कुल छपे पृष्ठों की संख्या -02
कुल छपे प्रश्नों की संख्या -28

नामांक ROLL NO.

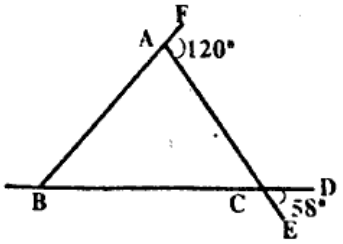
SPB-IX-7E

Half-Yearly Examination 2019-20

Class- 9 IX

Time : 3¼ Hrs. **Subject- Maths** **M.M. : 70**

1. Change $2\dot{4}\dot{3}$ into ordinary number. 1
2. Find the value of $(125)^{1/3}$ 1
3. Sum of all interior angles in a triangle. 1
4. What is SAS Rule of congruence. 1
5. Write the formulla to find the area of cyclic quadritateral. 1
6. What is the value of $\frac{3\pi}{4}$ in sexogesimal system. 1
7. Find the vaue of $\text{Sin}^2 10^0 + \text{Cos}^2 10^0$ 1
8. Multiply 102×107 by Sutra Nikhilam. 2
9. Rationalise the demoninator of $\frac{1}{\sqrt{7}+2}$. 2
10. If $P(x) = x^2 + 4x - 3$ then find the value of P(2). 2
11. If 3x-2y+7=0 and x=2, then find the value of y. 2
12. Find the angles of ΔABC in the figure. 2



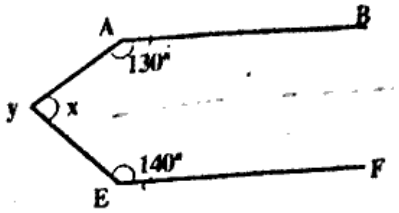
13. Construct a triangle ABC in which AB = 4cm., BC= 5cm., CA=6cm. 2
14. The length of diagonals of a rhombus are 20cm. and 30cm. respectively then find its area. 2
15. If $Sin\ A = \frac{3}{5}$ then find the value of CosA. 2
16. Divide by Paravartya Yajayet Method : 14885÷123 3
17. Express the $1.2\overline{35}$ in the form of $\frac{p}{q}$ where P and q are integers and $q \neq 0$. 3
18. Evaluate the following using suitable identities : 3
    (i) 103×103 (ii) 48×52

P.T.O.

19. Solve the following equations by the method of elemiltion by equating the coefficients : 3

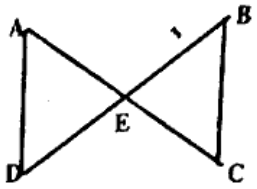
$2x+y = 13$,
$5x-3y=16$

20. In Figure AB||EF find the vaue of $\angle x$ and $\angle y$ 3



21. Prove that the sum of the three angles of a triangle is equal to two right angles. 3

22. In Figure AE=EC and DE=BE then show that $\Delta AED \cong \Delta CEB$ 3



23. Construct a triangle ABC, when base BC=6cm., $\angle B=60^0$, and AB+AC=7cm. 3

24. The angles of a triangles are in ratio 2:3:4. Find the all three angles in radians. 3

25. Factorise : (Any two) 5

(i) $6x^2 + 5x - 6$ (ii) $25x^2 - 36y^2$

(iii) $x^3 + 2x^2 - x - 2$

26. Solve the following equations by graphical method : 5

$x+2y=5$; $2x+y=4$

27. Length of a rectangular field is 35m. and breadth is 20m. It is to be tiled. If the measures of a tile is 7cm. × 5 cm. then how many tiles will be required. 5

or

A water tank is 10m. long, 8m. wide and 2m. deep. Find the expenditure of repairing its four walls and floor at the rate of Rs. 15 per square metre.

28. Prove following iedntities : 5

(i) $\sqrt{\frac{1-Sin\theta}{1+Sin\theta}} = \frac{1-Sin\theta}{Cos\theta}$

(ii) $\sqrt{\frac{Cosc^2\theta - 1}{Cosec\theta}} = Cos\theta$

or

$Sec^6\theta - \tan^6\theta = 1 + 3\tan^2\theta + 3\tan^4\theta$