EVERWIN MAT.HR.SEC.SCHOOL

24.7.2019 [FN] FA1- MATHS II Std : VIII

Time :2 hrs Marks :75

I. Choose the correct answer: (15x1=15)

1. The ratio between the circumference and diameter of any circle is _____

a) r b) d c)π d) θ

2. The longest chord of a circle is _____

a) radius b) quadrant c) length d) diameter

3. A part of the circumference of a circle is called a _____

a)Circular ring b)Circular path c)Circular arc d)Circular sector

4. The central angle of a circle is _____

a) 90° b)270° c)180° d)360°

5. Area of a sector, A = _____

a) $\frac{\theta}{360^\circ} \times \pi r^2$ b) $\frac{\theta}{360^\circ} \times 2\pi r$ c)$2\,\pi r^2$ d) $\frac{\theta}{360^\circ}$

6. Two or more plane figures joined with the sides of same measure give rise to a new shape called _____shapes.

a) Fixed b) Combined c) Square d) Triangle

7. If all the sides and all angles of a polygon are equal then it is called _____polygon.

a) Regular b) Simple c) Combined d) Total

8. All the sides of a rhombus are _____

a) Unequal b) Equal c) Irregular d) Area

9. The meeting point of more than two edges is called as _____

a) Angle b) Vertex c) Point d) Arc

10. A cube has _____faces.

a) 7 b) 10 c) 6 d)5

11. The three dimensions of a cuboid are _____

a) Length b) Breadth

c) Length, breadth, height d) Length, angle, base.

12. A cross section of a solid cylinder is _____

a) Angle b) Perimeter c) Area d) Circle

13. How many outcomes can you get when you toss 3 coins once?

a) 6 b) 8 c) 3 d) 2

14. How many 2 digit numbers contain the number 7?

a)10 b) 18 c) 19 d)20

15. If there are two operations such that they can be done independently in m ways and n ways then either of the two operations can be done in _____ ways.

a) m-n b) m c) n d) m+n

II. Answer any ten question.

Question no.28 is compulsory either a or b. (10x3=30)

16. The radius of a sector, is 21cm and its central angle is 120°. Find the length of the arc.

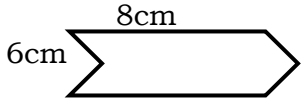
17. Length of the arc is 48m and radius is 10m. Find the area of the sector

18. A circle of radius 120m is divided into 8 equal sectors. Find the length of the arc of each of the sectors.

19. Find the area of the sector whose length of the arc is 50mm and radius is 14mm.

20. In front of the house, flower plants are grown in a circular quadrant shaped pot whose radius is 2 feet. Find the area of the pot in which the plants grow (π=3.14)

21. Find the area of the combined figure given which resulted by joining two parallelograms.



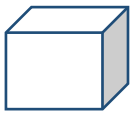
22. Verify Euler's formula given faces is 10, vertices is 6 and edges is 12

23. Can a polyhedron have 12 faces, 22 edges and 17 vertices?

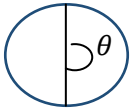
24. If you have 2 school bags and 3 water bottles then, in how many different ways can you carry both a school bag and a water bottle, while going to school?

25. Identify the 3D shapes given below

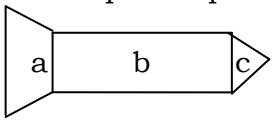
(i) (ii) (iii)



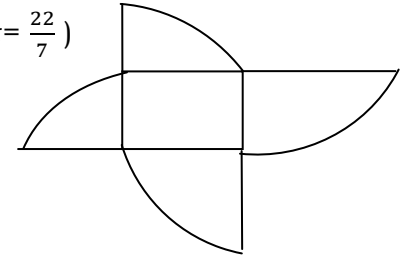
26. Find the central angle of the shaped sector (circle is divided into equal sector)



27. Simple shapes are attached to form a combined shapes. Identify the simple shapes. a _____, b _____, c _____



28. Find the area of the given figure a) ($\pi = \frac{22}{7}$)



(or)

b) How many possible out comes are there in tossing a coin?

III. Answer any six questions. Question no.37 is compulsory either "a" or "b" (6x5=30)

29. Roll numbers are created with a letter followed by 3 digit in it, from the letters A, B, C, D and E and any 3 digits from the 0 to 9. In how many possible ways can the roll numbers be generated?

30. Match the following

(i) Area of a circle - $\frac{1}{4}\pi r^2$

(ii) Circumference of a circle - $(\pi+2)r$

(iii) Area of the sector of a circle - πr^2

(iv) Circumference of a semicircle - $2\pi r$

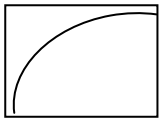
(iv) Area of a quadrant of a circle - $\frac{\theta}{360^\circ}\pi r^2$

31. Find the length of the arc and area for the sector with given measures (π= 3.14) central angle 60°, r= 36cm.

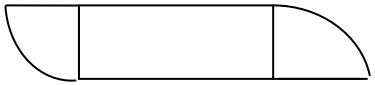
32. Find the area of a sector whose perimeter is 64cm and length of the arc is 44cm

33. A sector of radius 4.2 cm has an area 9.24cm^2. Find its perimeter (π= 3.14)

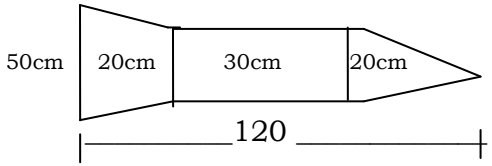
34. Ravi fixes a square tile of 30cm on the floor. The tile has a sector design on it as shown in the figure. Find the area of the sector (π= 3.14)



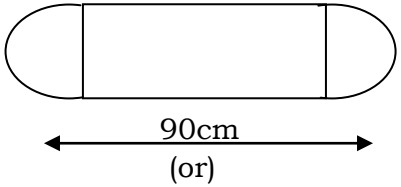
35. Find the area of the combined figure ($\pi=\frac{22}{7}$)



36. A rocket drawing has the measure as given in the figure. Find its area.



37. a)Find the area of the door mat whose measure are given in the figure(π= 3.14)



(or)

b) Find the area of the irregular polygon field whose measures are given in the figure.