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PRACTICE PAPER
2013-2014
STD:- VIII

Sub : - Mathematics   **Time:- 3 Hours**
Date :-   **Marks:- 90**

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General Instructions:-

1.   All questions are compulsory.
2.   The question paper consists of 34 questions divided into 4 sections – A, B, C, D.
     i)   Section A comprises of 8 questions of 1 mark each.
     ii)   Section B comprises of 6 questions of 2 marks each.
     iii)   Section C comprises of 10 questions of 3 marks each.
     iv)   Section D comprises of 10 questions of 4 marks each.
3.   Internal choice has been provided in some questions. You have to attempt only one of alternatives in all such questions.

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SECTION-A

Q.1. Value of $5\sqrt{5} \times 5^3 \div 5^{-\frac{3}{2}}$ is………..

a) 5^4 b) 5^5 c) 5^6 d) 5^8

Q.2. Let P is the principal and interest compounded half yearly at the rate of 20% per annum then amount after two year will be

a) $P\left(\frac{6}{5}\right)^4$ b) $P\left(\frac{11}{10}\right)^2$ c) $P\left(\frac{11}{10}\right)^4$ d) $P\left(\frac{11}{10}\right)$

Q.3. If x^2+2x+3 is divided by x+ then the remainder is

a) 1   b) 2   c) -3   d) none of thes

Q.4. The Degree of $(x^4+3x+1)\div(3x+1)$ is

a) 1   b) 2   c) 3   d) 4

Q.5.The maximum length of pencil that can be placed in a rectangular box of dimensions 8cm x 6cm x 2cm is

a) $2\sqrt{13}$ cm   b) $2\sqrt{14}$ cm   c) $2\sqrt{26}$ cm   d) $3\sqrt{26}$ cm

Q6.If the length , breadth ,depth of the cuboid is 19 cm. and its diagonal is$5\sqrt{5}$ cm and then its surface area is

a) 216 cm^2 b) 236 cm^2 c)   256 cm^2 d) 276 cm^2

Q.7. Angle of rotation of a rhombus about its points of intersection of its diagonal is…….

a) 90^0 b) 180^0 c) 60^0 d) 120^0

Q.8. . Order of rotation for the alphabet   M is……..

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

SECTION B

Q.9. Evaluate: $81^{\frac{-3}{4}} \times 343^{\frac{2}{3}}$

Q.10. Determine x so that $800 = 8 \times 10^8 \times x^{-\frac{3}{2}}$

Q.11. Solve for x, $\dfrac{2x - \frac{3}{4}}{9x + \frac{4}{7}} = \dfrac{1}{4}$

Q.12. Two adjacent angles of parallelogram are in the ratio 2:7, Find all the angles of parallelogram.

Q.13. Find the lateral surface area of a right circular cylinder, if it has base diameter 6cm and its height is 12cm.

Q.14. Show shows rotational symmetry in alphabet H and Z, also write an Order and angle of rotation of each.

SECTION C

Q.15 . Evaluate: $\dfrac{(0.0225)^{\frac{-3}{2}} \times (0.0001)^{\frac{3}{4}}}{(0.0125)^{\frac{1}{3}}}$

Q.16. At what rate percent per annum will a sum of Rs.3200 amount to Rs.3872 in 2 years .

OR

Two years ago, the population of a town was 31250. Due to Epidemic, it decreases at the rate of 4% per annum. Find the present population.

Q.17. The compound interest on certain sum at the rate of 5% per annum. For 2 years is Rs.328. Find the simple interest for the same sum and same rate and same time period.

Q.18. Divide $x^4 + 3x^2 - 10 \; by \; x^2 + 5$ using factor method only.

Q.19. State whether or not $2x + 3$ is a factor of $6x^3 + 19x^2 + 13x - 3$

Q.20. Solve for x : $\dfrac{6x+7}{3x+2} = \dfrac{4x+13}{2x+5}$

Q.21. The sum of digit of two digit number is 15,if the number formed by reversing the digits is less than the original number by 27,find the original number .

Q.22. ABCD is parallelogram, diagonals AC and BD Intersect each other at point M, Show that: i) $\Delta AMB \cong \Delta CMD$ ii) AM=CM, BM=DM
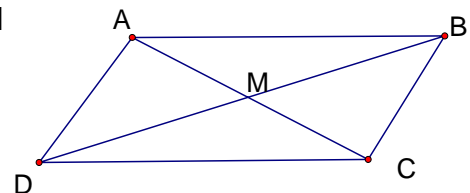
Q.23. The height and radius of a cylinder are in the ratio 7:5 and its volume is 550cm^3.Find the radius of its base

OR

Find the area of a trapezium whose parallel sides are 25cm and 13cm the non parallel sides are 10cm each

Q.24.Construct a quadrilateral PQRS such that PQ = 4.2 cm QR = 5cm,

RS = 5.3cm, and $\angle Q$ = 120^0 and $\angle R = 75^0$

SECTION-D

Q.25.   Evaluate: i) $2^{55} \times 2^{60} - 2^{97} \times 2^{18}$

ii)$(1^3 + 2^3 + 3^3)^{\frac{-5}{2}}$

Q.26. Mr.Rasiklal barrows a sum of Rs.12500 at 12% per annum for 3 years from a bank at a simple interest. If he had borrowed this sum at 12% per annum at compound interest. What excess amount he would have to pay to the bank after 3 years.

Q.27. Divide the polynomial $6x^5 + 4x^4 - 27x^3 - 7x^{2-} 27x - 6$ by $2x^2 - 3$ find quotient and remainder.

Q.28.Two men start from two towns 10 km apart. And walk towards each other .If the distance between them after 80 min is 2km if one man walks 3km /hr, how fast does the other man walks.

OR

One of the angles of the triangle is equal to the sum of the other two angles. If the ratio of other two angles is 4:5, find measures of all angles of the triangle

Q.29.The diagonals of a rhombus are in the ratio 3:4 if its perimeter is 40cm, find the length of the diagonals of the rhombus.

Q.30. The difference between the compound interest and simple interest on a certain sum for 2years at 7.5% per annum is Rs.360 find the sum.

Q.31. ABCD is rhombus show that diagonal AC bisect $\angle A$ as well as $\angle C$

Q.32 Construct a quadrilateral ABCD in which AB = 5cm, BC=8 cm CD = 4.5 cm , $\angle B=120^0$, $\angle C=90^0$

Q.33.A well with 10m inside diameter is dug 14m deep. Earth taken out of it is spread all around to a width of 5m to form embankment. Find height embankment.

Q.34. A cubical box with lid has a length 45cm find the cost of painting inside and outside of the box at Rs.150 per m^2.