SAMPLE QUESTION PAPER

Class – ......VIII.....   Subject .MATHEMATICS................

SECTION –A

Q1 – Q6 are multiple choice questions. Select the most appropriate answer from the given options :

Q.1   A cuboid has --- number of faces.   1

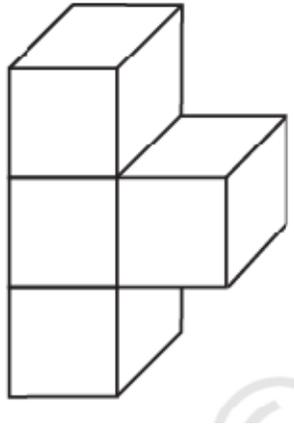   a) 8   b) 12   c) 6   d) 10

Q.2   Formula for profit percent is   1

    a) $\frac{p}{sp} \times 100$ b) $\frac{p}{cp} \times 100$ c) $\frac{cp}{sp} \times 100$ d) $\frac{sp}{cp} \times 100$

Q.3   (x – 6)(x – 6) = ?   1

    a) $x^2 - 36$ b) $x^2 + 36$ c) $x^2 - 6x + 36$ d) $x^2 - 12x + 36$

Q.4   The lateral surface area of a cube of side x cm is   1

    a) $6x^2$ b) $4x^2$ c) 12x   d) x^3

Q.5   A man's monthly salary is Rs 24000 and his monthly expenses on travel are Rs. 4800, the central angle of the sector representing travel expenses in the pie chart would be   1

    a) 30°   b) 72°   c) 45°   d) 60°

Q6   The point whose x-coordinate is zero will lies on   1

    a) x-axis   b) y-axis   c) origin   d) none of these

Q 7 – Q14 are fill in the blanks

Q.7   Length, breadth and height of a rectangular box are 2p, 4q and 8r respectively, so the volume of this rectangular box is........

OR   1

$\left(\frac{-10}{3}pq^3\right) \times \left(\frac{6}{5}p^3q\right) = $ ----

Q.8   If r is the radius of base and h be the height of cylinder, then its volume is..........cm³   1

Q.9   The standard form of 0.0000123 is...........   1

Q.10   The common factor of 6abc , 24ab², 12a²b is.......   1

Q.11   A polyhedron having 4 triangular faces is called......   1

Q.12   The ratio of speed of a cycle 15 km/hour to the speed of scooter 30 km/hr is..............   1

Q.13   If $\frac{3}{8} = \frac{9}{x}$, then x = -----   1

Q.14   The coordinates of origin are ----   1

Q 15 – Q 20 : Answer the following

Q.15   Evaluate $\left(\frac{1}{2}\right)^{-5}$

OR   1

Express 3.02×10^{-6} in usual form

Q.16   Draw the front view and side view of   1

Q.17 In a spinning wheel, there are 3 white and 5 green sectors. It is spinned, what is the probability of getting a green sector — 1

Q.18 The cost of 8 oranges is Rs 20.80, find the cost of an orange — 1

Q.19 Divide $24\, xy^2z^3$ by $6yz^2$ — 1

Q.20 Find the time period and rate for a sum taken for $1\frac{1}{2}$ years at 8% per annum compounded half yearly — 1

SECTION- B

Q.21 The number of members in 20 families are given below:

4, 6, 5, 5, 4, 6, 3, 3, 5, 5, 3, 5, 4, 4, 6, 7, 3, 5, 5, 7 — 2

Prepare a frequency distribution of the data

Q.22 Factorise: $49x^2 - 16y^2$ — 2

Q.23 Find the height of a cuboid whose base area is 180 sq cm and volume is 900 cu cm

OR

— 2

Find the area of a rhombus whose diagonals are of lengths 10 cm and 8.2 cm

Q.24 Find the value of

$(2^0 + 3^{-1}) \times 3^2$ — 2

Q.25 A machine in a soft drink factory fills 840 bottles in 6 hours. How many bottles will it fill in 5 hours ?

OR

— 2

If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours ?

Q.26 Find the values of the letters

  2 A B

+ A B 1

  B 1 8 — 2

SECTION - C

Q.27 At what rate percent per annum will a sum of Rs 10000 amount to Rs 13310 in 3 years compounded annually?

OR

— 3

An article was purchased for Rs 1416 including GST of 18 %. Find the price of

the article before GST was added?

Q.28 Factorise : $x^2 + 13x + 40$ 3

Q.29 Find the value of x if $\left(\frac{3}{5}\right)^2 \times \left(\frac{3}{5}\right)^x = \left(\frac{3}{5}\right)^{2x-1}$ 3

Q.30 Factorise : $p^4 - 81$

OR   3

Divide: $10y(6y + 21) \div 5(2y + 7)$

Q.31 The quantity of petrol filled in a car and the cost of petrol are given in the following table

Litres of petrol filled	10	15	20	25
Cost of petrol (in Rs)	500	750	1000	1250

Draw a graph representing the above data. Also, find the cost of 12 litres of petrol using the graph

OR   3

Following table gives the temperature at 12:00 noon on seven successive days in a city

Day (November)	1	2	3	4	5	6	7
Temperature in °C	14	18	14	16	20	22	18

Plot a graph to illustrate this information.

Q.32 A milk tank is in the form of cylinder whose radius is 1.5 m and length is 7 m . Find the quantity of milk in litres that can be stored in the tank ?   3

Q.33 There are 100 students in a hostel. Food provision for them is for 20 days. How long will these provisions last, if 25 more students join the group ?   3

Q.34 Given that 35a84 is divisible by 3, where 'a' is a digit, what are the possible values of 'a'.   3

SECTION - D

Q.35 Employees of a company have been categorized according to their religions as given below

Religions	Hindu	Muslim	Sikh	Christians	Total
No. of workers	450	270	255	105	1080

Draw a pie chart to represent the above information

OR   4

Given below is the frequency distribution of the heights of 50 students of a class:

Class interval	140-145	145-150	150-155	155-160	160-165
Frequency	8	12	18	10	5

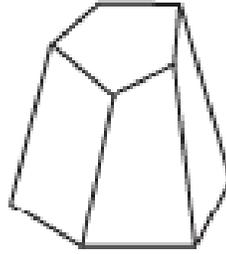Draw a histogram representing the above data.

Q.36 Divide : $x(5x^2 - 80)$ by $5x(x + 4)$ 4

Q.37 Find the amount and the compound interest on Rs 31250 for $1\frac{1}{2}$ years at 8% per annum compounded half yearly   4

OR

A VCR and TV were bought for Rs 8000 each. The shopkeeper made a loss of 4% on the VCR and a profit of 8% on the TV. Find the gain or loss percent on the whole transaction.

Q.38   Verify Euler's formula for the given solid

4

Q.39   An aquarium is in the form of a cuboid whose external measures are 80 cm × 30 cm × 40 cm. The base, side faces and back face are to be covered with a coloured paper. Find the area of the paper needed ?

OR

4

The volume of a cylinder of height 8 cm is 1232 cu cm. Find curved surface area of a cylinder.

Q.40   Simplify: $\dfrac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$

4