www.Padasalai.Net www.CBSEtips.in

HSL

HALF YEARLY EXMINATION - 2022

VIII - Std **MATHS**

Time :2.00 Hrs Marks : 60

PART - I

I Choose the correct answer :- 10 X 1 = 10

1. $\frac{-5}{4}$ is a rational number which lies between .....
   a) 0 and $\frac{-5}{4}$ b) –1 and 0 c) –1 and –2 d) –4 and –5
2. The square of 43 ends with the digit.....
   a) 9 b) 6 c) 4 d) 3
3. If $\frac{10^x}{10^{-3}} = 10^9$ then x is ..... a) 4 b) 5 c) 6 d) 7
4. The product of $7P^3$ and $(2P^2)^2$ is ..... a) $14P^{12}$ b) $28P^7$ c) $9P^7$ d) $11P^{12}$
5. If $x^2 - y^2 = 16$ and $(x + y) = 8$ then $(x - y)$ is.....
   a) 8 b) 3 c) 2 d) 1
6. $\frac{(a+b)(a^3-b^3)}{(a^2-b^2)} =$ ..... .
   a) $a^2 - ab + b^2$ b) $a^2 + ab + b^2$ c) $a^3 + 2ab + b^2$ d) $a^2 - 2ab + b^2$
7. $(x + 4)$ and $(x - 5)$ are the factors of ..... .
   a) $x^2 - x + 20$ b) $x^2 - 9x - 20$ c) $x^2 + x - 20$ d) $x^2 - x - 20$
8. Two similar triangles will always have ..... angles.
   a) acute b) obtuse c) right d) matching
9. What is the eleventh Fibonacci number?
   a) 55 b) 77 c) 89 d) 144
10. Common Prime factors of 30 and 250 are .....
    a) 2 X 5 b) 3 X 5 c) 2 X 3 X 5 d) 5 X 5

II Fill in the blanks :- 5 X 1 = 5

11. The rational number $\frac{-8}{3}$ and $\frac{8}{3}$ are equidistant from ..... .
12. For $a \neq 0$, a^0 is .....
13. The longest Chord of a circle is .....
14. The linear equation in one variable has ..... solution.
15. The centroid of a triangle divides each medians in the ratio .....

III Match the following :- 5 X 1 = 5

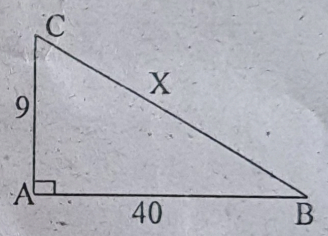
16.	Area of a circle	-	20
17.	$4y^2 X - 3y$	-	πr^2
18.	$\frac{x}{2} = 10$	-	Circumcentre
19.	Perpendicular Bisector	-	$\frac{1}{2} d\ (h_1 + h_2)$
20.	Area of the Quadrilateral	-	$-12y^3$

Kindly send me your questions and answerkeys to us : Padasalai.net@gmail.com

PART - II

IV Answer the following questions. (any 10). 10 X 2 = 20

21. Find a rational number between $\frac{1}{3}$ and $\frac{5}{9}$.
22. Find the square root by Prime factorisation - 144.
23. Evaluate : $(3^{-1} + 4^{-2} + 5^{-3})^0$
24. A circle of radius 120m is divided into 8 equal sectors. Find the length of the arc of each of the sectors.
25. Verify Euler's formula for the given below details.
    Faces = 4 ; Vertices = 4 ; Edges =6.
26. Find the product of the terms - 2mn, $(2m)^2$, (–3mn)
27. Find the value of $(3a + 4c)^2$ by using $(a + b)^2$ identity.
28. Factorise the following by taking out the common factor 18xy–12yz.
29. Solve : 2x + 5 = 9.
30. Check whether the given sides are the sides of right angled triangles using Pythogras theorem 8 ; 15 ; 17.
31. Name the 4 points of concurrency in a triangle.
32. Define : Centroid.
33. Find the unknown side in the following triangle.



34. Using repeated division method, find the HCF 392 and 256.
35. Using repeated substraction method, find the HCF 280 and 420.

PART - III

V Answer the following questions. (any 4) 4 X 3 = 12

36. List any five rational numbers between $\frac{-1}{2}$ and $\frac{3}{5}$.
37. Find the square root by long division method 6889.
38. Solve for x : $\frac{5^5 X 5^{-4} X 5^x}{5^{12}} = 5^{-5}$
39. For the sectors with given measures, find the area central angle = 45° ; r = 16m
40. Expand : $(5^2)^3$
41. 210menworking 12 hours a day can finish a job in 18 days. How many men are required to finish the job in 20 days working 14 hours a day?
42. Kalai wants to cut identical squares as big as she can, from a piece of paper measuring 168mm and by 196mm. What is the length of the side of the biggest square?
    (To find HCF using repeated subtraction method?

PART - IV

VI Answer the following questions :- (any 1) 8 X 1 = 8

43. Construct a quadrilateral DEAR with DE = 6cm, EA = 5cm, AR =5.5 cm, RD =5.2cm and DA = 10cm. Also, find its area.
44. Construct a parallelogram BIRD with BI = 6.5cm, IR = 5cm and $\angle BIR = 70^o$; Also find its area.

Kindly send me your questions and answerkeys to us : Padasalai.net@gmail.com