Dnyansagar Coaching Classes, A'nagar

Std. 6th (Semi/EM)	Semister II	Time - 3 hr
Sub- Math	(Syllabus - Chap. 14 to 26)	Max Marks - 100

Q. 1 A) Fill in the blanks. **06**

1) An expression which has only the multiplication operation is called as _____.
2) If all angles of a triangle are acute angles then the triangle is called an _____ tirangle.
3) The sum of the measures of the three angles of any triangle is _____.
4) All radii of a circle are _____ in length.
5) The measure of the diameter of any circle is twice the length of its _____.
6) If the lengths of all the three sides of a triangle are equal, the triangle is called an _____ triangle.

B) Solve any four. **04**

1) Write the following no's in symbols.
   i) Positive two ii) negative six
2) Write the proper sign > or < in empty boxes.
   i) 0 ☐ + 6 ii) -5 ☐ - 8
3) Write the magnitude of each no.
   i) +28 ii) -13
4) Write the opposite of
   i) -3 ii) +7
5) Write the coefficients and variables in each of following.
   i) 22x ii) $-\frac{11}{2}ax$
6) Add
   i) (-4) + (-3) ii) (-12) + 10

Q. 2 Solve any ten of the following. **20**

1) Subtract the following.
   i) (-8) - (-5) ii) 8 - 5
2) Carry out following.
   i) 12 x (-3) ii) (-38) ÷ (-2)
3) Form group of like terms from the following groups.
   i) $5x, -7y, 6y, -3m, 2z, m, -y, 5z, -8x$
   ii) $4x^2, -7y^3, -10x^2, -y^3, 5y^3$
4) Taking $x = 4$, find the values of folloinwg.
   i) $5 - x$ ii) $3(5 - x)$
5) Add
   i) $11x^2, -21y^2, 9x^2, 11y^2$
6) Add
   $xy + yz + zx, \ 9xz + 7yz + 3yx$
7) Subtract (in vertical arrangement)
   $(11x^2 + 12y) - (9x^2 - 7y)$
8) Write which property of an equality has been used.
   i) $9 = 11 - 2 \ \therefore \ 9 + 5 = (11 - 2) + 5$

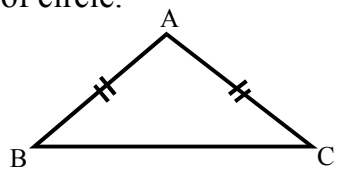
9) Identify the equality and equations in the following statement.

i) $y - 2 = 7$ ii) $2 = \frac{10}{5}$

10) Draw angle of measure 120^0 and Draw the bisector of angle.

11) The radius of circle is 7cm. What is diameter of circle.

12) State the type of triangle ABC shown in figure.



13) In Δ RST, $m\angle A = 63^0$, $m\angle B = 52^0$ and $m\angle C = 65^0$ so that state the type of triangle.

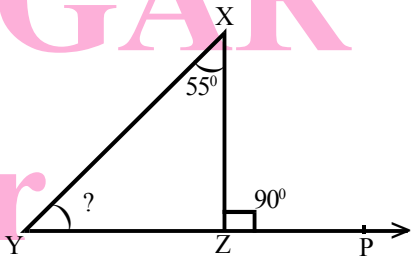
Q. 3 Solve any four. **12**

1) Simplify :
$(210 - 150) + [9 \times 10 + (-5 \times 2)] - 100$

2) If $p = 3$, $q = 5$ find the values of following expression.
i) $p^2 + q^2$ ii) $qp + 3q$

3) If Shakila scored 760 out of 1000 marks in an exam. What was the % of marks she scored?

4) The measure of the exterior angle XZP of Δ XZY is 90^0. The measure of $\angle YXZ = 55^0$.
Find the measure of $\angle XYZ$



5) In Δ ABC, $m\angle A = 60^0$, $m\angle B = 40^0$, Find $m\angle C$.

6) Draw seg. ST and KL. Draw seg DE equal in length to the sum of the length's of these two segments.

Q. 4 A) Write the formulae of. **4**

1) Area of rectangle -
2) Area of square -
3) Volume of a cube -
4) Volume of a cuboid -

B) Solve any two. **4**

1) Write using symbol.

i) $\frac{25}{100}$ ii) $\frac{1}{100}$

2) Write the following as ratio's having denominator 100.
i) 47 percent ii) 65%

3) Explain the following statement.
i) The rate of interest of the Jijamata co-operative credit society is 12 pc.p.a.

4) Write down what is principal and interest in given example.
i) Rehmanbhai borrowed Rs. 25,000 from a bank. After 3 years he returned Rs. 32,500 to the bank which included both the loan and the interest.

Q. 5 A) Solve any two. **6**

1) The interest on Rs. 15,000 after 2 years at a rate of 11 p.c.p.a. is 3,300. What will be the interest on the same principal at the same rate after 6 year?

2) If one square meter of land costs Rs. 600, find the cost of a plot 35m long and 20m broad.

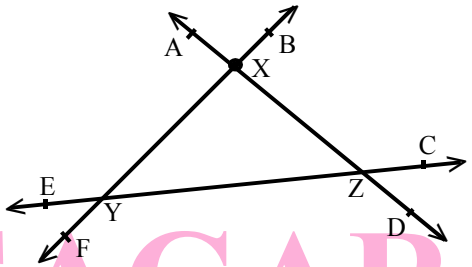
3) Draw a line AB. Take any point C outside the line. Draw a perpendicular to line AB trough point C using the set square.

B) Solve any two. **4**

1) Convert the following fraction's into percentage.

i) $\frac{7}{20}$ ii) $\frac{21}{300}$

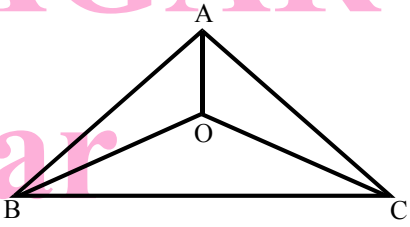
2) Name any 4 exterior angles of the trangles in the figure alongs ide :



3) Look at the figure and answer.

1) Name all triangles in figure.

2) Name all triangles having the vertex O.



Q. 6 A) Solve any three. **6**

1) Find the values of

i) 25% of 55

2) Seema 75% marks out of 800 in the exams find out her score.

3) Using the property of an equality solve.

$1 = \frac{x}{3}$

4) Find out weather the no. given in the brackete a solution of the equation or not.

i) 5m - 1 = 19[4]

5) Subtract , $(7x^2 - 5z^2 + 11y^2) - (3y^2 - 4x^2 + 2z^2)$

B) Solve any one. **4**

1) [180 + (-15) + 20] - [(-2) x (-11) - (4 + 3)]

2) Draw $\angle ABC$ of the 90^0 and draw bisector of $\angle ABC$.

3) Define -

i) Perpendicular line ii) Equilateral triangle

Q. 7 A) Solve any two. **6**

1) The runs scored in some overs of a cricket match are shown in he table below. Draw a corresponding Bar graph.

Over	1st	2ed	3rd	4th
score (runs)	6	8	7	4

2) Subtract
   i) - 16 - 9 ii) 41 - (-33) iii) 49 - 14
3) Carry out following multiplication.
   i) 35 x 8 ii) 12 x (-3) iii) (-6) x 4
4) Draw a vertical number line on this line show numbers up to (-5) below zero and upto + 5 above it.

B) Solve any four. **4**

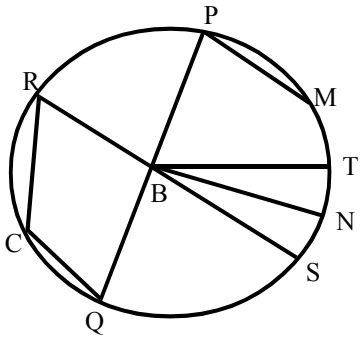
1) Simplify, (-16) x [4 x 3]
2) Write the opposite i) -2 ii) +21
3) Identify the monmials, binomials and trinomials in the following algebric expressions.
   i) $a^2 - 2ab + b^2$ ii) 8
4) If $x = 3$, then find
   i) x^2 ii) $2x^3$
5) Solve. i) p + 4 = 11

Q. 8 A) Solve any three. **6**

1) Draw a line AB. Take any point C outside the line. Draw a perpendicular to line AB trough point C using the compass.
2) Write the following statements using symbol.
   i) Seg KG is perpandicular to ray VJ.
   ii) Line AD is perpandicular to seg. EF.
3) If he length of a flower bed is 5m and it's width is 3m, find its area.
4) A square living room with a side 6m long is to be carpeted. What will be the cost of carpet at the rate of Rs. 40 per square metre?
5) The side of cube is 8cm. Find its volume.

B) Solve any one. **4**

1) Write weather the following statements are true or false.
   a) seg PM is a diameter ( )
   b) seg Rs is a diameter ( )
   c) seg CQ is a radius ( )
   d) seg RC is not a dimater ( )



2) Follow the directions given below.
   a) Draw Δ LMN
   b) Show points D and S on the Δ LMN.
   c) Show points P and Q in the interior of Δ LMN
   d) Show points A and B in the exterior of Δ LMN.

Q. 9 Solve any five. **10**

1) Find the area of square if it has a side of length 5m.
2) One play ground is 120m long and 52m wide. The other one is 110m long and 62m wide. Which ground is bigger?
3) If a playwood costs Rs. 100 per sq.m. What will a board 2.5m long and 1m broad cost?

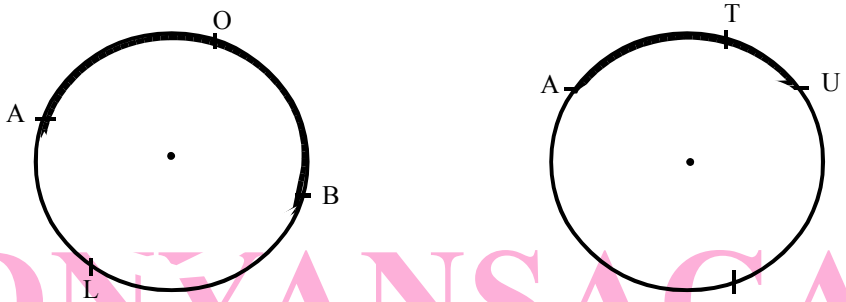
4) How much soil will be taken out while digging a ditch 5m long, 2.5m broad and 1.5m deep?

5) What is the volume of a stoargae bin that Kishan got made for grain, if it is 2m long, 12m broad and 1.8m high?

6) If the radii of some circle is given below what are their diameters?
   i) 7cm ii) 2m

7) Draw circle of radii -
   i) 5cm ii) 3.5cm

8) Write the names of arcs is each of the circles below.



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