the instruction and shall abide by them.

.....

(Signature of the candidate)

I have verified all the information filled in by the candidate.

.....

(Signature of the Invigilator)

## PART-I (MATHEMATICS)

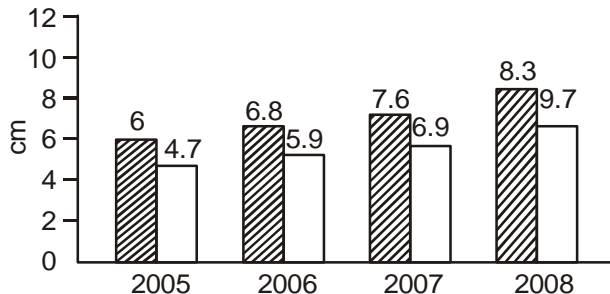
1. A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win?  
 (a) 5 (b) 8  
 (c) 10 (d) 4
2. Convert 1:2:5 to percentage  
 (a) 35%, 45% and 55%  
 (b) 0.5%, 15% and 25%  
 (c) 12.5%, 25%, 62.5%  
 (d) none of these
3. Convert 150% to fractions in simplest form  
 (a)  $\frac{3}{2}$  (b)  $\frac{2}{3}$   
 (c)  $\frac{5}{3}$  (d)  $\frac{4}{3}$
4. The sum of the values of the expression  $2x^2 - 2x + 2$  when  $x = -1$  and  $x = 1$  is \_\_\_\_  
 (a) 6 (b) 8  
 (c) 4 (d) 2
5.  $46 \times 46 + 54 \times 54 + 2 \times 46 \times 54$   
 (a) 9996 (b) 10004  
 (c) 9800 (d) 10000
6.  $\frac{79^2 - 9^2}{89^2 - 9^2}$   
 (a)  $\frac{5}{8}$  (b)  $\frac{13}{15}$   
 (c)  $\frac{6}{9}$  (d)  $\frac{11}{14}$
7. If  $\frac{1}{x} - \frac{3}{x} = \frac{11}{3}$  then  $x =$   
 (a)  $\frac{11}{3}$  (b)  $\frac{2}{3}$   
 (c)  $\frac{12}{11}$  (d)  $\frac{3}{11}$
8. Solve :  $\frac{7x - 3}{4} = \frac{9x - 5}{8} = \frac{16x - 5}{16}$   
 The following are the steps involved in solving the above problem. Arrange them in sequential order
- (a)  $x \times \frac{5}{30} = \frac{1}{6}$   
 (b)  $\frac{7x - 3}{4} = \frac{9x - 5}{8} = \frac{16x - 3}{16} = \frac{14x - 6}{8} = \frac{9x - 5}{8}$   
 $= \frac{16x - 3}{16}$   
 (c)  $\frac{23x - 1}{8} = \frac{16x - 3}{16} = 23x - 1 = \frac{16x - 3}{2}$   
 (d)  $46x + 2 = 16x - 3 \Rightarrow 30x = -5$   
 (a) bcda (b) cbda  
 (c) bcad (d) bdca
9. A number is doubled and half of the number is added to it. If 10 is subtracted from the result, then we get a number which is one less than the original number. Find the original number  
 (a) 5 (b) 6  
 (c) 7 (d) 8
10. If one-fourth, half and one-third of a number are added to the number itself, then the result is equal to 25. Find the number  
 (a) 10 (b) 11  
 (c) 12 (d) 14
11. Which of the following fractions lies between  $\frac{2}{3}$  and  $\frac{5}{7}$ ?  
 (a)  $\frac{3}{4}$  (b)  $\frac{4}{5}$   
 (c)  $\frac{5}{6}$  (d) none of these
12. If the product of two integers is 72 and one of them is -9, then find the other integer  
 (a) 8 (b) -8  
 (c) 81 (d) 63
13. Arrange  $\frac{3}{4}$ ,  $\frac{9}{13}$ ,  $\frac{12}{17}$  and  $\frac{1}{2}$  in the ascending order.  
 (a)  $\frac{1}{2}$ ,  $\frac{9}{13}$ ,  $\frac{3}{4}$ ,  $\frac{12}{17}$   
 (b)  $\frac{3}{4}$ ,  $\frac{9}{13}$ ,  $\frac{1}{2}$ ,  $\frac{12}{17}$

Space For Rough Work

- (c)  $1/2, 3/4, 9/13, 12/17$
- (d)  $1/2, 9/13, 12/17, 3/4$

Directions for the questions from 6 to 10: These questions are based on the following data. Read the following bar graph and answer the questions.

Scale : On-Y-axis, 1 cm = 10,000 units

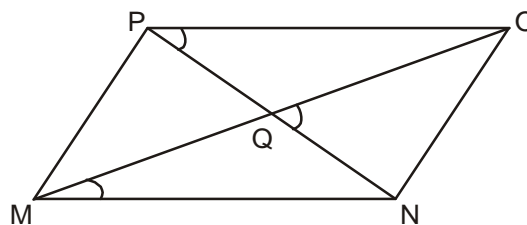


Bargraph represents the sales of cooldrinks of two companies A and B from 2005 to 2008

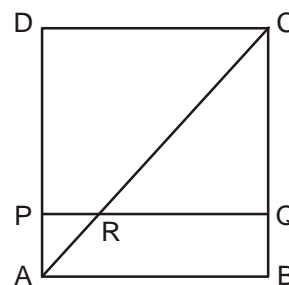


14. In which year is the difference between the sales of A and the sales of B highest?
  - (a) 2008
  - (b) 2005
  - (c) 2006
  - (d) 2007
15. Total sales of A and B in the year 2006 is\_\_\_\_
  - (a) 1160000
  - (b) 1270000
  - (c) 1380000
  - (d) 1490000
16. Find the minimum difference between the sales of A and sales of B in any year in the given period.
  - (a) 90000
  - (b) 70000
  - (c) 50000
  - (d) 30000
17. Which of the following is the set of measures of the sides of a triangle?
  - (a) 8 cm, 4 cm, 20 cm
  - (b) 9 cm, 17 cm, 25 cm
  - (c) 11 cm, 16 cm, 28 cm
  - (d) none of these

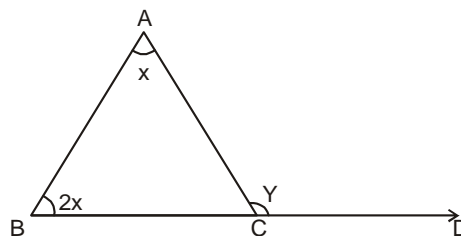
18. In which of the following cases, a right triangle cannot be constructed?
  - (a) 12 cm, 5 cm, 13 cm
  - (b) 8 cm, 6 cm, 10 cm
  - (c) 5 cm, 9 cm, 11 cm
  - (d) none of these
19. In this Fig. MNOP is a paralelogram, diagonals MO and PN intersect at Q,  $\angle OPQ = 40^\circ$  and  $\angle OMN = 30^\circ$ . Find  $\angle OQN$



- (a)  $110^\circ$
  - (b)  $70^\circ$
  - (c)  $30^\circ$
  - (d)  $90^\circ$
20. In this fig. ABCD is a square and PQCD is a rectangle. Find  $\angle PRC$ .



- (a)  $135^\circ$
  - (b)  $75^\circ$
  - (c)  $45^\circ$
  - (d)  $120^\circ$
21. In this figure below,  $AB = AC$  and BC extended to the point D. Find  $y - x$ .



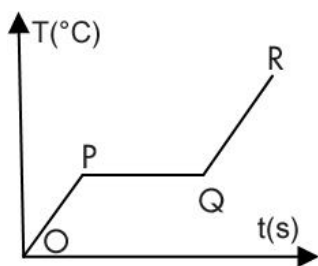
Space For Rough Work

- (a)  $72^\circ$  (b)  $108^\circ$   
 (c)  $36^\circ$  (d)  $45^\circ$
22. Find the HCF of 17 and 19.  
 (a) 1 (b) 2  
 (c) 17 (d) 19
23. If  $m = (-1)^{2000}$  &  $n = (-1)^{2002}$  then the value of  $\frac{m}{n}$   
 (a) -1 (b) 1  
 (c) 2000 (d) 2002
24. The cost of 30 mangoes is less than the cost of 40 mangoes by Rs. 50. Find the cost of 50 mangoes (in Rs.)  
 (a) 400 (b) 300  
 (c) 250 (d) 350
25. If the simple interest on a certain sum for 2 years at the rate of 5% per annum is Rs. 4000, then find the sum (in Rs.)  
 (a) 46000 (b) 44000  
 (c) 40000 (d) 48000

## PART-II (SCIENCE)

26. A polished silver surface is  
 (a) good absorber of heat  
 (b) good reflector of heat  
 (c) poor reflector of heat  
 (d) none of these
27. Sea breeze is caused due to  
 (a) conduction (b) convection  
 (c) radiation (d) none of these
28. A thermos flask prevents loss or gain of heat by  
 (a) conduction only (b) convection only  
 (c) radiation only (d) all of these
29. In Fahrenheit scale water freezes at  
 (a)  $0^\circ\text{F}$  (b)  $32^\circ\text{F}$   
 (c)  $40^\circ\text{F}$  (d)  $212^\circ\text{F}$
30. When matter gets warmer the atoms and molecules in that matter  
 (a) stand still (b) move faster  
 (c) move slower (d) none of these
31. Higher the temperature of the body is the kinetic energy of the molecules of that body.  
 (a) higher (b) lower  
 (c) same (d) none of these
32. Body transmitting heat via radiation  
 (a) don't require any medium  
 (b) are liquid only  
 (c) make heat travels in one direction only  
 (d) solids only
33. If temperature is  $-40^\circ\text{C}$ . the temperature in Fahrenheit is  
 (a)  $40^\circ$  (b)  $-40^\circ$   
 (c)  $32^\circ$  (d) none of these
34. Reaumer is unit of  
 (a) heat (b) temperature  
 (c) length (d) none of these
35. Triple point of water is  
 (a)  $273.16\text{K}$  (b)  $0.01^\circ\text{C}$   
 (c)  $32.02^\circ\text{F}$  (d) all of these
36. Choose correct statement  
 (a) density of water is invariant with temperature  
 (b) density of water is maximum at  $4^\circ\text{C}$   
 (c) density of water is maximum at  $0^\circ\text{C}$   
 (b) none of these
37. Heat transfer takes place due to  
 (a) temperature difference  
 (b) pressure difference  
 (c) potential difference  
 (d) none of these
38. Water is heated from  $-15^\circ\text{C}$ . from the graph phase transformation takes place at

Space For Rough Work



- (a) OP (b) PQ  
(c) QR (d) none of these
39. Univers is a  
(a) closed system (b) open system  
(c) isolated system (d) none of these
40. Thermodynamics first law is based on  
(a) conservation of energy  
(b) conservation of linear momentum  
(c) conservation of charge  
(d) none of these
41. Heat transfer in liquid and gases takes place by-  
(a) Conduction (b) Convection  
(c) Radiation (d) Scattering
42. What is upper fixed point temperature of clinical thermometer?  
(a) 42°C (b) 100°C  
(c) 108°C (d) None of these
43. Heat transfer take place as per:  
(a) Zeroth law of thermodynamics  
(b) 2nd law of thermodynamics  
(c) 1st law of thermodynamics  
(d) Krichoff's law
44. Most convenient way of separating saw dust from water-  
(a) Distillation  
(b) Evaporation  
(c) Filtration  
(d) Sedimentation
45. Rate of evaporation of water-  
(a) Is more in coastal area than in non-coastal area  
(b) Is more in non-coastal area than in coastal area  
(c) Is same in both area  
(d) None of these
46. Germanium is a \_\_\_\_\_  
(a) Gas (b) Metal  
(c) Liquid (d) Metalloid
47. Dog stretch out their tongues generally in summer because  
(a) Evaporation leads cooling  
(b) Of condensation of water vapour  
(c) Freezing of saliva  
(d) Their body temperature are high
48. Water shows convex meniscus in narrow \_\_\_\_\_ and \_\_\_\_\_ tubes  
(a) Glass, plastic  
(b) Glass, was coated glass  
(c) Was coated glass, plastic  
(d) Plastic, coloured glass
49. Role of nitre in manufacture of gun powder is-  
(a) To supply oxygen  
(b) To supply nitrogen  
(c) To decrease rate of combustion  
(d) Absorb temperature produced by combustion
50. Pure nitric acid on long standing terms to yellow due to formation of  
(a) O<sub>2</sub>, NO and H<sub>2</sub>O (b) O<sub>2</sub>, NO<sub>2</sub> and H<sub>2</sub>O  
(c) NO, NO<sub>2</sub> and H<sub>2</sub>O (d) N<sub>2</sub>O, O<sub>2</sub> and H<sub>2</sub>O
51. Which among the following is an antacid pair?  
(a) Mg(OH)<sub>2</sub>, NaOH (b) Mg(OH)<sub>2</sub>, Al(OH)<sub>3</sub>  
(c) KOH, NaOH (d) Al(OH)<sub>3</sub>, NaOH
52. \_\_\_\_\_ is used in refrigeration of sea and food.  
(a) Chlorofluoro carbons (b) Dry ice  
(c) CO<sub>2</sub> (d) Inert gase

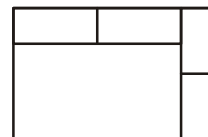
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53. Nitrogen dilutes the activity of \_\_\_\_\_ in atmosphere.  
 (a) Ar (b) CO<sub>2</sub>  
 (c) O<sub>2</sub> (d) He
54. \_\_\_\_\_ is used for burning fuel in rockets space ship.  
 (a) Liquid oxygen (b) Ar  
 (c) He (d) N<sub>2</sub>
55. Generally, a metal gets corroded due to oxidation. Name a metal which becomes chemically resistance due to oxidation.  
 (a) Zinc (b) Copper  
 (c) Al (d) Fe
56. Malaria is caused by  
 (a) Virus (b) fungi  
 (c) Protozoa (d) Bacteria
57. Communicable disease are caused by  
 (a) Bacteria (b) Virus  
 (c) fungi (d) all of the above
58. Which of the following are the richest source of energy?  
 (a) Fats  
 (b) Carbohydrates  
 (c) proteins  
 (d) vitamins & mineral
59. Industrial waste comprising compounds of certain like, mercury, arsenic, cadmium, lead etc. in water are.  
 (a) toxic  
 (b) non-poisonous  
 (c) nutrition  
 (d) none of the above
60. Which animal moves with the help of pseudopodia?  
 (a) Pasamoecium (b) euglena  
 (c) Amoeba (d) Humans
61. Which of the following is an endocrine gland?  
 (a) Heart (b) overy  
 (c) lungs (d) liver
62. The response to stimuli may be made by muscles or groups of secretory cells called  
 (a) effectors (b) receptors  
 (c) pancrease (d) nerves
63. Pollen grains are  
 (a) male gametes (b) present in ovary  
 (c) present in the sepalo  
 (d) carriers of male gametes
64. The flowering plants ovaries develop in to  
 (a) flowers (b) fruits  
 (c) seeds (d) leaves
65. Yeast reproduces by  
 (a) Binary fission (b) spore formation  
 (c) vegetative propogation  
 (d) regeneration
66. Hydra reproductive by  
 (a) Spore formation (b) sexual reproduction  
 (c) budding (d) binary fission
67. Foods gets spoiled by  
 (a) sunlight (b) rain  
 (c) bacteria & fungi (d) water
68. In insects, exchange of gases occurs through  
 (a) spiracles (b) gills  
 (c) lungs (d) stomata
69. The muscles that control the movement of your lower arm are.  
 (a) biceps  
 (b) triceps  
 (c) both biceps and triceps  
 (d) humor
70. Which of the following is responsible for phototropism and geotropism in plants.  
 (a) Adrenalin  
 (b) phyto hormones  
 (c) Auxin  
 (d) medulla

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## PART-III (REASONING)

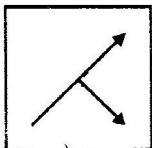
71. Find the wrong number in the series :-  
3, 8, 15, 24, 34, 48, 63  
(a) 15 (b) 24  
(c) 34 (d) 48
72. Which term comes next in the series :-  
YEB, WFD, UHG, SKI, ?  
(a) QOL (b) QGL  
(c) TOL (d) QNL
73. Menu : Food :: Catalogue : ?  
(a) Rack (b) Newspapers  
(c) Library (d) Books
74. Melt : Liquid :: Freeze : ?  
(a) Ice (b) condense  
(c) solid (d) crystal
75. Choose the odd one out :-  
(a) 70 - 80 (b) 54 - 62  
(c) 28 - 32 (d) 14 - 16
76. Choose the odd one out :-  
(a) 295 (b) 381  
(c) 552 (d) 729
77. If HEALTH is written as GSKZDG, then how will NORTH be written in that code ?  
(a) OPSUI (b) GSQNM  
(c) FRPML (d) IUSPO
78. If 'Oranges are 'apples' bananas are orange and chillies are 'bannas' then which of the following are green in colour?  
(a) Apricots (b) Apples  
(c) chillies (d) bananas
79. In a certain code, RAIN is written as 8 \$ % 6 and MORE is written as 7 # 8 @. How is REMAIN written in that code?  
(a) # @ 7 \$ 9.6 (b) # @ \$ & \$ % 6  
(c) 7 @ # \$ % 6 (d) 8 @ 7 \$ % 6
80. If O = 16, FOR = 42 then what is FRONT equal to ?  
(a) 61 (b) 65  
(c) 73 (d) 78
81. A man is facing west. He turns  $45^\circ$  in the clockwise direction and then another  $180^\circ$  in the same direction and then  $270^\circ$  in anticlockwise direction. Which direction is he facing now?  
(a) South (b) North West  
(c) West (d) South West
82. Kunal walks 10 km towards North. From there he walks 6 km towards South. Then he walks 3 km towards East. How far and in which direction is he with reference to his starting point?  
(a) 5 km west (b) 7 km west  
(c) 7 km east (d) 5 km North East
83. Pointing towards a person, a man said to a woman, "His mother is the only daughter of your father." How is woman related to that person.  
(a) Daughter (b) Sister  
(c) Mother (d) Wife
84. A and B are brothers. C and D are sisters A's Son is D's brother. How is B related to C?  
(a) Uncle (b) Father  
(c) Brother (d) None of these
85. Errata : Books :: Flows : ?  
(a) Manuscripts (b) Metals  
(c) Speech (d) Chartres
86. What is the number of rectangles in the following figure?



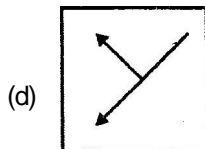
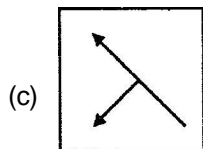
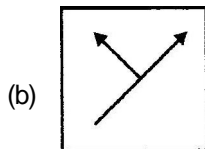
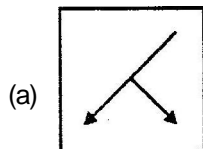
- (a) 6 (b) 7  
(c) 9 (d) 11

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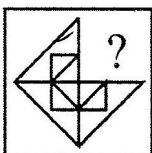
87. Choose the correct mirror-image of the fig.



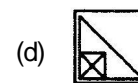
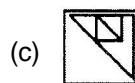
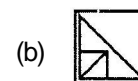
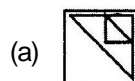
(X)



88. Complete the pattern in fig. (X) by selecting one of the figures from the four alternatives.



(X)



89. What number is opposite 3, if four different positions of a dice are as shown below?



(i)

(ii)

(iii)

(iv)

- (a) 6
- (b) 4
- (c) 3
- (d) 2

90. What was the day on 15 Aug. 1947?

- (a) Friday
- (b) Saturday
- (c) Thursday
- (d) None of these



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