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SET-E

SAMPLE TEST PAPER FOR TNTSE 2019-20

Takshila's National Talent Scholarship Examination

For Students of Class VIII

This booklet contains 6 Pages

SCIENCE	:	**20 QUESTIONS**
MATHEMATICS	:	**20 QUESTIONS**
REASONING	:	**10 QUESTIONS**

General Instructions:

1. Please do not write anything on question paper, Separate sheet will be provided for Rough work.

2. Total No. of Question = 50, All questions carry equal marks. Science, Maths, & Reasoning are compulsory.

3. For each correct Answer = 4 marks, there is no negative marking.

4. Candidates will find out the right answer of the question and will darken the appropriate circle completely with HB pencil or Black panes only.

5. The candidates will use their own ball point pens, HB pencils, erasers etc.

6. Total Time : 1:00 Hour

7. Maximum Marks : 200

SCIENCE

1. A batsman hits the ball for a boundary past the bowler i.e. four runs. The batsman thus
   (a) Changes the direction & speed of the ball
   (b) Does not change the direction but speed only
   (c) Does not change the speed but direction only
   (d) Does not change either direction or speed

2. A boat or an aeroplane has a pointed or tapering front head. Why?
   (a) To increase the friction of fluid/air
   (b) To reduce the friction of fluid/air
   (c) To look good
   (d) For no reason

3. An ultrasound equipment works at 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

4. Human can hear sound in the range of
   (a) 200-2000 Hz   (b) 20-20,000 Hz
   (c) 2-20000 Hz   (d) 2000-200000 Hz

5. Four children were asked to arrange forces due to rolling, static and sliding frictions in a increasing order. Their arrangements are given below. Choose the correct arrangement.
   (a) Rolling, Static, Sliding
   (b) Static, Rolling, Sliding
   (c) Rolling, sliding, static
   (d) Sliding, Static, Rolling

6. The normal temperature of human body is :
   (a) 37^0C (b) 38^0C
   (c) 35^0C (d) 25^0C

7. Which of the following undergoes spontaneous combustion?
   (a) Phosphorus   (b) LPG
   (c) Kerosene   (d) Petrol

8. Two holes of unequal diameters d_1 and d_2 ($d_1 > d_2$) are made in a metal sheet. If the sheet is heated :
   (a) Both d_1 and d_2 will decrease
   (b) Both d_1 and d_2 will increase
   (c) d_1 will increase d_2 will decrease
   (d) d_1 will decrease, d_2 will increase

9. The non-metal which is liquid at room temperature is:
   (a) Carbon   (b) Iodine
   (c) Bromine   (d) Chlorine.

10. Name the metal which is liquid at room temperature?
    (a) Sodium   (b) Calcium
    (d) Mercury   (d) Iron

11. Neha performed litmus test with three different substances *X, Y* and *Z*. She recorded her observations in tabular form.
    Which of the following observations made by her is correct?

Substance / Litmus	X	Y	Z
Red litmus	turns blue	no change	no change
Blue litmus	no change	turns red	no change

	X	Y	Z
(a)	Acid	Base	Salt
(b)	Base	Acid	Lemon Juice
(c)	Base	Acid	Water
(d)	Water	Acid	Base

12. A metal piece is dropped in a test tube containing dil, H_2SO_4, when a burning matchstick is brought near the mouth of thetest tube, a pop sound is heard. The sound is produced due to
    (a) Evolution of O_2 gas
    (b) Evolution of H_2 gas
    (c) Evolution of SO_2 gas
    (d) Evolution of CO_2 gas

13. It is easier to pull a lawn roller than to push it because pulling
    (a) Involves sliding friction
    (b) Involves rolling friction
    (c) Increases the effective weight
    (d) Decreases normal reaction

14. How do cyclones decrease the fertility of soil in the coastal areas?
    (a) By flooding the land with saline water.
    (b) By dissolving soil and rocks.
    (c) By increasing the water table of the place.
    (d) By decreasing the water table of the place.

15. Read the gtven statements and select the correct option.
    Statement-1 :Petroleum is called 'black gold' .
    Statement-2 :Petroleum is a dark oily liquid.

(a) Both statements 1 and 2 arc true but statement 2 is the correct explanation of statement 1.

(b) Both statements I and 2 are true but statement 2 is not the correct explanation of statement I.

(c) Statement I is true but statement 2 is false.

(d) Both statements 1 and 2 arc false.

16. Which planets changes colour in different seasons?

(a) Venus   (b) Mars

(c) Jupiter   (d) Saturn

17. Match Column I with Column II and select the correct option from the codes given below :

Column I	Column ll
(a) SPM	(i) Poisoning of bald eagles
(b) Typhoid	(ii) Green house gas
(c) CO	(iii) Vehicle exhaust
(d) CO_2	(iv) Incomplete combustion
(E) DDT	(v) Pathogens in polluted water

A	B	C	D	E
(a) iii	iv	ii	iv	i
(b) i	iii	iv	ii	v
(c) iii	iv	v	ii	i
(d) iii	v	iv	ii	i

18. Read the given statements and select the correct option.

Statement- 1 : Chloroplast and mitochondria are semi-autonomous organelles.

Statement- 2 : Chloroplast and mitochondria have their own DNA and protein synthesizing machinery.

(a) Both statements I and 2 arc true and statement 2 is the correct explanation of statement I.

(b) Both statements I and 2 are true but statement 2 is not the correct explanation of statement l.

(c) Statement I is true and statement 2 is false.

(d) Both statements I and 2 are false.

19. An object vibrates with a frequency 15 Hz. Which of the following is true?

(a) It produces sound which we can hear.

(b) It does not produce sound.

(c) Change in the direction of the particle is 30 times.

(d) It produces sound which we can hear if we strain our ears.

20. How do cyclones decrease the fertility of soil in the coastal areas?

(a) By flooding the land with saline water.

(b) By dissolving soil and rocks.

(c) By increasing the water table of the place.

(d) By decreasing the water table of the place.

MATHEMATICS

21. Sum of all interior angles of a polygon with (n) sides is given by

(a) $(n-2) \times 180°$ (b) $n-2 \times 180°$

(c) $(n+2) \times 180°$ (d) $n+2 \times 180°$

22. What will be the " one's digit" in the square of 1234 ?

(a) 6   (b) 2

(c) 8   (d) 9

23. By which smallest number 90 must be multiplied so as to make it a perfect square ?

(a) 10   (b) 2

(c) 5   (d) 3

24. In a right angle triangle ABC , right angled at B, AB=6cm, BC=8cm ,then AC= _____ .

(a) 10   (b) 12

(c) 21   (d) 14

25. By which smallest natural number 392 must be multiplied so as to make the product a perfect cube ?

(a) 2   (b) 14

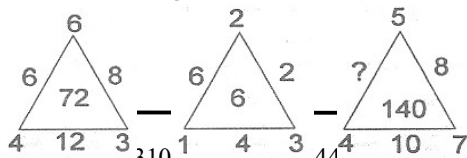(c) 7   (d) 49

26. After getting two successive discounts, a shirtWith a list price of Rs. 150 is available at Rs. 105 If the second discount is 12.5%, then first discount is :

(a) 15%   (b) 20%

(c) 25%   (d) 30%

27. The least number which must be added to 893304 to obtain a perfect square :
    (a) 1613   (b) 1614
    (c) 1610   (d) 1612

28. Which one of the following statement is correct:
    (a) There is no perfect cube which ends in 4
    (b) for an integer a, a^3 is always greater than a^2
    (c) If a divides b, then a^3 divides b^3
    (d) If a^2 ends in even number of zeros, then a^3 ends in odd number of zero.

29. If two parallel lines are cut by two distinct, transversals. Then the quadrilateral formed by The lines is always a :
    (a) Parallelogram   (b) rhombus
    (c) Square   (d) Trapezium

30. If A : B = 3 : 4, B : C = 2 : 3 then A : C = ?
    (a) $\dfrac{1}{2}$ (b) $\dfrac{6}{3}$
    (c) $\dfrac{1}{3}$ (d) $\dfrac{2}{3}$

31. A can do a job in 3 days, and B can do the same job in 6 days . How long will if take them if they work together ?
    (a) 1 day   (b) 2 day
    (c) 3 day   (d) 4 day

32. If the compound interest on a certain sum of money for 2 years at 4% per annum is Rs. 102, then the simple interest on the same sum of money at the same rate and for the same period is
    (a) Rs.99   (b) Rs.100
    (c) Rs.101   (d) Rs. 102

33. In what time a capital becomes five times at the interest rate of 10%.
    (a) 10years   (b) 30years
    (c) 40 years   (d) 50 years

34. An amount at certain rate of compound interest becomes Rs. 700 in 3 years and in 4 year Rs 756 rate of Interest
    (a) 7%   (b) 10%
    (c) 8%   (d) 10.5%

35. Two complementary angles are such that two times the measure of one is equal to three times measure of the other. Then the measure of the larger angle is:
    (a) 36^0 (b) 45^0
    (c) 40^0 (d) 54^0

36. If an article is sold for Rs. p, there is a loss of 15%. If however, the same article is sold for Rs. q, there is a profit of 15% then the ratio (q - p) : (q + p is) :
    (a) 20 : 23   (b) 20 : 3
    (c) 3 : 20   (d) 17 : 23

37. The price of sugar rises by 50%. By what fraction a family reduces the consumption of sugar, so that its expenditure does not increases ?
    (a) $\dfrac{1}{4}$ (b) $\dfrac{1}{3}$
    (c) $\dfrac{1}{2}$ (d) $\dfrac{2}{3}$

38. Area of a rectangle is A. If its length is reduced by 10% and its breadth is increased by 10% then which of the following statements is true ?
    (a) A remains unchanged
    (b) A is decreased by 1%
    (c) A is decreased by 0.1%
    (d) A is increased by .1%

39. If $\dfrac{3}{4}$ x= - 7 + x, then the value of x is :
    (a) 4   (b) $-\dfrac{7}{3}$
    (c) -28   (d) 28

40. If x = 1, y = -1 and z = -1, then the value of $\dfrac{x^2yz^2}{3}$ is :
    (a) $\dfrac{1}{3}$ (b) $-\dfrac{1}{3}$
    (c) 1   (d) -1

REASONING

41. 2, 3, 5, 7, 11, ?, 17
    (a) 14   (b) 13
    (c) 10   (d) 12

42. Find the missing term:

(a)   16   (b)   14

(c)   20   (d)   22

43.

7	9	11
2	3	2
53	90	?

(a)   120   (b)   100

(c)   125   (d)   64

44.   If L denotes ×, M denotes ÷, P denotes + and Q denotes –, then 8 P 36 M 6 Q 6 M 2 L 3 = ?

(a) $\dfrac{13}{6}$ (b) $-\dfrac{1}{6}$

(c) $14\dfrac{1}{2}$ (d)   5

45.   A man is facing North-West. He turns 90º in the clockwise direction and then 135º in the anti-clockwise direction. Which direction is he facing now?
(a)   East   (b)   West
(c)   North   (d)   South

46.   Ravi traveled 4 km straight towards south. He turned left and traveled 6 km straight, then turned right and traveled 4 km straight. How far is he from the starting point ?

(a)   8 km   (b)   10 km
(c)   12 km   (d) 18 km

Directions : (1 to 5) Read the following information carefully and answer the questions given below it.
I.   **Eight persons, E, F, G, H, I, J, K and L are seated around a square table - two on each side.**
II.   **There are three lady members and they are not seated next to each other.**
III.   **J is between L and F.**
IV.   **G is between I and F.**
V.   **H, a lady member, is second to the left of J.**
VI.   **L, a male number, is seated opposite of E, a lady member.**
VII.   **There is lady member between F and I.**

47.   Who among the following is seated between E and H?
(a)   F   (b)   I
(c)   J   (d)   None of these
48.   How many persons are seated between K and F?
(a)   One
(b)   Two
(c)   Three
(d)   Cannot to determined
49.   Who among the following are the three lady members?
(a)   E, G and J   (b) E, H and G
(c)   G, H and J   (d) Cannot be determined
50.   Who among the following is to the immediate left of F?
(a)   G   (b)   I
(c)   J   (d)   Cannot be determined

ANSWER KEYS

(For 8 Studying Students)

(SET-E)

1	A	2	B	3	A	4	B	5	C
6	A	7	A	8	B	9	C	10	C
11	C	12	B	13	D	14	A	15	B
16	D	17	D	18	A	19	C	20	A
21	A	22	A	23	A	24	A	25	C
26	B	27	D	28	C	29	D	30	A
31	B	32	B	33	C	34	C	35	D
36	C	37	D	38	B	39	D	40	B
41	B	42	B	43	C	44	D	45	B
46	B	47	D	48	C	49	B	50	C