AP SUPER GURU MODEL TEST PAPER – 5

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*) Which of the following is the multiplicative inverse of $\frac{3}{2}$?

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

(*ii*) What is the value of '*y*' for the equation $3y - 2 = y + 6$?

(*a*) 3 (*b*) 4 (*c*) 5 (*d*) 6

(*iii*) If $3x - 2$ and 7 are the opposite sides of a parallelogram then what is the value of '*x*' ?

(*a*) 2 (*b*) 7 (*c*) 3 (*d*) 4

(*iv*) Square of an odd number is always a ..... number.

(*a*) Even (*b*) Prime (*c*) Irrational (*d*) Odd

(*v*) $1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 =$ .....

(*a*) 8^2 (*b*) 7^2 (*c*) 6^2 (*d*) 5^2

(*vi*) What is the unit digit in the cube of 7 ?

(*a*) 7 (*b*) 3 (*c*) 5 (*d*) 6

(*vii*) What is the percentage form of 3 : 4 ?

(*a*) 25% (*b*) 50% (*c*) 75% (*d*) 12%

(*viii*) Complete the identity ; $x^2 - 4 =$ ..... ?

(*a*) $(x-2)(x-2)$ (*b*) $(x-4)(x+4)$

(*c*) $(x-4)(x+4)$ (*d*) $(x-2)(x+2)$

(*ix*) What will be the volume of a cube whose each edge is 5cm ?

(*a*) 125 cm^3 (*b*) 50 cm^3 (*c*) 15 cm^3 (*d*) 45 cm^3

(*x*) Which of the following formula is used to find the lateral surface area of a cuboid ?

(*a*) 2 (*l*b + bh + h*l*) (*b*) 2 (*l* + b) h

(*c*) (*l* × b × h) (*d*) None of these

(*xi*) What is the value of $(3^0 + 4^0 + 5^0)$?

(*a*) 1 (*b*) 0 (*c*) 3 (*d*) 60

(*xii*) Find the value of '*x*' $5^{2x-1} = 5^5$?

(*a*) 0 (*b*) 1 (*c*) 5 (*d*) 3

(*xiii*) Which of the following is equal to $m^2 - 14m - 32$?

(*a*) (m – 16) (m + 2) (*b*) (m – 16) (m – 2)

(*c*) (m + 16) (m – 2) (*d*) (m + 16) (m + 2)

(*xiv*) $(72x^2 - 50) \div (6x - 5)$ is = ...

(*a*) $(6x-5)$ (*b*) $2(6x+5)$ (*c*) $(2x-10)$ (*d*) $(12x+25)$

(*xv*) What is the absicca of the point (2, 7) ?

(*a*) 7 (*b*) 0 (*c*) 2 (*d*) –7

(*xvi*) Which of the following has no-multiplicative inverse ?

(*a*) 1 (*b*) 4 (*c*) 3 (*d*) 0

2. Fill in the blanks.

(*i*) If $3y$ and $120°$ are the adjacent angles of a rhombus then y and will be equal to .....

(*ii*) The probability of getting a head is ..... when a coin is tossed once.

(*iii*) 1+3+5+7+ ..... + upto n term = ...

(*iv*) 1 litre = ... cm^3.

(*v*) In India GST is implicated to on .....

(*vi*) The simple form of 1.6×10^4 .....

(*vii*) The Co-ordinates of origin are .....

3. True/False.

(*i*) $3x + 2y = 7$ is a equation in one variable. (True/False)

(*ii*) Adjacent angles of a parallelogram are always supplementary. (True/False)

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

(*iv*) Equation $ax^2 + bx + c = 0$ is a binomial. (True/False)

(*v*) $2\pi r(r + h)$ is the formula used to find the volume of a cylinder. (True/False)

(*vi*) If the value of 5 pens is Rs. 15 then the value of 12 such pens is Rs. 63. (True/False)

(*vii*) $(a + b)^2 - (a - b)^2 = 4ab$ (True/False)

PART – B

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

4. Subtract $\frac{-5}{6}$ from $\frac{-3}{4}$.

5. Find a largest four digit number which is a perfect square.

6. Find the cube root of 729000 by prime factorisation method.

7. Solve the following $\left[\left(\frac{1}{3}\right)^{-2} - \left(\frac{1}{2}\right)^{-3}\right] \div \left[\frac{1}{4}\right]^{-2}$

PART – C

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

8. Sum of the digits of a two digit number is 8. If 18 is added to the number, its digits are reversed. Find the number.

Or

Solve the following $4(x+2) - 5 = 2(x-1) + 7$.

9. If in a rhombus ABCD, Diagonal AC and BD intersects each other at O. If AC = 12 cm and BD = 16cm then find OA and AB.

10. Find the value of 97×104 by using suitable identity.

11. If the weight of 12 sheets of a paper is 36 grams then how many sheets of the same paper will weight 300 grams?

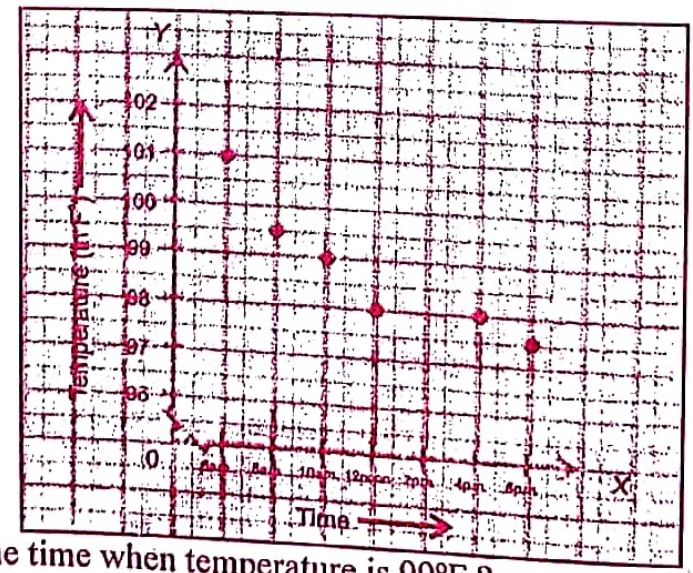
Or

If x and y are in indirect proportion then find the value of b_1 and b_2.

x	8	6	12
y	120	b_1	b_2

12. Study the given graph and answer the following questions.

(*i*) What information the graph shows ?



(*ii*) What is the time when temperature is 99°F ?

(*iii*) The temperature was same two times during the given period. What are the times?

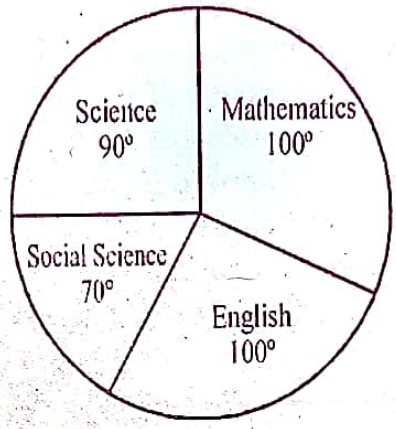
(*iv*) What is the temperature at 6 p.m. ?

13. Factorised $100x^2 - 80xy + 16y^2$. **Or** Divide $y^2 + 7y + 10$ by $(y + 5)$.

PART – D

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

14. The given pie chart shows the marks obtained by Anita in different subjects. If the total marks is 540 then find the marks obtained in each subject.



Or

A dies is thrown once, find the probability of getting :

(a) a prime number (b) number 2 or 4

(c) number greater than 4 (d) an odd number

15. In a class out of total students 40% are boys. If boys are 12 in number then find (*i*) Total students in the class (*ii*) Number of girls in the class (*iii*) Ratio of girls to boys of the class.

Or

Population of town is 1,50,000. The annual birth rate is 5% and mortality rate is 3%. Find the population after 2 years.

16. The length and breadth of a rectangular field are in the ratio of 3 : 2. If the area of the field is 294 m^2. Find the cost of fencing the field at Rs. 8 per metre.

Or

Find the other parallel side of trapeziuem if its area is 300 m^2. One parallel side is 15m and distance between parallel sides is 15m.

Answers of Multiple Choice Questions

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

2. (*i*) 20°, (*ii*) ½, (*iii*) n^2, (*iv*) 100, (*v*) 1 July 2017, (*vi*) 16000, (*vii*) (0, 0)

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