AP SUPER GURU MODEL TEST PAPER – 2

MATHEMATICS (UNSOLVED)

Time Allowed : 3 Hours | CLASS – VIII | Maximum Marks : 80

NOTE

1. All the questions are compulsory.
2. **In Part – A** there will be Q.No. 1 to 3.
   (*i*) Question No. **1** have 16 questions of Multiple Choice of **one** mark each.
   (*ii*) Question No. **2** have 7 questions of Fill in the Blanks of **one** mark each.
   (*iii*) Question No. **3** have 7 questions of True/False of **one** mark each.
3. **Part – B** have questions from No. **4** to **7** each of **two** marks.
4. **Part – C** have questions from No. **8** to **13** each of **four** marks and there is internal choice in question number **8, 11** and **12.**
5. **Part – D** have questions from No. **14** to **16** each of **six** marks and there is internal choice of all questions.

PART – A

Each question is of 1-1 mark in this part :

1. Choose the right option from the following questions.

(*i*) What is multiplicative inverse of $\frac{-2}{5}$?

(*a*) $\frac{5}{2}$ (*b*) $\frac{-5}{2}$ (*c*) $\frac{2}{5}$ (*d*) None of these

(*ii*) Name the property used in the product $\frac{5}{4} \times 2 = 2 \times \frac{5}{4}$

(*a*) Additive (*b*) Assosiative (*c*) Commutative (*d*) None of these

(*iii*) After subtracting 6 from *m*, we will get :

(*a*) m – 6 (*b*) 6 – m (*c*) –m – 6 (*d*) m + 6

(*iv*) A polygon having 4 sides is called :

(*a*) Pentagon (*b*) Triangle (*c*) Quadrilateral (*d*) Circle

(*v*) Square of an even number is .....

(*a*) Odd number (*b*) Prime Number (*c*) Even Number (*d*) None of these

(*vi*) How many perfect square numbers are there from 1 to 100 ?

(*a*) 10 (*b*) 9 (*c*) 8 (*d*) 7

(*vii*) One digit of cube of a number having 2 at ones place is :

(*a*) 2 (*b*) 4 (*c*) 6 (*d*) 8

(*viii*) If 75% of a number is added in 75, we will get the same number then the number is :

(*a*) 400 (*b*) 200 (*c*) 500 (*d*) 300

(*ix*) What should be added to $1 - 2x$ so that we get 1 as sum ?

(*a*) $2x$ (*b*) 1 (*c*) $-2x$ (*d*) -1

(*x*) If area of square is equal to the area of circle then what will be the ratio of side of square to be radius of circle ?

(*a*) $\sqrt{\pi} : 2$ (*b*) $\sqrt{\pi} : 1$ (*c*) $\sqrt{\pi} : 3$ (*d*) $\sqrt{\pi} : 4$

(*xi*) Which of the following formula is used to find the volume of cylinder ?

(*a*) $2\pi r^2 h$ (*b*) $\frac{4}{3}\pi r^3$ (*c*) $\pi r^2 h$ (*d*) $\frac{1}{3}\pi r^2 h$

(*xii*) By what least number 625 must be divided so as to make it a perfect cube.

(*a*) 9 (*b*) 8 (*c*) 6 (*d*) 5

(*xiii*) Which of the following number is not a perfect cube?

(*a*) 16 (*b*) 27 (*c*) 64 (*d*) 125

(*xiv*) Which of the following are the factors of $x^2 - 16$:

(*a*) $(x - 4)(x - 4)$ (*b*) $(x - 4)(x + 4)$

(*c*) $(x - 16)(x + 16)$ (*d*) None of these

(*xv*) $4x^3 - 9x =$ .....

(*a*) $x^3 (2x - 3)(2x + 3)$ (*b*) $x^2 (4x - 9)(4x + 9)$

(*c*) $x (2x - 3)(2x + 3)$ (*d*) $x^2 (2x - 3)(2x + 3)$

(*xvi*) What are the co-ordinates of origin ?

(*a*) (3, 3) (*b*) (1, 0) (*c*) (0, 1) (*d*) (0, 0)

2. Fill in the blanks.

(*i*) ..... is the sum of interior angles of a triangle.

(*ii*) ..... is the relation used to find the class interval.

(*iii*) ..... are the number of digits in square root of 676.

(*iv*) 3 : 4 = ... in percentage form.

(*v*) Perimeter of square of edge 4cm is .....

(*vi*) $(x^m)^n =$ .....

(*vii*) The point (1, 0) lies on ..... axis.

3. True/False.

(*i*) Diagonals of a rhombus are equal. (True/False)

(*ii*) (–5) is the multiplicative invers of (–5). (True/False)

(*iii*) Sum of all angles of a pie chart is 360°. (True/False)

(*iv*) 6 is the value of 2^3. (True/False)

(*v*) Co-efficient of x in expression $7x^2 - x + 6$ (True/False)

(*vi*) $(x + 3)(x + 3)$ are the factors of $(x^2 + 6x + 9)$ (True/False)

(*vii*) Ratio of height of tree to the length of its shadow at the same time is a direct proportion. (True/False)

PART – B

Note : This part has questions of 2-2 mark :

4. If $x = \frac{-5}{12}$ and $y = \frac{-3}{8}$ then prove that $x - y \neq y - x$.

5. Find the square root of 121 by method of repeated subtraction.

6. Find the smallest number by which 1029 must be divided to obtain a perfect cube. Find the cube of number.

7. Write 1286.256 in expanded form using exponents.

PART – C

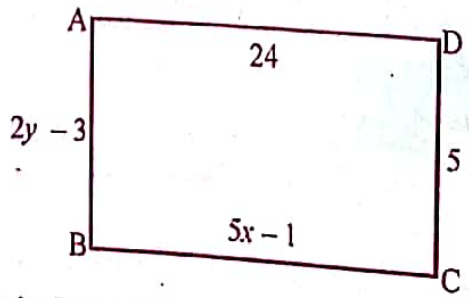
Note : This part has questions of 4-4 mark :

8. Shobo's mother's present age is six times Shobo's present age. Shobo's age five years from now will be one third of his mother's present age. What are their present ages ?

Or

Solve the following : $\frac{n}{2} - \frac{3n}{4} + \frac{5n}{6} = 21$

9. In the given figure ABCD is a rectangle. Find the value of x and y.



10. Subtract $(4xy - x - y + 4z)$ from the sum of $(7xy + 3x + 2y - 3z)$ and $(x + y + 2z)$.

11. Parveen has a road map with a scale of 1 cm representing 22 km. He drives on a road for 88 Km. What would be corresponding distance shown on the map ?

Or

A 15m high pole casts a shadow of 10 metres. Find the height of a tree that casts a shadow of 15 metres under similar conditions.

12. Find the factors of $25a^2 - 4b^2 + 28bc - 49c^2$. **Or**

Divide $(9y^2 - 6y - 8)$ by $(3y - 4)$

13. Draw a pie chart of the following data :

Amount deposited in Bank (in Rs.)	5000	10000	15000	20000
Simple Interest (in Rs.)	350	700	1050	1400

PART – D

Note : This part has questions of 6-6 mark.

14. The weekly wages (in Rs.) of 30 workers in a factory are 830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840 using tally marks make a frequency table with intervals as 800-810, 810-820 and so on.

Or

When a dice is thrown list the outcomes of an event getting (*i*) a prime number (*ii*) Number greater than 5 (*iii*) An odd number.

15. In the last year the value of a scooter was Rs. 34000. In this year it increases by 20%. Find the new value of scooter.

Or

Vahida bought a cooler for Rs. 3300 including 10% tax. Find the value of cooler before the addition of VAT.

16. A cylinderical milk tank is of the radius 1.5 m and length 7 m. Find the volume of the tank in litres. **Or**

A suitcase of dimensions 80 cm × 48 cm × 24 cm is to be covered with a cloth. To cover 100 such suitcases how much cloth of width 96 cm is needed ?

Answers of Multiple Choice Questions

1. (*i*) (*b*), (*ii*) (*b*), (*iii*) (*a*), (*iv*) (*c*), (*v*) (*c*), (*vi*) (*a*), (*vii*) (*d*), (*viii*) (*d*), (*ix*) (*a*), (*x*) (*b*), (*xi*) (*c*), (*xii*) (*d*), (*xiii*) (*a*), (*xiv*) (*b*), (*xv*) (*c*), (*xvi*) (*d*)

2. (*i*) 180°, (*ii*) Upper limit – Lower Limit, (*iii*) 2, (*iv*) 75%, (*v*) 16cm, (*vi*) $x^{m \times n}$, (*vii*) *x*–axis

3. (*i*) False, (*ii*) False, (*iii*) True, (*iv*) False, (*v*) False, (*vi*) True, (*vii*) True.