

NTSE

CLASS VIII

MAT QUESTIONS



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1. The length of two sides of a triangle are 12 cm and 13 cm, then the third side will be

- (a) 1 cm
- (b) 25 cm
- (c) More than 25 cm
- (d) More than 1 cm but less than 25 cm

Ans. (d) More than 1 cm but less than 25 cm

Sol. Difference of two sides < Third side < Sum of two sides

$$13 - 12 < \text{Third side} < 13 + 12$$

$$1 \text{ cm} < \text{Third side} < 25 \text{ cm}$$

2. Three angles of a quadrilateral are of magnitudes 80° , 95° and 120° . The magnitude of the fourth angle is :

- (a) 80°
- (b) 75°
- (c) 70°
- (d) 65°

Ans. (d) 65°

Sol. $360^\circ - (80^\circ + 95^\circ + 120^\circ)$

$$360 - 295 = 65^\circ.$$

3. The length of a side of rhombus is 5 cm and one of its diagonals is of lengths 8 cm. The length of the other diagonal is :

- (a) 5 cm
- (b) 7 cm
- (c) 6 cm
- (d) 8 cm

Ans. (c) 6 cm

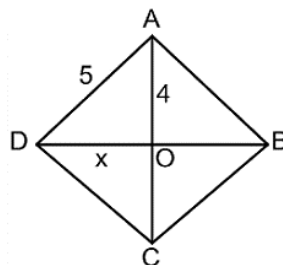
$$5^2 = 4^2 + x^2$$

$$25 - 16 = x^2$$

$$x^2 = 9$$

$$x = 3$$

$$\text{Diagonal} = 2x = 6 \text{ cm}.$$



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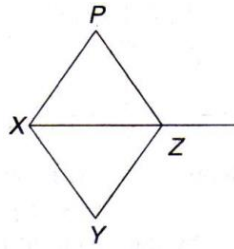
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4. In the figure, $\angle PXZ = \angle XYZ$, $\angle XPZ = \angle XZY$. Then triangles are congruent by the postulate



- (a) SSS (b) SAS (c) ASA (d) RHS

Ans. (c) ASA

Sol. Here two angles are equal, and thus the third angle is also equal (By Angle sum Property of a triangle) and one side is common, then by ASA Congruency criterion, Triangles are Congruent

5. RBUKAE

- (a) #70892 (b) 670892 (c) 670982 (d) 607892

Ans. (b) 670892

Sol. We know that, in English alphabets A, E, I, O, U letters are vowels and remaining letters are consonants.

For condition (ii)

R	B	U	K	A	E
↓	↓	↓	↓	↓	↓
6	7	0	8	9	2

This question does not follow any condition.

6. If 'white' is called 'blue', 'blue' is called 'red', 'red' is called 'yellow', 'yellow' is called 'green', 'green' is called 'black' is called 'violet' and 'violet' is called 'orange', then what would be the colour of human blood.

- (a) Red (b) Green (c) Yellow (d) Violet

Ans. (c) Yellow

Sol. We know that, the colour of the human blood is 'red' and given that 'red' is called 'yellow'. So, the colour of human blood will be yellow.

7. If 'Parrot' is known as 'Peacock', 'Peacock' is known as 'Swallow', 'Swallow' is known 'Pigeon' and 'Pigeon' is known as 'Sparrow', then what would be the name of the Indian National Bird?

- (a) Parrot (b) Swallow (c) Peacock
(d) Pigeon (d) None of these

Ans. (b) Swallow

Sol. We know that, Peacock is the Indian National Bird but here Peacock is known as Swallow. So, the answer is Swallow.

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I still wonder how one man has such a deep understanding of an examination. It becomes the truth what ever Vipin Sir says about NTSE.

M. Pareek

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IIT-JEE (Adv.) AIR-3

Mukesh Pareek



8. January 1, 2007 was Monday. What day of the week lies on Jan. 1, 2008?
(a) Monday (b) Tuesday (c) Wednesday (d) Sunday

Ans. (b) Tuesday

Sol. The year 2007 is an ordinary year. So, it has 1 odd day.

1st day of the year 2007 was Monday.

1st day of the year 2008 will be 1 day beyond Monday.

Hence, it will be Tuesday.

9. How many meaning full English words can be formed using the second, third, fifth and seventh letters of the word 'KITCHEN' using each letter once in each word?
(a) Only one (b) Two (c) Three (d) Four
(e) None of these

Ans. (b) Two

Sol. Second, third, fifth and seventh letters of the word are I, T, H and N respectively.

The words formed from the letters = Hint and Thin

Hence, two words can be formed from the given letters above.

Hence, the correct answer is option B.

10. If the letters in the word 'CREATION' are rearranged as they appear in the English alphabet then the position of how many letters will remain unchanged after the rearrangement?
(a) Two (b) One (c) Three (d) None
(e) Four

Ans. (b) One

Sol. The given letter
C R E A T I O N

After arranging the letters of the given word as they appear in the English alphabet, we have:

A C E I N O R T

Only 'E' remains at the same position after rearrangement

Hence, option 'B' is the Correct choice.

11. Given interchanges: Signs + and – and number 4 and 8 which one of the four equations would be correct?
(a) $4 \div 8 - 12 = 16$ (b) $4 - 8 + 12 = 0$ (c) $8 \div 4 - 12 = 24$ (d) $8 - 4 \div 12 = 8$

Ans. (b) $4 - 8 + 12 = 0$

Sol. On interchanging + and – and 4 and 8 in (b), we get the equation as:

$8 + 4 - 12 = 0$ or $12 - 12 = 0$ or $0 = 0$, which is true

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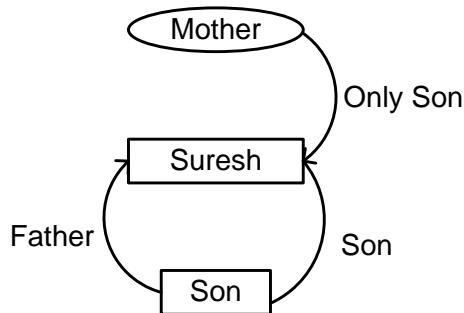


12. Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?

(a) Brother (b) Uncle (c) Cousin (d) Father

Ans. (d) Father

Sol. Suresh is father of boy.

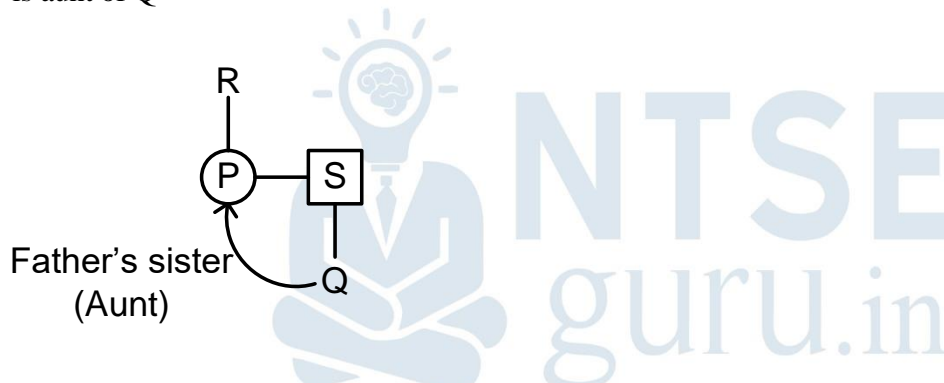


13. If $P \div R + S + Q$, then which of the following is true?

(a) P is daughter of Q (b) Q is aunt of P
(c) P is aunt of Q (d) P is mother of Q

Ans. P is aunt of Q

Sol.



14. Pointing to a woman, Ram said, "She is the only daughter of my wife's grandfather's only child." How is the woman related to Ram?

(a) Wife (b) Sister-in-Law (c) Sister (d) Data Inadequate
(e) None of these

Ans. (a) Wife

Sol. Wife's grandfather's only child means wife's parents and only daughter means wife herself so that woman is a wife of Ram.

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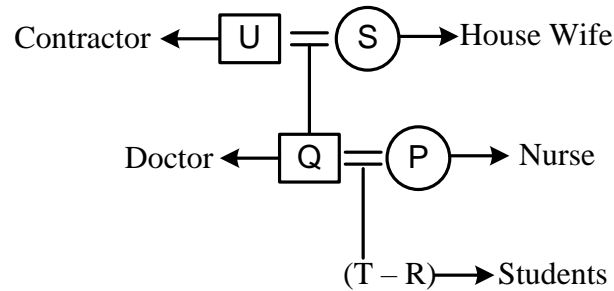


15. Who one is probably Nurse in a family.

- (a) S (b) P (c) R (d) T

Ans. (b) P

Sol.



16. Who many grandchildren are there in a group.

- (a) 0 (b) 1 (c) 2 (d) 3

Ans. (c) 2

Sol. Q is the father of T, U is grandfather of R and there are two married couples so U must be father of Q and also a grandfather of R so there are two grandchildren (R and T) in a family.

17. _____ : trail :: grain : grail

- (a) Train (b) Path (c) Wheat (d) Holy

Ans. (a) Train

Sol. Train becomes trail when the "n" is replaced by an "l," and grain becomes grail when the "n" is replaced by an "l."

18. conjugate: pair :: partition : _____

- (a) Divide (b) Consecrate (c) Parade (d) Squelch

Ans. (a) Divide

Sol. To conjugate means to pair and to partition means to divide.

19. (AGE) : (ZHD) :: (ASK) :

- (a) ATJ (b) ZTJ (c) JTZ (d) ZTL

Ans. (b) ZTJ

Sol. Pattern

-1, +1, -1

A - 1 = Z

S + 1 = T

K - 1 = J

**Did you
know?**



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20. $1/3 : 2/3 :: \underline{\hspace{2cm}} : 60$

- (a) 20 (b) 30 (c) 10 (d) 120

Ans. (b) 30

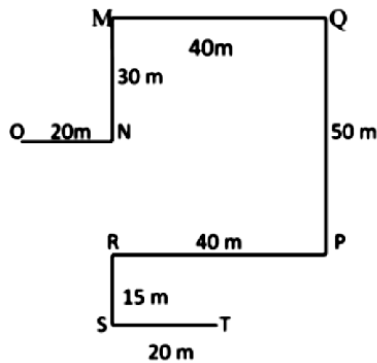
Sol. 30 is half of 60, and $1/3$ is half of $2/3$.

21. If one more person U is standing towards South-West with respect to P, then in which direction is T, standing with respect to U?

- (a) South-West (b) North-East
(c) North-West (d) Cannot be determined

Ans. (d) Cannot be determined

Sol. Distance of U was not given so cannot be determined

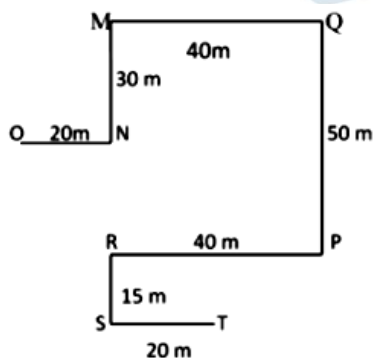


22. What is the direction of O with respect to S?

- (a) North-West (b) North
(c) West (d) Cannot be determined

Ans. (a) North – West

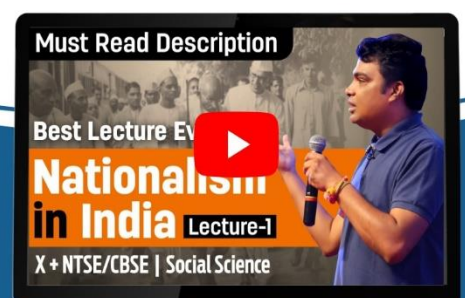
Sol.



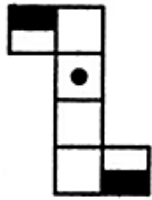
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23. Choose the box that is similar to the box formed from the given sheet of paper (X)?



(X)



(1)



(2)



(3)



(4)

(a) Only one

(b) Only two

(c) Only three

(d) All of these

Ans. (d) All of these

Sol. Possible cube are made by any three alternate face given in the NET of cube and 2 shaded portion are opposite to one another so only one will show at a time then all are right options.

24. Which letter replaces the question mark?

N	252	R
T	500	Y
Y	400	P
K	132	L
G	182	?

(a) P

(b) Q

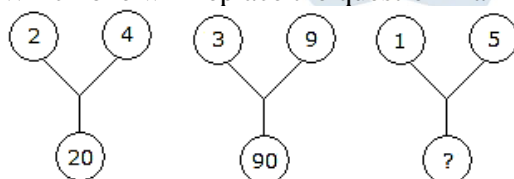
(c) R

(d) Z

Ans. (d) Z

Sol. In each row multiply the numerical values of the left and right hand letters, putting the result in the centre.
 $7 \times 26 = 182$

25. Which one will replace the question mark?



(a) 11

(b) 26

(c) 35

(d) 42

Ans. (b) 26

Sol. $(2)^2 + (4)^2 = 20$

$(3)^2 + (9)^2 = 90$

$(1)^2 + (5)^2 = 26$

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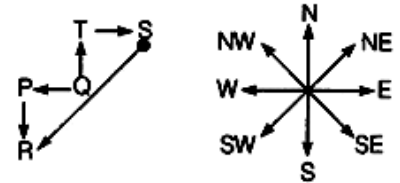


26. Of the five villages P, Q, R, S and T situated close to each other, P is to the West of Q, R is to the South of P, T is to the North of Q and S is to the East of T. Then, in which direction R is with respect to S?
(a) North-West (b) South-East (c) South-West (d) Data inadequate

Ans. (c) South-West

Sol.

Locations of the given villages can be shown according to the figure.
Clearly, R lies to the South-West of S



27. Find the odd one out
(a) Crusade (b) Campaign (c) Expedition (d) Cruise

Ans. (d) Cruise

Sol. Cruise = a sea voyage for pleasure.

All other words are related to 'journey on land, sea with an aim

28. Find the odd one out
(a) Flower : Petal (b) Circle : Arc (c) Cover : Page (d) Chair : Leg

Ans. (c) Cover : Page

Sol. In all other pairs, second is a part of the first.

29. Choose the number pair/group which is different from others?
(a) 7 : 22 (b) 12 : 37 (c) 8 : 33 (d) 15 : 46

Ans. (c) 8 : 33

Sol. In all other pairs, 2nd number = (1st number \times 3) + 1.

30. Choose the number which is different from others in the group?
(a) 64 (b) 162 (c) 27 (d) 144

Ans. (d) 144

Sol. Each of the numbers except 144, is a perfect cube.

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