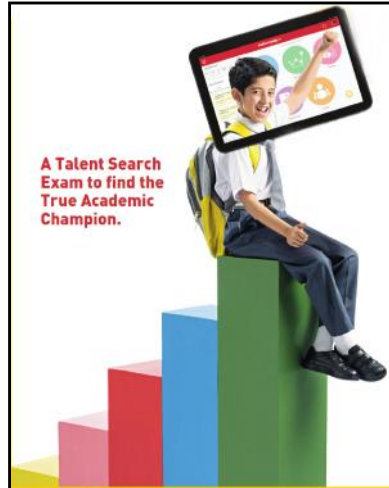


# Robo-Champs

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## SAMPLE QUESTIONS

for

## CLASS VII

Name : \_\_\_\_\_

School Name : \_\_\_\_\_

Contact No. : \_\_\_\_\_



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**INSTRUCTIONS**

**Time duration:** 1:00 hr. (Time of OMR filling is included in time duration).

**Maximum Marks: 200**

**This Paper contains 50 questions divided in two sections**

<b>Section-A</b>	<b>Mental Aptitude</b>	<b>20 questions</b>	<b>80 marks</b>
<b>Section-B</b>	<b>Scholastic Aptitude</b>	<b>30 questions</b>	<b>120 marks</b>

Each Question has a single correct answer.

**Marking Scheme:** +4 marks for correct answers.

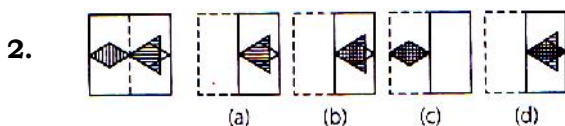
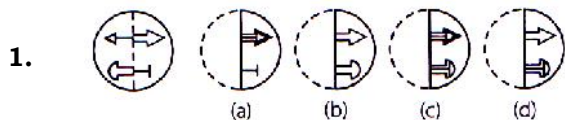
There is **NO NEGATIVE MARKING** in Stage-I but it will be there in Stage-II as per NTSE Standard.

## SECTION-A (MAT)

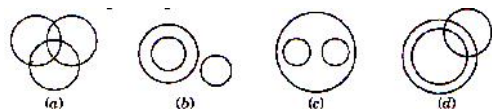
### MENTAL APTITUDE

**Direction (Q1 and 2) :** In each of the following questions a figure marked on transparent sheet is given and followed by four answer figures, one out of these four options resembles the figure, which is obtained by folding transparent sheet along the dotted line. This option is your answer

**Transparent sheet**                      **Answer Figures**



3. In the following questions, three classes are given. Out of the five figure that follow, you are to indicate which figure will best represent the relationship amongst the three classes.



Elephants, Wolves, Animals

**Directions (Q. 4 to Q.6):** Read the information carefully and then answer the questions given below

Shalu, Charu, Lata, Tom and Sandy help themselves to take some sweets from bowl. Four of them each take a gulab jamun. Charu and Tom do not take a burfy as all the others do. Infact, Charu takes only one sweet, which is a laddu. Laddu is not taken by others apart from Charu, only Shalu and Sandy do not take peda.

4. Who only had a peda and a gulab jamun?  
 (a) Charu                      (b) Sandy  
 (c) Shalu                      (d) Tom
5. Who takes three sweets ?  
 (a) Charu                      (b) Sandy  
 (c) Shalu                      (d) Lata
6. Who are the two people taking the same number and same type of sweets?  
 (a) Shalu and Lata  
 (b) Sandy and Lata  
 (c) Shalu and Sandy  
 (d) Tom and Sandy

7. A person drives 20 km towards south, he then turns to his left and moves 10 km. Again, he turns to his right and drives another 5 km. In which direction is he facing now?

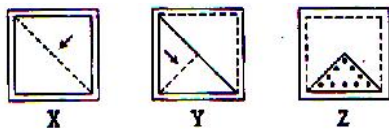
- (a) South                      (b) East
- (c) North                      (d) West

8. Ramesh walks 15 m towards North, then he turns to his right and walks another 10 m and again turns to his left and walks 10 m. Now, in which direction is he from his starting point?

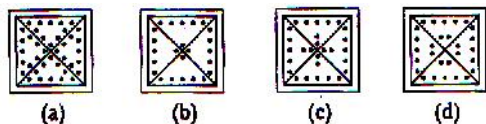
- (a) East                      (b) South-East
- (c) North                      (d) North-East

**Direction (Q. 9) :** In each of the following questions a piece of paper is folded in the manner shown in the question figure (s). Select the figure out of the answer choices showing the unfolded pattern after the punches (cut).

9. Question Figures



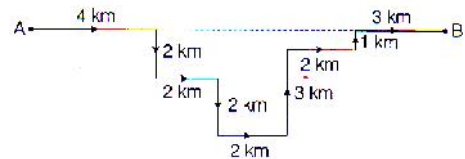
Answer Figures



10. If North becomes East, then what will North-East become?

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

11. Shantanu travels from point A to B but by mistake he takes wrong turn and takes the path as shown in the given figure.



Find the total distance travelled by Shantanu.

- (a) 19 km                      (b) 21 km
- (c) 15 km                      (d) 12 km

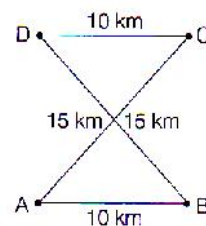
**Directions (Q. 12) :** Read the following information carefully and answer the questions that follow:

- (i) 'A + B' means 'A is the daughter of B'
- (ii) 'A - B' means 'A is the husband of B'
- (iii) 'A × B' means 'A is the brother of B'

12. If  $P + Q \times R$ , which of the following is true?

- (a) P is the daughter of R
- (b) P is the daughter-in-law of R
- (c) P is the niece of R
- (d) P is the cousin of R

13. The given figure shows the map of interconnected cities.



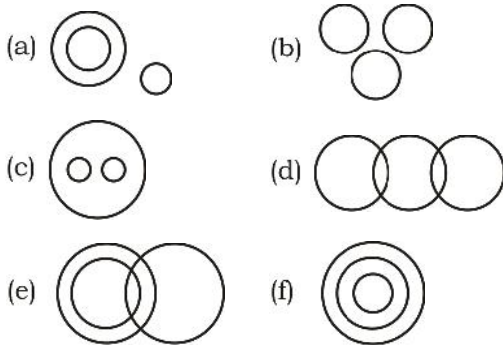
Calculate the distance travelled by Ramesh from A to B via D.

- (a) 50 km                      (b) 30 km
- (c) 40 km                      (d) 25 km

14. In Rajesh drives 50 km towards East, then turns towards South and travels 60 km and finally covers another 90 km towards East, then the total distance travelled by Rajesh is

- (a) 100 km            (b) 300 km  
(c) 400 km            (d) 200 km

**Directions (Q.15 and 16) :-** Each of the following questions has three items which are represented below by circles, irrespective of their size. Your task is to match the right set of items with the right set of circles on the basis of their relationship.



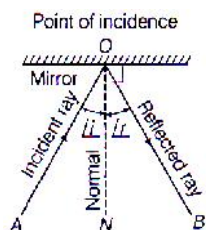
15. Sentence, Word, Letter  
(a) F                      (b) C  
(c) E                      (d) B
16. Boys, College, Infants  
(a) A                      (b) C  
(c) E                      (d) B

**Directions Q.No. 17 to 19 :** Read the information given below and answer the questions that follow:

- (i) In a family of six persons A, B, C, D, E and F there are two married couples.  
(ii) D is grandmother of A and mother of B  
(iii) C is wife of B and mother of F  
(iv) F is the grand daughter of E.
17. What is C to A?  
(a) Daughter  
(b) Grandmother  
(c) Mother  
(d) Cannot be determined
18. How many male members are there in the family?  
(a) Two  
(b) Three  
(c) Four  
(d) Cannot be determined
19. Which of the following is true ?  
(a) A is brother of F  
(b) A is sister of F  
(c) D has two grandsons  
(d) None of these
20. Who among the following is one of the couples?  
(a) CD  
(b) DE  
(c) Cannot be determined  
(d) None of these

## SECTION-B (SAT) SCHOLASTIC APTITUDE TEST

21. Which statement is not true in context with the figure given below?



- (a)  $\angle AON = \angle BON$   
 (b) AO is the incident ray  
 (c) O is the only point from where the light ray can be reflected  
 (d) If BO is the incident ray, then OA will be the reflected ray

22. A list of objects is given below:

(i) Sun (ii) Moon (iii) Earth (iv) Stars (v) Glowing tubelight (vi) Table (vii) Fire

Category I : Luminous objects

Category II : Non-luminous objects

what is the correct division of the gives list of objects according to the two categories given ?

- (a) I : (i), (ii), (iii), (iv)  
 II : (v), (vi), (vii)  
 (b) I : (i), (iv), (v), (vii)  
 II. (ii), (iii), (vi)  
 (c) I : (i), (iv), (v), (vii)  
 II : (iii), (v), (vi), (vii)  
 (d) I : (i), (iv), (vii)  
 II : (ii), (iii), (v), (vi)

23. Read the following statements and choose the correct option

(i) Planets are not luminous bodies  
 (ii) The sun is the nearest star to us from which the earth receives most of the light

- (a) Only A is true  
 (b) Only B is true  
 (c) Both A and B are true  
 (d) Both A and B are false
24. Geometric center of a mirror is called \_\_\_\_\_

(a) pole  
 (b) principal focus  
 (c) optic centre  
 (d) centre curvature

25.  $1 \text{ km h}^{-1} = \text{_____ m s}^{-1}$ .

(a)  $\frac{50}{3}$  (b)  $\frac{5}{18}$   
 (c)  $\frac{18}{5}$  (d)  $\frac{5}{8}$

26. Which one of the following metals can be cut with knife ?

(a) Sodium (b) Phosphorus  
 (c) Gallium (d) Sulphur

27. The property by which metals can be beaten into sheets, is called its \_\_\_\_\_.

(a) Ductility  
 (b) Conductivity  
 (c) Melting point  
 (d) Malleability

28. Which one of the following metal is malleable but not ductile ?

(a) Copper (b) Iron  
 (c) Silver (d) Tin

- 29.** The solution of a metal in mercury is called \_\_\_\_\_.  
 (a) Amalgam  
 (b) Metallation  
 (c) Galvanisation  
 (d) None of these
- 30.** Out of the following, which non metal have density more than 1.  
 (a) Carbon (b) Phosphorus  
 (c) sulphur (d) All of these
- 31.**  $(-336) \div (-12) =$  \_\_\_\_\_.  
 (a) -28 (b) 28  
 (c) 24 (d) none
- 32.** Julius Ceasar was born in 100 BC and was 65 years old when he died. The year in which he died was \_\_\_\_\_.  
 (a) 165 BC (b) 165 AD  
 (c) 35 BC (d) none
- 33.** The temperature of a city at 12 noon was  $15^{\circ}\text{C}$ . Every hour it decreases by  $3^{\circ}\text{C}$ . The temperature at 6 P.M. was \_\_\_\_\_.  
 (a)  $3^{\circ}\text{C}$  (b)  $0^{\circ}\text{C}$   
 (c)  $-3^{\circ}\text{C}$  (d) none
- 34.** The elevator descends into a mineshaft at the rate of 8 m/ min. If the descent starts from 20 m above the ground level, the time taken by the elevator to reach - 300 m is \_\_\_\_\_.  
 (a) 30 min (b) 40 min  
 (c) 50 min (d) 1 hour
- 35.** A freezing process requires the room temperature to be lowered from  $40^{\circ}\text{C}$  at the rate of  $8^{\circ}\text{C}$  every hour. The room temperature 4 hours after the process begins is \_\_\_\_\_.  
 (a)  $-8^{\circ}\text{C}$  (b)  $8^{\circ}\text{C}$   
 (c)  $72^{\circ}\text{C}$  (d)  $-72^{\circ}\text{C}$
- 36.** The numeral coefficient of each term of the algebraic expression  $2x^2 - 7x^2y + 5xy^2 - 8$  are \_\_\_\_\_.  
 (a) 2, 7, 5, 8 (b) 2, -2, 5, 8  
 (c) 2, -7, -5, -8 (d) 2, -7, 5, -8
- 37.** Add:  $a^2 + b^2 + c^2 - 3abc$  and  $a^2 - b^2 + c^2 + 3abc$ .  
 (a)  $a^2 + 2c^2$   
 (b)  $a^2 + c^2 + 2abc$   
 (c)  $2a^2 + 2c^2$   
 (d)  $2a^2 + 2b^2 + 2abc$
- 38.** Simplify by combining the like terms of  $(3y^2 + 5y - 4) - (8y - y^2 - 4)$ .  
 (a)  $4y^2 - 3y$  (b)  $2y^2 - 3y$   
 (c)  $4y^2 + 3y$  (d) none
- 39.**  $x^2 - y^2$  is same as \_\_\_\_\_.  
 (a)  $y^2 - x^2$  (b)  $x^2 + y^2$   
 (c)  $-(y^2 - x^2)$  (d) none
- 40.** Find the value of expression  $4(2x - 1) + 3x + 11$  for  $x = 2$ .  
 (a) 22 (b) 25  
 (c) 29 (d) 30
- 41.** Subtract  $4pq - 5q^2 - 3p^2$  from  $5p^2 + 3q^2 - pq$ .  
 (a)  $8p^2 - 8q^2 + 5pq$  (b)  $8p^2 + 8q^2 - 5pq$   
 (c)  $8p^2 + q^2 - 5pq$  (d) none
- 42.** What should be added to  $2a^2 + ab + b^2$  to get  $3a^2 + 4ab$  ?  
 (a)  $a^2 - 3ab$  (b)  $a^2 + 3ab - b^2$   
 (c)  $2a^2 - 3ab - b^2$  (d)  $2a^2 - 3ab + b^2$
- 43.** A term of an algebraic expression having no literal factor is called :  
 (a) zero  
 (b) constant term  
 (c) literal coefficient  
 (d) degree
- 44.** If  $x = 2$ ,  $y = -3$ , the value of  $2x + 3y$  is :  
 (a) -5 (b) 13  
 (c) -13 (d) 5
- 45.** The degree of the expression  $-7x^3y^4 + x^2y^6 - 2x^5y$  is :  
 (a) 6 (b) 7  
 (c) 5 (d) 8
- 46.** Oxygen is liberated during the process of  
 (a) Combustion (b) Photosynthesis  
 (c) Respiration (d) Evaporation

- 47.** Tissue known for the transportation of water and minerals from the soil to other parts of plant is.
- (a) Roots (b) Xylem  
(c) Stems (d) Phloem
- 48.** Fungi can grow on :
- (a) Pickles only  
(b) Leather and clothes only  
(c) Dead and decaying matter  
(d) All of these
- 49.** Starch is stored in \_\_.
- (a) chloroplast  
(b) leucoplast  
(c) amyloplasts  
(d) None of the above
- 50.** Match the following and choose the correct option:
- |                    |               |
|--------------------|---------------|
| (A) Monosaccharide | (i) cellulose |
| (B) Disaccharide   | (ii) fructose |
| (C) Polysaccharide | (iii) Lactose |
- |     |       |       |       |
|-----|-------|-------|-------|
| (A) | (B)   | (C)   |       |
| (a) | (i)   | (iii) | (ii)  |
| (b) | (i)   | (ii)  | (iii) |
| (c) | (ii)  | (iii) | (i)   |
| (d) | (iii) | (ii)  | (i)   |

*Dream on !!*



**ANSWER KEY****SECTION-A (MAT)  
MENTAL APTITUDE**

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 1. (c)  | 2. (d)  | 3. (c)  | 4. (d)  | 5. (d)  |
| 6. (c)  | 7. (a)  | 8. (d)  | 9. (a)  | 10. (c) |
| 11. (b) | 12. (c) | 13. (c) | 14. (d) | 15. (a) |
| 16. (a) | 17. (c) | 18. (d) | 19. (d) | 20. (b) |

**SECTION-B (SAT)  
SCHOLASTIC APTITUDE TEST**

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 21. (c) | 22. (b) | 23. (c) | 24. (a) | 25. (b) |
| 26. (a) | 27. (d) | 28. (d) | 29. (a) | 30. (d) |
| 31. (b) | 32. (c) | 33. (c) | 34. (b) | 35. (b) |
| 36. (d) | 37. (c) | 38. (a) | 39. (c) | 40. (c) |
| 41. (b) | 42. (b) | 43. (b) | 44. (a) | 45. (d) |
| 46. (b) | 47. (b) | 48. (d) | 49. (c) | 50. (c) |