AP SUPER GURU MODEL TEST PAPER – 4

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

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

1. Choose the right option from the following questions :

(*i*) What is the multiplicative inverse of $-\frac{13}{19}$?

(*a*) $\frac{13}{19}$ (*b*) $\frac{19}{13}$ (*c*) $-\frac{19}{13}$ (*d*) 1

(*ii*) What is the lower limit of the class Interval 20 – 30 ?

(*a*) 20 (*b*) 30 (*c*) 25 (*d*) 10

(*iii*) If $7x = 56$, then $x =$ .....

(*a*) 8 (*b*) 7 (*c*) –7 (*d*) 49

(*iv*) The sum of four angles of a quadrilateral is .....

(*a*) 180° (*b*) 360° (*c*) 90° (*d*) 480°

(*v*) What is the probability of getting a number greater than 4 when a dice is thrown ?

(*a*) $\frac{1}{2}$ (*b*) $\frac{1}{3}$ (*c*) $\frac{1}{6}$ (*d*) $\frac{5}{6}$

(*vi*) The square of which of the following number would be an even number :

(*a*) 431 (*b*) 8204 (*c*) 2825 (*d*) 533

(*vii*) The ones digit of a number is 2, then what will be the ones digit of the cube of that number?

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

(*viii*) Convert 3 : 5 into percentage.

(*a*) 40% (*b*) 25% (*c*) 20% (*d*) 60%

(*ix*) What is the coefficient of x in $-5x$.

(*a*) 5 (*b*) -5 (*c*) x (*d*) $5x^2$

(*x*) A cuboid has ..... vertices.

(*a*) 6 (*b*) 8 (*c*) 12 (*d*) 4

(*xi*) Amount of region occupied by a solid is called its .....

(*a*) Area (*b*) Volume (*c*) Perimeter (*d*) None of these

(*xii*) The relation between dependent variable and independent variable is shown by :

(*a*) Graph (*b*) Pie chart

(*c*) Class Interval (*d*) Histograph

(*xiii*) What is the value of 3^0?

(*a*) 3 (*b*) 0 (*c*) 1 (*d*) None of these

(*xiv*) The cosumption of petrol and distance travelled by a car is a case of :

(*a*) Inverse proportion (*b*) Direct proportion

(*c*) Zero proportion (*d*) No proportion

(*xv*) What is the common factor between $-28p$ and $7p$?

(*a*) $7p$ (*b*) $-196p^2$ (*c*) $-287p^2$ (*d*) $-14\ p^2$

(*xvi*) Which of the following number is not divisible by 3 ?

(*a*) 108 (*b*) 636 (*c*) 243 (*d*) 440

2. Fill in the blanks.

(*i*) Zero has ..... reciprocal.

(*ii*) ..... measurements can determine a quadrilateral uniquely.

(*iii*) When a coin is thrown the number of possible outcomes are .....

(*iv*) Discount is a reduction given on the ..... price of an item.

(*v*) $5x - 7y$ is a .....

(*vi*) Area of trapezium = Half of the sum of the lengths of parallel sides × .....

(*vii*) The population of a country and the area of land per person is in ..... proportion.

3. True/False :

(*i*) The sum of the measures of the external angles of any polygon is 360°. (True/False)

(*ii*) The opposite angles of a parallelogram are equal. (True/False)

(*iii*) $x \times x^2 \times x^3 \times x^4 = x^{1234}$. (True/False)

(*iv*) The volume of a cylinder = $\pi r^3 h$. (True/False)

(*v*) The exponent of 5^{-3} is -3. (True/False)

(*vi*) Speed of the vehicle and time taken to cover a distance are in direct porportion. (True/False)

(*vii*) x – axis is called horizontal axis. (True/False)

PART – B

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

4. Multiply $\frac{6}{13}$ by the reciprocal of $\frac{-7}{16}$.

5. Find the square root of 25 by the method of repeated subtraction.

6. Find the cube root of 15625.

7. Find the product of $\frac{2}{3}xy \times \frac{-9}{10}x^2y^2$

PART – C

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

8. Solve the equation $5t - 3 = 3t - 5$ and check your answer.

Or

Three consecutive integers add up to 51. What are these integers ?

9. Find the number of sides of a regular polygon whose each exterior angle has a measure of 45°.

10. Solve the equation : $(3y^8 - 4y^6 + 5y^4) \div y^4$.

11. 6 pipes are required to fill a tank in 80 minutes. How long will it take if only 5 pipes of the same type are used ?

12. Factorise the following : $x^4 - (x-2)^4$

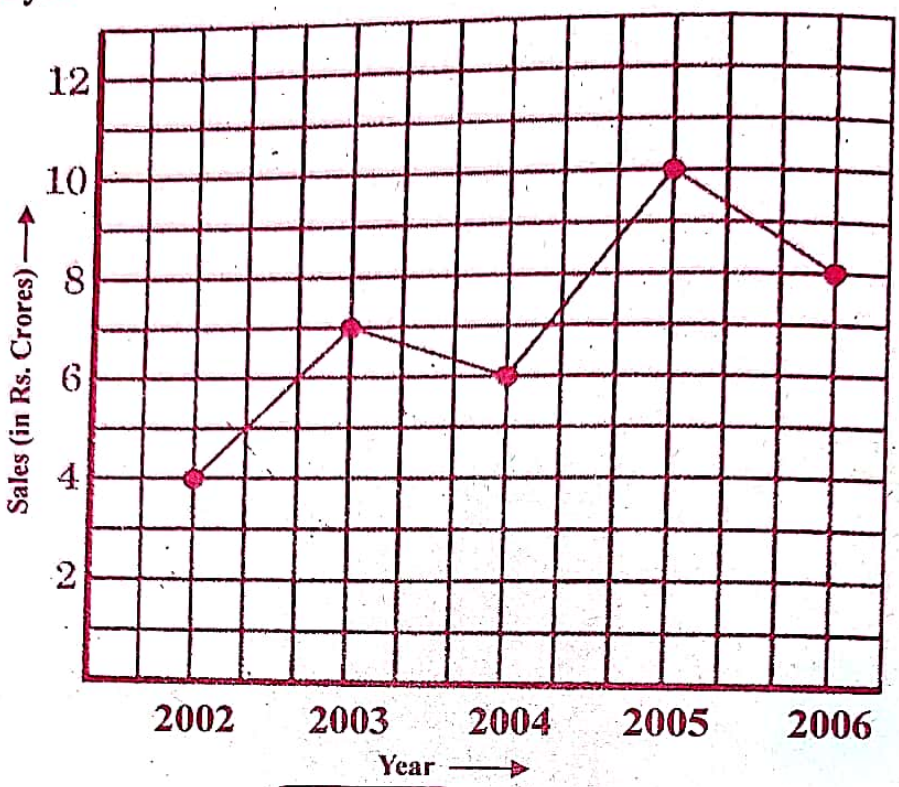
13. The following line graph shows the yearly sales figures for a manufacturing company.

(*i*) What was the sale in the year 2003 ?

(*ii*) What was the sale in the year 2005 ?

(*iii*) Compute the difference between the sales in the years 2002 and 2006.

(*iv*) In which year was there the greatest difference between the sales as compared to its previous year ?



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

Study the following frequency distribution table and answer the question given below.

Class Interval (Daily Income in Rs.)	Frequency (No. of Workers)
100 – 125	45
125 – 150	25
150 – 175	55
175 – 200	125
200 – 225	140
225 – 250	55
250 – 275	35
275 – 300	50
300 – 325	20
Total	550

(*i*) What is the size of intervals ?

(*ii*) Which class interval has the lowest frequency ?

(*iii*) Which class interval has the highest frequency ?

(*iv*) What is the upper limit of the class interval 275 – 300 ?

(*v*) What is the lower limit of the class interval 200 – 225 ?

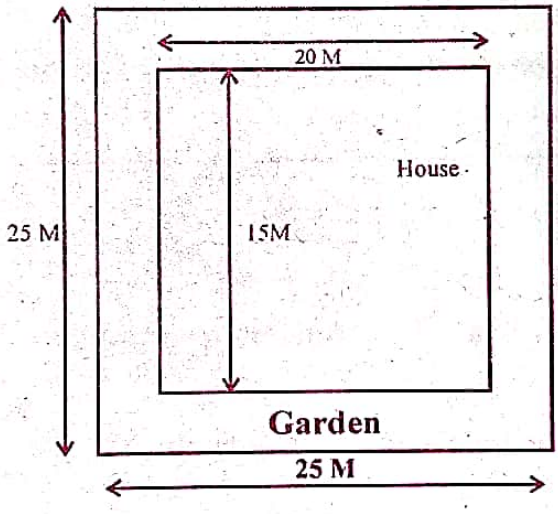
(*vi*) Which two class intervals have the same frequency ?

15. 72% of 25 students are good in mathematics. How many are not good in mathematics ?

Or

A photo frame is marked at Rs. 600 is sold at Rs. 450. What is the discount and discount percentage ?

16. Mrs. Kaushik has a square plot with measurement as shown in the figure. She wants to construct a house in the middle of the plot. A garden is developed around the house. Find the total cost of developing a garden around the house at the rate of Rs. 55 per m^2.



Or

A cuboid is of dimensions 60cm × 54cm × 30cm. How many small cubes with side 6cm can be placed in the given cuboid ?

Answers of Multiple Choice Question

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

2. (*i*) Infinite , (*ii*) 5, (*iii*) 2, (*iv*) Marked (*v*) Two (*vi*) Perpendicular, (*vii*) Inverse.

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