

**ATOMIC ENERGY EDUCATION SOCIETY, MUMBAI**  
**MULTIPLE CHOICE QUESTIONS TEST**  
**ACADEMIC YEAR 2018-19**

**CLASS : IX**

**MARKS: 40**

**SUBJECT: MATHEMATICS**

**DURATION: 1 HOUR**

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**INSTRUCTIONS:**

**Answer all the questions. Each question carries one mark.**

**Choose the right answer and write its corresponding alphabet in the bracket provided against the question.**

1. The sum of all the angles of a quadrilateral is ----- ( )

- a.  $360^\circ$       b.  $180^\circ$       c.  $540^\circ$       d.  $720^\circ$

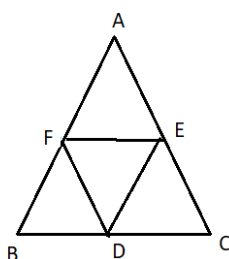
2. Which of the following is not true? ----- ( )

- a. A rectangle is not a square      b. A rhombus is not a square  
c. A trapezium is a parallelogram      d. A kite is not a parallelogram

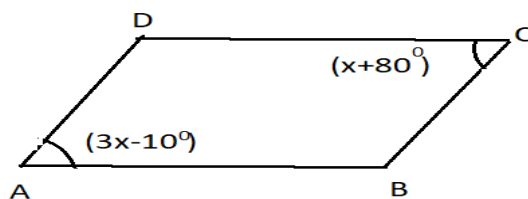
3. In the following fig. D, E and F are the mid-points of sides BC, CA and AB of a  $\Delta ABC$ .

If  $AB=3$  cm,  $BC= 4$  cm and  $CA= 4$  cm, then the perimeter of  $\Delta DEF$  is ----- ( )

- a. 11cm      b. 8 cm      c. 7 cm      d. 5.5 cm



4. In the following figure, ABCD is a parallelogram. Find the value of x.----- ( )



- a.  $25^\circ$       b.  $60^\circ$       c.  $75^\circ$       d.  $45^\circ$

5. If angles of a quadrilateral ABCD are in the ratio 3:7:6:4, then ABCD is a ---- ( )

- a. rhombus      b. parallelogram      c. trapezium      d. kite

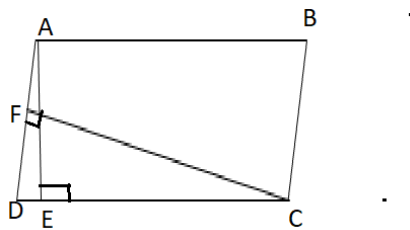
6. The two diagonals are equal in a ----- ( )

- a. parallelogram      b. rhombus      c. rectangle      d. trapezium

7. If the degree measures of the angles of a quadrilateral are  $4x, 7x, 9x$  and  $10x$ , what is the sum of the measures of the smallest and the largest angle? ----- ( )

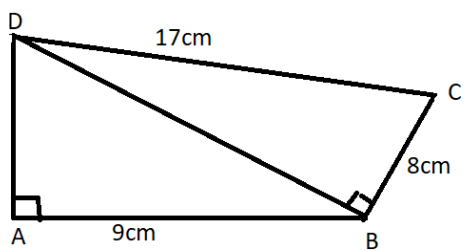
- a.  $140^\circ$       b.  $150^\circ$       c.  $168^\circ$       d.  $180^\circ$

8. In the following figure, ABCD is a parallelogram.  $AE \perp DC$  and  $CF \perp AD$ . If  $AB = 16\text{cm}$ ,  $AE = 8\text{cm}$ ,  $DE = 6\text{cm}$  and  $CF = 10\text{cm}$  then  $AD =$  ----- ( )



- a. 16cm      b. 12.8cm      c. 8cm      d. 10cm

9. In the following figure find the area of quadrilateral ABCD----- ( )



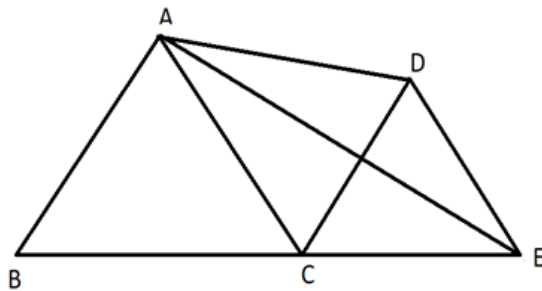
- a.  $112\text{cm}^2$       b.  $56\text{cm}^2$       c.  $28\text{cm}^2$       d.  $14\text{cm}^2$

10. If a triangle and a rhombus are on the same base and between the same parallels, then ratio of area of triangle and area of rhombus are in the ratio ----- ( )

- a. 1:1      b. 1:2      c. 1:3      d. 2:1

11. In the figure,  $AC \parallel DE$   $ar(\text{quad. } ABCD) = 25$  sq. units and  $ar(\triangle ABC) = 17$  sq. units.

Find area of  $\triangle ACE$ .----- ( )



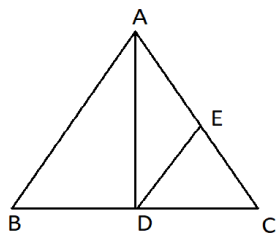
- a. 34 sq. units      b. 8 sq. units      c. 17 sq. units      d. 4 sq. units

12. If the area of  $\triangle ABC$  is  $800\text{cm}^2$ , AD is a median, E is the mid- point of AD, F is the mid-point of AB, then the area of triangle AEF(in  $\text{cm}^2$ ) is ----- ( )

- a. 400      b. 300      c. 200      d.100

13. In the given figure, D is the mid-point of side BC of  $\triangle ABC$  and E is the mid-point of AC. If  $ar(\triangle DEC) = 6$ sq. units, then  $ar(\triangle ABC)$  in sq. units is ----- ( )

- a. 12      b. 18      c.24      d. 36



14. Medians of  $\triangle ABC$  intersect at G. If area of triangle ABC is  $27\text{cm}^2$ , then area of triangle BGC is ----- ( )

- a.  $6\text{cm}^2$       b.  $9\text{cm}^2$       c.  $12\text{cm}^2$       d.  $18\text{cm}^2$

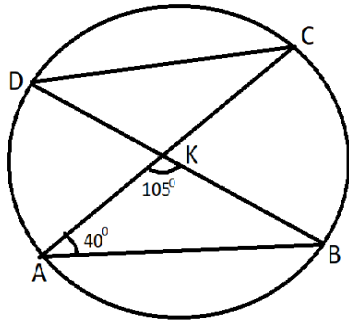
15. How many circles can pass through three given non-collinear points? ----- ( )

- a. one and only one      b. two      c. three      d. infinitely many

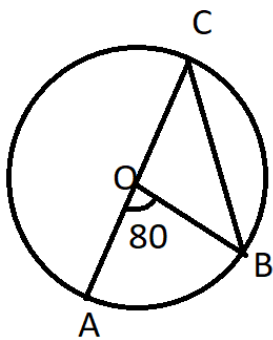
16. In the following figure ,  $\angle CAB = 40^\circ$  ,,  $\angle AKB = 105^\circ$ . The measure of ,  $\angle KCD$  is ---

----- ( )

- a.  $72.5^\circ$       b.  $40^\circ$       c.  $35^\circ$       d.  $65^\circ$



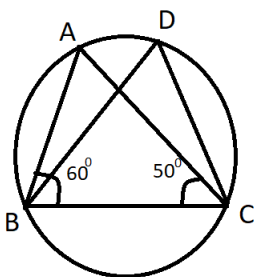
17. In the following figure, O is the centre of the circle. AOC is a diameter of the circle and  $\angle AOB = 80^\circ$ . The degree measure of  $\angle OBC =$  ----- ( )



- a.  $45^\circ$       b.  $35^\circ$       c.  $30^\circ$       d.  $40^\circ$

18. In the following figure,  $\angle BAC$  and  $\angle BDC$  are the angles on the same segment of a circle. If the measure of  $\angle ABC = 60^\circ$  and the measure of  $\angle ACB = 50^\circ$ , then the measure of  $\angle BDC =$  ----- ( )

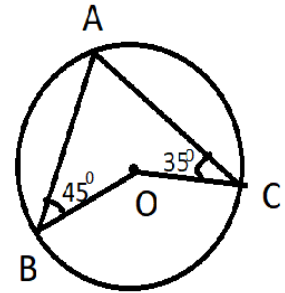
- a.  $120^\circ$       b.  $100^\circ$       c.  $70^\circ$       d.  $60^\circ$



19. In the given figure, O is the centre of the circle ,  $\angle ACO = 35^\circ$  and  $\angle ABO = 45^\circ$ , then

$\angle BOC$  is ----- ( )

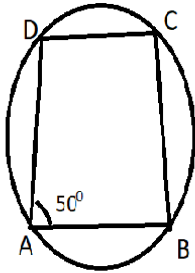
- a.  $80^\circ$       b.  $160^\circ$       c.  $70^\circ$       d.  $90^\circ$



20. In the given figure,  $AB \parallel DC$ . If  $\angle A = 50^\circ$ , then measure of

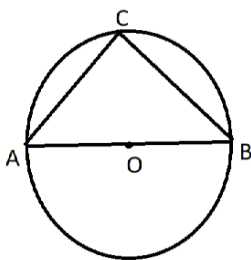
$\angle ABC$  is ----- ( )

- a.  $130^\circ$       b.  $50^\circ$       c.  $100^\circ$       d.  $80^\circ$



21. In the given figure, if AOB is the diameter of the circle and  $AC = BC$ , then  $\angle CAB = --$

----- ( )



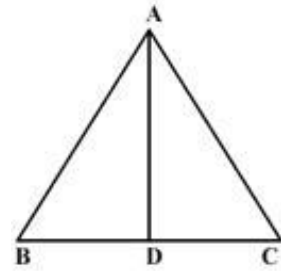
- a.  $30^\circ$       b.  $60^\circ$       c.  $90^\circ$       d.  $45^\circ$

22. The construction of a triangle ABC in which  $AB = 4$  cm,  $\angle A = 60^\circ$  is not possible when difference of BC and AC is equal to ----- ( )

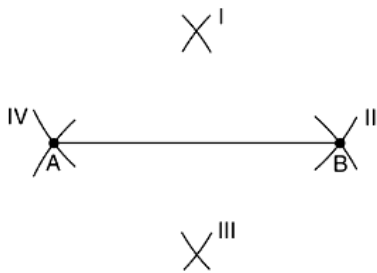
- (a) 3.5 cm      (b) 4.5 cm      (c) 3 cm      (d) 2.5 cm

23. In which of the following is AD not the bisector of angle A? ----- ( )

- (a)  $AB = 6$  cm,  $AC = 8$  cm,  $BD = 1.5$  cm and  $CD = 2$  cm
- (b)  $AB = 4$  cm,  $AC = 6$  cm,  $BD = 1.6$  cm and  $CD = 2.4$  cm
- (c)  $AB = 5$  cm,  $AC = 10$  cm,  $BD = 1.5$  cm and  $CD = 3.5$  cm
- (d)  $AB = 8$  cm,  $AC = 24$  cm,  $BD = 6$  cm and  $CD = 24$  cm



24. Line segment AB is shown in the diagram below.

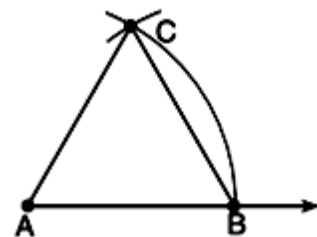


Which two sets of construction marks, labeled I, II, III, and IV, are part of the construction of the perpendicular bisector of line segment AB? ----- ( )

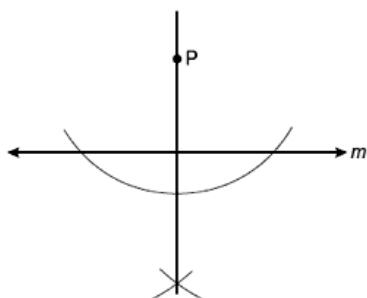
- (a) I and II                      (b) I and III                      (c) II and III                      (d) II and IV
25. One step in a construction uses the endpoints of  $\overline{AB}$  to create arcs with the same radii. The arcs intersect above and below the segment. What is the relationship of  $\overline{AB}$  and the line connecting the points of intersection of these arcs? ----- ( )
- (a) collinear                      (b) congruent                      (c) parallel                      (d) perpendicular

26. The diagram shows the construction of an equilateral triangle. Which choice justifies the construction given? ----- ( )

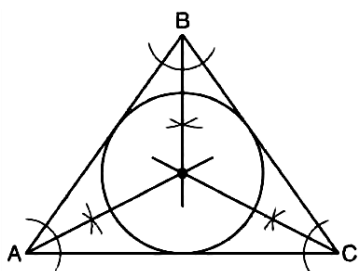
- (a)  $\angle A + \angle B + \angle C = 180$     (b)  $m\angle A = m\angle B = m\angle C$
- (c)  $AB = AC = BC$                       (d)  $AB + BC > AC$



27. The diagram below shows the construction of a line through point P perpendicular to line m.



- Which statement is demonstrated by this construction? ----- ( )
- (a) If a line is parallel to a line that is perpendicular to a third line, then the line is also perpendicular to the third line.
- (b) The set of points equidistant from the endpoints of a line segment is the perpendicular bisector of the segment.
- (c) Two lines are perpendicular if they are equidistant from a given point.
- (d) Two lines are perpendicular if they intersect to form a vertical line.
28. Which geometric principle is used in the construction shown below?----- ( )



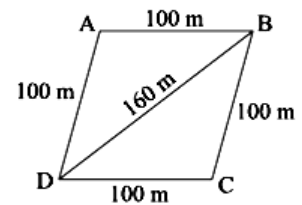
- (a) The intersection of the angle bisectors of a triangle is the centre of the inscribed circle.
- (b) The intersection of the angle bisectors of a triangle is the centre of the circumscribed circle.
- (c) The intersection of the perpendicular bisectors of the sides of a triangle is the centre of the inscribed circle.
- (d) The intersection of the perpendicular bisectors of the sides of a triangle is the centre of the circumscribed circle.
29. The base of a right triangle is 8 cm and hypotenuse is 10 cm. Its area will be -- ( )
- (a)  $24 \text{ cm}^2$       (b)  $40 \text{ cm}^2$       (c)  $48 \text{ cm}^2$       (d)  $80 \text{ cm}^2$
30. The area of an equilateral triangle with side  $2\sqrt{3}$  cm is ----- ( )
- (a)  $5.196 \text{ cm}^2$       (b)  $0.866 \text{ cm}^2$       (c)  $3.496 \text{ cm}^2$       (d)  $1.732 \text{ cm}^2$

31. The sides of a triangle are in the ratio of 3: 4: 5. If its perimeter is 36 cm, then what is its area? ----- ( )

- (a)  $32 \text{ cm}^2$       (b)  $54 \text{ cm}^2$       (c)  $67 \text{ cm}^2$       (d)  $72 \text{ cm}^2$

32. Sanya has a piece of land which is in the shape of a rhombus (See figure given below). She wants her one daughter and one son to work on the land and produce different crops. She divided the land in two equal parts. If the perimeter of the land is 400 m and one of the diagonals is 160 m, how much area each of them will get for their crops? ----- ( )

- (a)  $5000 \text{ m}^2$       (b)  $4500 \text{ m}^2$   
 (c)  $4800 \text{ m}^2$       (d)  $4600 \text{ cm}^2$



33. The sides of a triangular plot are in the ratio of 3: 5: 7 and its perimeter is 300 m. What is its area? ----- ( )

- (a)  $1250\sqrt{3} \text{ m}^2$       (b)  $5000 \text{ m}^2$       (c)  $1500\sqrt{3} \text{ m}^2$       (d)  $1500 \text{ m}^2$

34. An isosceles triangle has perimeter 30 cm and each of the equal sides is 12 cm. What is the area of the triangle? ----- ( )

- (a)  $9\sqrt{15} \text{ cm}^2$       (b)  $15 \text{ cm}^2$       (c)  $9 \text{ cm}^2$       (d)  $15\sqrt{9} \text{ cm}^2$

35. In a cylinder, if radius is halved and height is doubled, the volume will be -- ( )

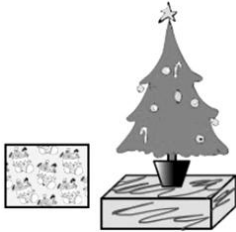
- (a) same      (b) doubled      (c) halved      (d) four times

36. The radii of two cylinders are in the ratio of 2:3 and their heights are in the ratio of 5:3. The ratio of their volumes is: ----- ( )

- (a) 10: 17      (b) 20: 27      (c) 17: 27      (d) 20: 37

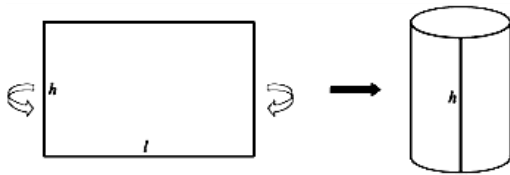


37. Mary wants to decorate her Christmas tree. She wants to place the tree on a wooden box covered with coloured paper with picture of Santa Claus on it (See figure given below). If the box has length, breadth and height as 80 cm, 40 cm and 20 cm respectively, how many square sheets of paper of side 40 cm would she require? ----- ( )



- (a) 10 sheets                      (b) 7 sheets  
 (c) 5 sheets                        (d) 11 sheets

38. Savitri had to make a model of a cylindrical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope (See figure given below). What would be the area of chart paper required by her, if she wanted to make a kaleidoscope of length 25 cm with a 3.5 cm radius? (Take  $\pi = 22/7$ ) ----- ( )



- (a)  $550 \text{ cm}^2$                       (b)  $500 \text{ cm}^2$                       (c)  $350 \text{ cm}^2$                       (d)  $300 \text{ cm}^2$

39. The hollow sphere, in which the circus motorcyclist performs his stunts, has a diameter of 7 m. What will be the area available to the motorcyclist for riding? (Take  $\pi = 22/7$ )-----  
 ----- ( )

- (a)  $146 \text{ m}^2$                       (b)  $154 \text{ m}^2$                       (c)  $152 \text{ m}^2$                       (d)  $150 \text{ m}^2$

40. A child playing with building blocks, which are of the shape of cubes, has built a structure as shown in figure given below. If the edge of each cube is 3 cm, find the volume of the structure built by the child.----- ( )



- (a)  $460 \text{ cm}^3$                       (b)  $450 \text{ cm}^3$                       (c)  $405 \text{ cm}^3$                       (d)  $406 \text{ cm}^3$

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1. The sum of all the angles of a quadrilateral is ----- ( )

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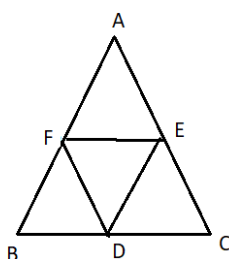
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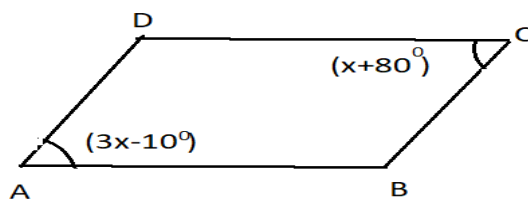
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If  $AB=3$  cm,  $BC= 4$  cm and  $CA= 4$  cm, then the perimeter of  $\Delta DEF$  is ----- ( )

- a. 11cm      b. 8 cm      c. 7 cm      d. 5.5 cm



4. In the following figure, ABCD is a parallelogram. Find the value of x.----- ( )



- a.  $25^\circ$       b.  $60^\circ$       c.  $75^\circ$       d.  $45^\circ$

5. If angles of a quadrilateral ABCD are in the ratio 3:7:6:4, then ABCD is a ---- ( )

- a. rhombus      b. parallelogram      c. trapezium      d. kite

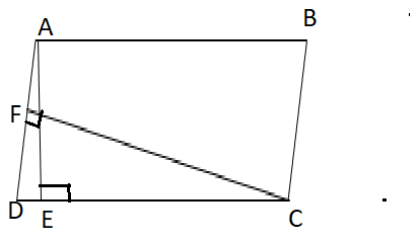
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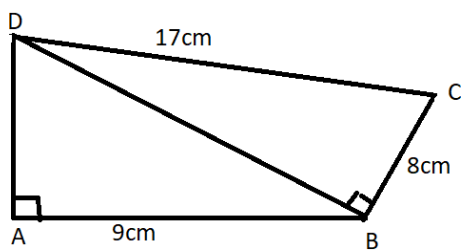
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9. In the following figure find the area of quadrilateral ABCD----- ( )



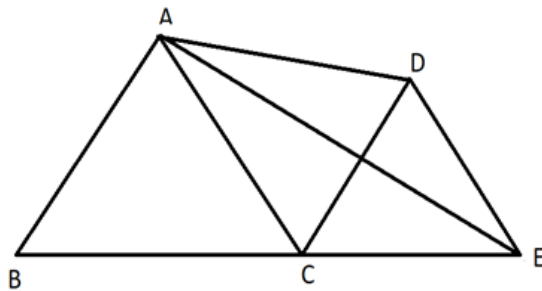
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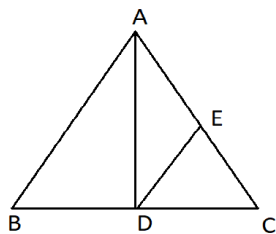
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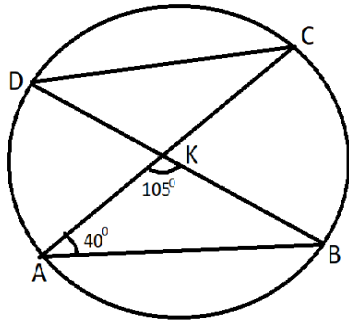
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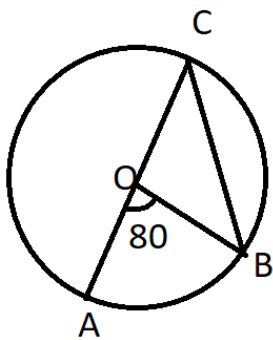
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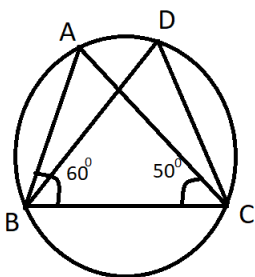
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- a.  $45^\circ$       b.  $35^\circ$       c.  $30^\circ$       d.  $40^\circ$

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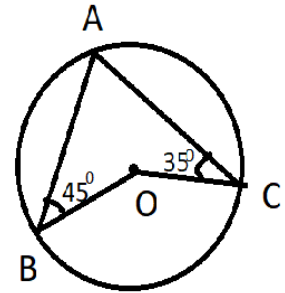
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19. In the given figure, O is the centre of the circle,  $\angle ACO = 35^\circ$  and  $\angle ABO = 45^\circ$ , then

$\angle BOC$  is ----- ( )

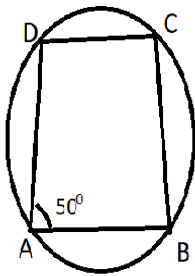
- a.  $80^\circ$       b.  $160^\circ$       c.  $70^\circ$       d.  $90^\circ$



20. In the given figure,  $AB \parallel DC$ . If  $\angle A = 50^\circ$ , then measure of

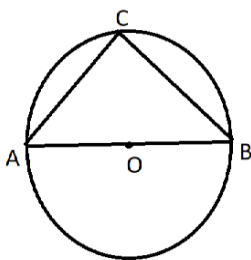
$\angle ABC$  is ----- ( )

- a.  $130^\circ$       b.  $50^\circ$       c.  $100^\circ$       d.  $80^\circ$



21. In the given figure, if AOB is the diameter of the circle and  $AC = BC$ , then  $\angle CAB = --$

----- ( )



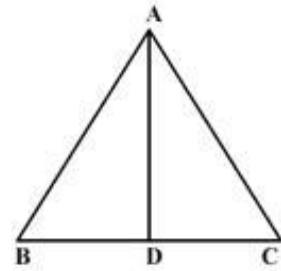
- a.  $30^\circ$       b.  $60^\circ$       c.  $90^\circ$       d.  $45^\circ$

22. The construction of a triangle ABC in which  $AB = 4$  cm,  $\angle A = 60^\circ$  is not possible when difference of BC and AC is equal to ----- ( )

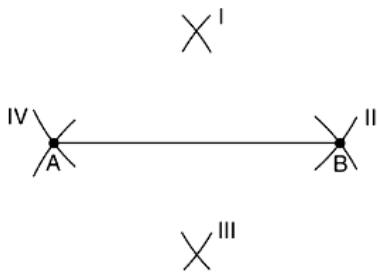
- (a) 3.5 cm      (b) 4.5 cm      (c) 3 cm      (d) 2.5 cm

23. In which of the following is AD not the bisector of angle A? ----- ( )

- (a)  $AB = 6$  cm,  $AC = 8$  cm,  $BD = 1.5$  cm and  $CD = 2$  cm
- (b)  $AB = 4$  cm,  $AC = 6$  cm,  $BD = 1.6$  cm and  $CD = 2.4$  cm
- (c)  $AB = 5$  cm,  $AC = 10$  cm,  $BD = 1.5$  cm and  $CD = 3.5$  cm
- (d)  $AB = 8$  cm,  $AC = 24$  cm,  $BD = 6$  cm and  $CD = 24$  cm



24. Line segment AB is shown in the diagram below.

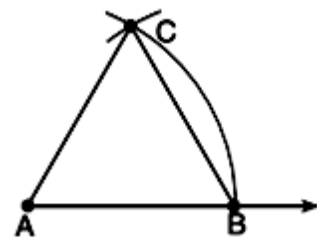


Which two sets of construction marks, labeled I, II, III, and IV, are part of the construction of the perpendicular bisector of line segment AB? ----- ( )

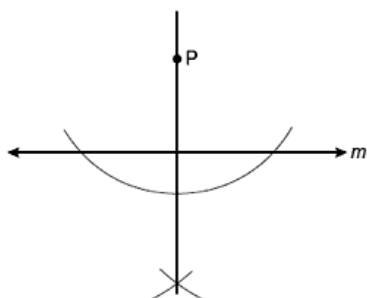
- (a) I and II                      (b) I and III                      (c) II and III                      (d) II and IV
25. One step in a construction uses the endpoints of  $\overline{AB}$  to create arcs with the same radii. The arcs intersect above and below the segment. What is the relationship of  $\overline{AB}$  and the line connecting the points of intersection of these arcs? ----- ( )
- (a) collinear                      (b) congruent                      (c) parallel                      (d) perpendicular

26. The diagram shows the construction of an equilateral triangle. Which choice justifies the construction given? ----- ( )

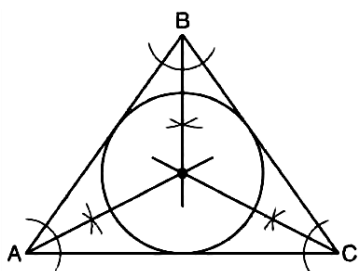
- (a)  $\angle A + \angle B + \angle C = 180$     (b)  $m\angle A = m\angle B = m\angle C$
- (c)  $AB = AC = BC$                       (d)  $AB + BC > AC$



27. The diagram below shows the construction of a line through point P perpendicular to line m.



- Which statement is demonstrated by this construction? ----- ( )
- (a) If a line is parallel to a line that is perpendicular to a third line, then the line is also perpendicular to the third line.
- (b) The set of points equidistant from the endpoints of a line segment is the perpendicular bisector of the segment.
- (c) Two lines are perpendicular if they are equidistant from a given point.
- (d) Two lines are perpendicular if they intersect to form a vertical line.
28. Which geometric principle is used in the construction shown below?----- ( )



- (a) The intersection of the angle bisectors of a triangle is the centre of the inscribed circle.
- (b) The intersection of the angle bisectors of a triangle is the centre of the circumscribed circle.
- (c) The intersection of the perpendicular bisectors of the sides of a triangle is the centre of the inscribed circle.
- (d) The intersection of the perpendicular bisectors of the sides of a triangle is the centre of the circumscribed circle.
29. The base of a right triangle is 8 cm and hypotenuse is 10 cm. Its area will be -- ( )
- (a)  $24 \text{ cm}^2$       (b)  $40 \text{ cm}^2$       (c)  $48 \text{ cm}^2$       (d)  $80 \text{ cm}^2$
30. The area of an equilateral triangle with side  $2\sqrt{3}$  cm is ----- ( )
- (a)  $5.196 \text{ cm}^2$       (b)  $0.866 \text{ cm}^2$       (c)  $3.496 \text{ cm}^2$       (d)  $1.732 \text{ cm}^2$

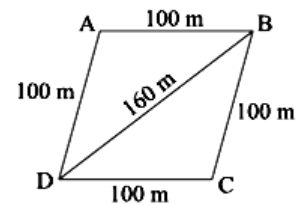


31. The sides of a triangle are in the ratio of 3: 4: 5. If its perimeter is 36 cm, then what is its area? ----- ( )

- (a)  $32 \text{ cm}^2$       (b)  $54 \text{ cm}^2$       (c)  $67 \text{ cm}^2$       (d)  $72 \text{ cm}^2$

32. Sanya has a piece of land which is in the shape of a rhombus (See figure given below). She wants her one daughter and one son to work on the land and produce different crops. She divided the land in two equal parts. If the perimeter of the land is 400 m and one of the diagonals is 160 m, how much area each of them will get for their crops? ----- ( )

- (a)  $5000 \text{ m}^2$       (b)  $4500 \text{ m}^2$   
 (c)  $4800 \text{ m}^2$       (d)  $4600 \text{ cm}^2$



33. The sides of a triangular plot are in the ratio of 3: 5: 7 and its perimeter is 300 m. What is its area? ----- ( )

- (a)  $1250\sqrt{3} \text{ m}^2$       (b)  $5000 \text{ m}^2$       (c)  $1500\sqrt{3} \text{ m}^2$       (d)  $1500 \text{ m}^2$

34. An isosceles triangle has perimeter 30 cm and each of the equal sides is 12 cm. What is the area of the triangle? ----- ( )

- (a)  $9\sqrt{15} \text{ cm}^2$       (b)  $15 \text{ cm}^2$       (c)  $9 \text{ cm}^2$       (d)  $15\sqrt{9} \text{ cm}^2$

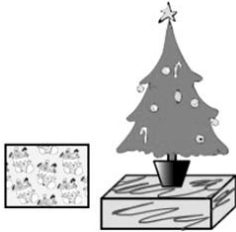
35. In a cylinder, if radius is halved and height is doubled, the volume will be -- ( )

- (a) same      (b) doubled      (c) halved      (d) four times

36. The radii of two cylinders are in the ratio of 2:3 and their heights are in the ratio of 5:3. The ratio of their volumes is: ----- ( )

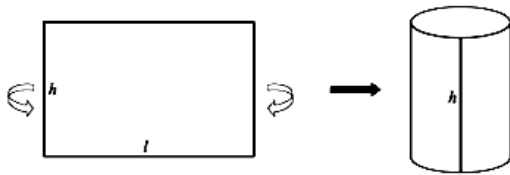
- (a) 10: 17      (b) 20: 27      (c) 17: 27      (d) 20: 37

37. Mary wants to decorate her Christmas tree. She wants to place the tree on a wooden box covered with coloured paper with picture of Santa Claus on it (See figure given below). If the box has length, breadth and height as 80 cm, 40 cm and 20 cm respectively, how many square sheets of paper of side 40 cm would she require? ----- ( )



- (a) 10 sheets                      (b) 7 sheets  
(c) 5 sheets                        (d) 11 sheets

38. Savitri had to make a model of a cylindrical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope (See figure given below). What would be the area of chart paper required by her, if she wanted to make a kaleidoscope of length 25 cm with a 3.5 cm radius? (Take  $\pi = 22/7$ ) ----- ( )



- (a)  $550 \text{ cm}^2$                       (b)  $500 \text{ cm}^2$                       (c)  $350 \text{ cm}^2$                       (d)  $300 \text{ cm}^2$

39. The hollow sphere, in which the circus motorcyclist performs his stunts, has a diameter of 7 m. What will be the area available to the motorcyclist for riding? (Take  $\pi = 22/7$ )-----  
----- ( )

- (a)  $146 \text{ m}^2$                       (b)  $154 \text{ m}^2$                       (c)  $152 \text{ m}^2$                       (d)  $150 \text{ m}^2$

40. A child playing with building blocks, which are of the shape of cubes, has built a structure as shown in figure given below. If the edge of each cube is 3 cm, find the volume of the structure built by the child.----- ( )



- (a)  $460 \text{ cm}^3$                       (b)  $450 \text{ cm}^3$                       (c)  $405 \text{ cm}^3$                       (d)  $406 \text{ cm}^3$



9. What does Arthropod mean? ----- ( )  
 a. bony legs                      b. cartilaginous legs  
 c. largest leg                      d. jointed legs
10. Which sub group in plant kingdom produces flowers? ----- ( )  
 a. Angiosperm                      b. Ferns  
 c. Mosses                              d. None
11. Presence of tube feet is the characteristic of which phylum ? ----- ( )  
 a. Mollusca                              b. Echinodermata  
 c. Cnidaria                              d. Annelida
12. What is the cell wall of fungus made up of ? ----- ( )  
 a. Cellulose                              b. Chitin  
 c. Keratin                                d. Sucrose
13. Out of the following which is not warm blooded? ----- ( )  
 a. Crocodile                              b. Ostrich  
 c. Rat                                        d. Crow
14. Which of the following will have reticulate venation? ----- ( )  
 a. Guava                                  b. Paddy  
 c. Wheat                                  d. Date
15. In a tug of war, work done by a winning team is ----- ( )  
 a. zero    b. positive    c. negative    d. none of these
16. S I unit of energy is ----- ( )  
 a. erg                      b. dyne                      c. joule                      d. Newton.
17. A spring is stretched. The potential energy of the stretched spring ----- ( )  
 a. remains the same                              b. increases  
 c. decreases    d. becomes zero
18. A machine performs 1820 J of work in 20 seconds. The power of machine is -- ( )  
 a. 90 Watt                      b. 91 Watt                      c. 92 Watt                      d. 93 Watt
19. The kinetic energy of an object is K. If its mass is reduced to half, then its kinetic energy will be ----- ( )  
 a. K                              b. 2K                              c.  $\frac{K}{2}$                               d.  $\frac{K}{4}$
20. In case of negative work, the angle between the force and displacement is ----- ( )  
 a.  $0^\circ$                               b.  $45^\circ$                               c.  $90^\circ$                               d.  $180^\circ$

21. Tuberculosis can be prevented through ----- ( )  
 a. MMR      b. BCG      c. Hib      d. TAB
22. A protozoan disease is ----- ( )  
 a. Sleeping sickness      b. kala azar      c. Malaria      d. All the above
23. If you live in a overcrowded and poorly ventilated house ,it is possible that you may suffer from which of the following disease . ----- ( )  
 a. Cancer      b. AIDS      c. Air borne diseases      d. Cholera
24. We should not allow mosquitoes to breed in our surroundings because they ----- ( )  
 a. multiply very fast and cause pollution      b. are vectors of many diseases  
 c. bite and cause skin disease      d. are not important insects
25. AIDS is caused by ----- ( )  
 a. bacteria      b. protozoa      c. worms      d. virus
26. What is minimum distance to observe an echo between reflector and observer.  
 a. 15.2 m      b. 17.2 m      c. 10.2 m      d. 14.2 m
27. What is the nature of sound waves ? ----- ( )  
 a. Longitudinal      b. Transverse      c. Chemical      d. None of these
28. Distance travelled by one wave is called ----- ( )  
 a. frequency      b. pitch      c. wave length      d. time period
29. What is the full form of SONAR ? ----- ( )  
 a. Sound navigate and range      b. Sound Navigation and Ranging  
 c. Solid Navigation and Ranging      d. Sound Navigation and Radio
30. Which part of human ear is used to convert sound signals into electrical signals ---- ( )  
 a. Cochlea      b. ear bone      c. ear drum      d. auditory nerve
31. An atom with 3 protons and 4 neutrons will have a valency of ----- ( )  
 a. 3      b. 7      c. 1      d. 4
32. Which of the following correctly represents the electronic distribution in the Mg atom ? ( )  
 a. 3, 8, 1      b. 2, 8, 2      c. 1, 8, 2      d. 8, 2, 2

33. The elements with valency 1 are ----- ( )

- a. always metals
- b. always metalloids
- c. either metal or non metals
- d. always non metals

34. Which of the following are true for an element ? ----- ( )

- (i) . Atomic number = number of protons + number of electrons
- (ii). Mass number = number of protons + number of neutrons
- (iii). Atomic mass = number of protons + number of neutrons
- (iv). Atomic number = number of protons = number of electrons

- a. (i) & (ii)
- b. (i) & (iii)
- c. (ii) & (iii)
- d. (ii) & (iv)

35. Atomic model have been improved over the years. Arrange the following atomic models in the order of their chronological order : ----- ( )

- (i). Rutherford`s atomic model
- (ii). Thomson`s atomic model
- (iii).Bohr`s atomic model

- a. (i), (ii) & (iii)
- b. (ii), (iii) & (i)
- c. (ii), (i) & (iii)
- d. (iii), (ii) & (i)

36. Top Soil contains which of the following? ----- ( )

- a. Humus & Living organisms only
- b. Humus and soil particles only
- c. Humus, Living organisms & plants
- d. Humus, Living organisms & soil particles.

37. Which of the following planets have 95 -97 % of carbon dioxide in their atmosphere?--- ( )

- a. Mercury & Venus
- b. Venus & Earth
- c. Jupiter & Saturn
- d. Venus & Mars

38. Lichens are highly sensitive to ----- ( )

- a. carbon dioxide
- b. sulphur dioxide
- c. nitrogen
- d.Oxygen

39. Oxygen is returned to the atmosphere mainly by ----- ( )

- a. burning of fossil fuels
- b. respiration
- c. photosynthesis
- d. Fungi

40. Biosphere occurs ----- ( )

- a. in lithosphere
- b. in lithosphere & hydrosphere
- c. place of interaction of lithosphere, hydrosphere & atmosphere
- d. in atmosphere & hydrosphere

**AES**  
**MCQ TEST**  
**ACADEMIC YEAR - 2018-19**  
**ANSWER KEY**

<b>Class :IX</b>	<b>Subject: Maths</b>
<b>Q. No.</b>	<b>Correct Option</b>
1	A
2	C
3	D
4	D
5	C
6	C
7	C
8	B
9	A
10	B
11	B
12	D
13	C
14	B
15	A
16	C
17	D
18	C
19	B
20	A
21	D
22	B
23	C
24	B
25	D
26	C
27	B
28	A
29	A
30	A
31	B
32	C
33	C
34	A
35	C
36	B
37	B
38	A
39	B
40	C

**AEES**  
**MCQ TEST**  
**ACADEMIC YEAR 2018-19**  
**ANSWER KEY**

**class:IX      subject: SCIENCE**

sno	Correct option
1	A
2	B
3	D
4	B
5	A
6	B
7	B
8	C
9	D
10	A
11	B
12	B
13	A
14	A
15	B
16	C
17	B
18	B
19	C
20	D
21	B
22	D
23	C
24	B
25	D
26	B
27	A
28	C
29	B
30	A
31	C
32	B
33	C
34	D
35	C
36	D
37	D
38	B
39	C
40	C



**AEES**  
**MCQ TEST 2018-19**  
**CLASS: IX**  
**SUBJECT: SOCIAL SCIENCE**  
**ANSWER KEY**

1. b) Weimar
2. b) Weimar
3. c) Hindenburg
4. c) The Eternal Jew

**Answer key for Q. No 5 to 9 if lesson 4: Forest, Society and Colonialism is taught.**

5. a. British
6. c. Forests did not yield revenue to enhance income of the state
7. d. A forest from which villagers could collect firewood, fodder, leaves etc from their
8. b. sleepers
9. b. railways

**Answer key for Q. No 5 to 9 if lesson 4: Peasants and Farmers is taught.**

5. c. A mythical name which was used to threaten landlords by sending threatening letters
6. c. These deprived the workers of their livelihood
7. a. Thomas Jefferson
8. a. Threshing machines had become a sign of bad times and unemployment
9. a. Opium

**Answer key for Q. No 5 to 9 if lesson 4: Pastoralists in the modern world is taught.**

5. b. Rajasthan
6. b. Pastoralists of Rajasthan who travelled long distance in search of pastures, selling ploughs, cattle and other groups
7. b. Tanzania
8. a. Bhabar
9. b. Raikas

**Answer key for Q. No. 10 to 40**

10. c) Coastal areas
11. b) Tamilnadu coast
12. b) Inter Tropical Convergence Zone
13. b) Continental
14. a) 60 m
15. a) Tropical Deciduous forests
16. c) Jammu and Kashmir
17. c) Nilgiri
18. d) Nyay yudh
19. c. Subsidy
20. b. 1950s
21. b. Self sufficiency in food grains
22. b. rice yield
23. a. famine like condition

- 24. a. Green Revolution
- 25. c. All the mentioned
- 26 d. minimum support price (MSP)
- 27 d. All the mentioned
- 28 a. Minimum Support Price
- 29 a. 2 crore
- 30 a. Chronic hunger
- 31. c. Tamilnadu
- 32. a. 1999
- 33. a. Mother Dairy, Delhi
- 34. a) Electoral Roll
- 35. b) 543
- 36. c) 25
- 37. b) B.P.Mandal
- 38. d) Socially and Economically Backward Classes
- 39. c) Rajya Sabha
- 40. b) The Prime Minister