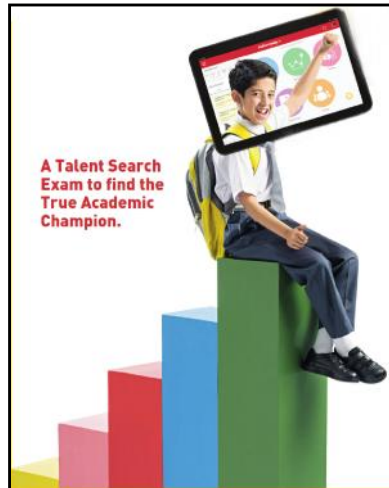


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SAMPLE QUESTIONS

for

CLASS VIII

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

Section-A **Mental Aptitude** **20 questions** **80 marks**

Section-B **Scholastic Aptitude** **30 questions** **120 marks**

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

1. Pointing towards a man another man said, he is the son of my father's sister. then what is the relation between them?

(a) Father-Son (b) Brother
(c) Cousin (d) Uncle-Nephew

2. A + B means A is Father of B'

A - B means A is Wife of B;

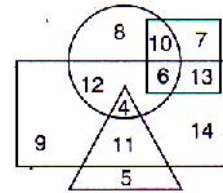
A × B means A is Brother of B;

and A ÷ B means A is Daughter of B'

If $P + R \div Q$, which of the following is true?

(a) P is the Brother of Q
(b) P is the Son of Q
(c) P is the Husband of Q
(d) P is the Father of Q

Direction (Q.No. 3 and 4): In the following diagram rectangle represents men, triangle represents educated, circle represents urban and square represents government employees. Accordingly answer questions from 56 to 57.



3. Which one of the following represents the educated men but not urban ?

(a) 9 (b) 5
(c) 4 (d) 11

4. Which one of the following represents a woman who is urban as well as government employee?

(a) 7 (b) 13
(c) 10 (d) 6

Directions (Q.No. 5) : In the following questions, select the set of conclusion which logically follows from the given statements.

5. Statements :

- I. All doors are cots.
II. Some cots are erasers.

Conclusions :

- I. Some doors are erasers.
II. All cots are doors.
III. Some cots are doors.
IV. Some erasers are doors.
(a) Only conclusions III and IV follow.
(b) Only conclusions I and II follow.
(c) Only conclusions III follows.
(d) Only conclusion IV follow

Direction (Q. 6 and 7): In each of the following questions, a number or alphabet series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

- 6.** 121, 143, 165, 186, 209
(a) 143 (b) 165
(c) 186 (d) 209
- 7.** DF, GJ, KM, NQ, RT, ?
(a) UW (b) YZ
(c) XZ (d) UX

Direction (Q. 8 and 9) : In each of the following questions, a letter-number series is given with one or more terms missing as shown by (?). Choose the missing term out of the given alternatives.

- 8.** _ op _ mo _ n _ _ pn mop _
(a) mnpmon (b) mpnmop
(c) mnompn (d) mnpomn

9. If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that language?

- (a) CPNCBX (b) CPNCBZ
(c) CPOCBZ (d) CQOCBZ

10. If 'light' is called 'morning', 'morning' is called 'dark', 'dark' is called 'night', 'night' is called 'sunshine' and 'sunshine' is called 'dusk', when do we sleep?

- (a) Night (b) Sunshine
(c) Dusk (d) Dark

11. In a certain code language, '234' means 'spark and fire', '456' means 'spark is cause' and '258' means 'fire is effect'. Which of the following numerals is used for 'cause'?

- (a) 3 (b) 4
(c) 5 (d) 6

12. If 'lead' is called 'stick', 'stick' is called 'nib', 'nib' is called 'needle', 'needle' is called 'rope' and 'rope' is called 'thread', what will be fitted in a pen to write with it?

- (a) Stick (b) Lead
(c) Needle (d) Nib

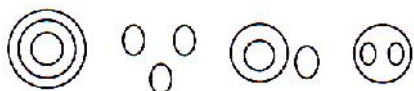
13. If $A = 2$, $M = 26$, $Z = 52$, then $BET = ?$

- (a) 44 (b) 54
(c) 64 (d) 72

14. If A \$ B means A is the brother of B; A @ B means A is the wife of B; A # B means A is the daughter of B and A * B means A is the father of B, which of the following indicates that U is the father-in-law of P?

- (a) P @ Q \$ T # U * W
(b) P @ W \$ Q * T # U
(c) P @ Q \$ W * T # U
(d) P @ Q \$ T # W * U

Directions (Q.No. 15 and 16) : Each of the following questions 21 to 23 has a group of the three words which are related to each other in some way. This relationship can be represented by one of the four figure alternative given in the beginning. Find out the correct figure alternative.



- (1)
- (2)
- (3)
- (4)

15. History, Physics, Psychology

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

16. Jharkhand, Ranchi, Nagpur

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

Directions (Q.No. 17) : In the following questions, select the set of conclusion which logically follows from the given statements.

17. Statements :

All planets are moon.

All moons are stars.

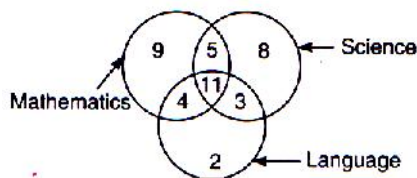
Conclusions :

I. All moons are planets.

II. All planets are stars.

- (a) A
- (b) B
- (c) C
- (d) D

Directions (Q.No. 18 and 19): In the following Venn Diagram the number of students who like Science, Mathematics and Language is given. Observe the figure and answer the following questions:



18. Find the number of students who likes Mathematics but not Language.

- (a) 15
- (b) 14
- (c) 11
- (d) 10

19. How many students, who like Science and Mathematics do not like Language?

- (a) 4
- (b) 8
- (c) 11
- (d) 5

Direction (Q. 20): In each of the following questions, a number or alphabet series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

20. 6, 13, 28, 59, ?

- (a) 111
- (b) 113
- (c) 114
- (d) 122

SECTION-B (SAT) SCHOLASTIC APTITUDE TEST

- 21.** In case of a moving body
(a) displacement = distance
(b) displacement \geq distance
(c) displacement \leq distance
(d) distance < displacement
- 22.** Area under a (v - t) graph represents a physical quantity which has the unit
(a) m^2 (b) m
(c) m^3 (d) ms^{-1}
- 23.** A bus travels one third of the distance with a speed of 12 km h^{-1} and the remaining distance with a speed of 20 km h^{-1} . The average speed of the bus is _____ km h^{-1} .
(a) 14 (b) 20
(c) 12 (d) 16.4
- 24.** The velocity-time graph of a particle is not a straight line. Its acceleration is
(a) zero (b) constant
(c) negative (d) variable
- 25.** The ratio of the unit of acceleration and velocity gives the unit of the physical quantity _____.
(a) time (b) frequency
(c) amplitude (d) speed
- 26.** Which of the following has smallest mass :
(a) 4 g of He
(b) 6.022×10^{23} atoms of He
(c) 1 atom of He
(d) 1 mole atoms of He
- 27.** Which of following has largest number of particles :
(a) 8g of CH_4 (b) 4.4 g of CO_2
(c) 34.2 g of $\text{C}_{12}\text{H}_{22}\text{O}_{11}$ (d) 2g of H_2
- 28.** Which of the following represents a polyatomic ion
(a) Sulphide (b) Chloride
(c) Sulphate (d) Nitride
- 29.** The number of molecules in 16.0 g of oxygen is :
(a) 6.02×10^{23} (b) 6.02×10^{-23}
(c) 3.01×10^{-23} (d) 3.01×10^{23}
- 30.** Find the mass of oxygen contained in 1 kg of potassium nitrate (KNO_3)
(a) 475.5 g (b) 485.5 g
(c) 475.2 g (d) 485.2 g
- 31.** Which of the following statement is false ?
(a) Zero has a reciprocal
(b) The product of two negative rational numbers is always positive
(c) The reciprocal of a positive rational number is positive
(d) The product of two positive rational numbers is always positive
- 32.** If 24 trousers of equal size can be prepared in 54 metres of cloth, what length of cloth is required for each trouser ?
(a) $\frac{4}{3}$ m (b) $\frac{9}{4}$ m
(c) $\frac{8}{9}$ m (d) $\frac{14}{9}$ m
- 33.** Find $(x + y) \div (x - y)$ if $x = \frac{1}{4}$, $y = \frac{3}{2}$
(a) $\frac{6}{5}$ (b) $\frac{10}{3}$
(c) $-\frac{5}{4}$ (d) $-\frac{7}{5}$
- 34.** The sum of the additive inverse and multiplicative inverse of 2 is _____.
(a) $\frac{3}{2}$ (b) $-\frac{3}{2}$
(c) $\frac{1}{2}$ (d) $-\frac{1}{2}$

35. The value of $4 - \frac{5}{1 + \frac{1}{3 + \frac{1}{2 + \frac{1}{4}}}}$ is _____.
- (a) $\frac{40}{31}$ (b) $\frac{4}{9}$
 (c) $\frac{1}{8}$ (d) $\frac{31}{40}$
36. If $a = 5$, then the value of $-\left(\frac{a+1}{a}\right)$ is _____.
- (a) $-\frac{6}{5}$ (b) $-\frac{5}{6}$
 (c) $\frac{6}{5}$ (d) $\frac{5}{6}$
37. Which of the following statement is true?
- (a) Every point on the number line represents a rational number
 (b) The product of a rational number and its reciprocal is 0.
 (c) $(17 \times 12)^{-1} = 17^{-1} \times 12$
 (d) Reciprocal of $\frac{1}{a}$, $a \neq 0$ is a
38. What is least number of which 13720 must be divided so that the quotient is a perfect cube ?
- (a) 5 (b) 25
 (c) 7 (d) 2
39. What least number must be multiplied to 3456 so that the product becomes a perfect cube ?
- (a) 2 (b) 4
 (c) 6 (d) 8
40. Evaluate $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$
- (a) 6.3 (b) 3.64
 (c) 6.36 (d) 3.6
41. Find the side of a cube whose volume is $\frac{1331}{729} \text{m}^3$.
- (a) $\frac{9}{13} \text{m}$ (b) $\frac{9}{11} \text{m}$
 (c) $\frac{11}{9} \text{m}$ (d) 12 m
42. Find the volume of cube whose side is $\frac{15}{2} \text{cm}$.
- (a) 421.875cm^3 (b) 431.875cm^3
 (c) 401.875cm^3 (d) 411.875cm^3
43. Three numbers are in the ratio to one another 2 : 3 : 4 the sum of their cubes is 33957. What are the numbers ?
- (a) 21, 14, 28 (b) 14, 21, 28
 (c) 28, 14, 21 (d) 27, 15, 14
44. Find the cube root of the following 91125
- (a) 54 (b) 50
 (c) 45 (d) 65
45. Find the volume of cube whose surface area 216m^2 .
- (a) 216m^3 (b) 200m^3
 (c) 210m^3 (d) 262m^3
46. Name a multicellular algae which may form colonies.
- (a) Kelps (b) Volvox
 (c) Chlamydomonas (d) Ulothrix
47. Organism body is made - up of mycelium in :
- (a) protozoa (b) algae
 (c) fungi (d) virus
48. Protozoan _____ shows bioluminescence-
- (a) Giardia (b) Entamoeba
 (c) Euglena (d) Noctiluca
49. Streptococcus bacteria have shape:-
- (a) spherical (b) rod
 (c) comma (d) spirillum
50. _____ are symbiotic association between a fungus and an algae
- (a) mycorrhizae (b) lichens
 (c) mycology (d) mycelium

Dream on !!



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

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

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

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