

## JS TUTION CENTER

TEST 7  
CHAPTER 2

TIME : 1 Hr

MARKS : 50

## PART I

Answer the following

5 x 1 = 5

1. The equation whose roots are numerically equal but opposite in sign to the roots of  $3x^2 - 5x - 7 = 0$  is  
(1)  $3x^2 - 5x - 7 = 0$  (2)  $3x^2 + 5x - 7 = 0$  (3)  $3x^2 - 5x + 7 = 0$  (4)  $3x^2 + x - 7$
2. The solution of  $5x - 1 < 24$  and  $5x + 1 > -24$  is  
(1) (4, 5) (2) (-5, -4) (3) (-5, 5) (4) (-5, 4)
3. If 3 is the logarithm of 343, then the base is  
(1) 5 (2) 7 (3) 6 (4) 9
4. The number of roots of  $(x + 3)^4 + (x + 5)^4 = 16$  is  
(1) 4 (2) 2 (3) 3 (4) 0
5. If a and b are the roots of the equation  $x^2 - kx + 16 = 0$  and satisfy  $a^2 + b^2 = 32$ , then the value of k is  
(1) 10 (2) -8 (3) -8, 8 (4) 6

## PART II

Answer the following

5 x 2 = 10

6. Find the roots of the polynomial equation  $(x - 1)^3(x + 1)^2(x + 5) = 0$  and state their multiplicity
7. Simplify:  $(125)^{\frac{2}{3}}$
8. Solve  $x^{\log_3 x} = 9$
9. Compute  $\log_3 5 \log_{25} 27$
10. Solve  $3x - 5 \leq x + 1$  for x

## PART III

Answer the following

5 x 3 = 15

11. Resolve into partial fractions:  $\frac{2x}{(x^2+1)(x-1)}$
12. Simplify by rationalising the denominator:  $\frac{7+\sqrt{6}}{3-\sqrt{2}}$
13. Find the logarithm of 1728 to the base  $2\sqrt{3}$
14. Prove  $\log \frac{75}{16} - 2\log \frac{5}{9} + \log \frac{32}{243} = \log 2$ .
15. If  $x^2 + x + 1$  is a factor of the polynomial  $3x^3 + 8x^2 + 8x = a$ , then find the value of a.

## PART IV

Answer the following

$$4 \times 5 = 20$$

16. If the difference of the roots of the equation  $2x^2 - (a + 1)x + a - 1 = 0$  is equal to their product, then prove that  $a = 2$ .

(or)

A quadratic polynomial has one of its zeros  $1 + \sqrt{5}$  and it satisfies  $p(1) = 2$ . Find the quadratic polynomial.

17. Solve  $\sqrt{x + 14} < x + 2$ .

(or)

Solve  $3x^2 + 5x - 2 \leq 0$

18. Find the real roots of  $x^4 = 16$

(or)

Use the method of undetermined coefficients to find the sum of  $1 + 2 + 3 + \dots + (n - 1) + n$ ,  $n \in \mathbb{N}$

19. The equations  $x^2 - 6x + a = 0$  and  $x^2 - bx + 6 = 0$  have one root in common. The other root of the first and the second equations are integers in the ratio 4:3. Find the common root.

(or)

Solve  $\frac{x+1}{x+3} < 3$



# www.Padasalai.Net

படங்களை தொடுக! பாடசாலை வலைதளத்தை சமூக ஊடகங்களில் பின்தொடர்க!! உடனுக்குடன் புதிய செய்திகளை Notifications-ல் பெறுக!



YouTube



Zoom



Touch Below Links



Download!

<b>12<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials – EM</a>	<a href="#">Study Materials - TM</a>	<a href="#">Practical</a>	<a href="#">Online Test (EM &amp; TM)</a>
	<a href="#">Monthly Q&amp;A</a>	<a href="#">Mid Term Q&amp;A</a>	<a href="#">Revision Q&amp;A</a>	<a href="#">PTA Book Q&amp;A</a>	<a href="#">Centum Questions</a>	<a href="#">Creative Questions</a>
	<a href="#">Quarterly Exam</a>	<a href="#">Half Yearly Exam</a>	<a href="#">Public Exam</a>	<a href="#">NEET</a>		

<b>11<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials – EM</a>	<a href="#">Study Materials - TM</a>	<a href="#">Practical</a>	<a href="#">Online Test (EM &amp; TM)</a>
	<a href="#">Monthly Q&amp;A</a>	<a href="#">Mid Term Q&amp;A</a>	<a href="#">Revision Q&amp;A</a>	<a href="#">Centum Questions</a>	<a href="#">Creative Questions</a>	
	<a href="#">Quarterly Exam</a>	<a href="#">Half Yearly Exam</a>	<a href="#">Public Exam</a>	<a href="#">NEET</a>		

<b>10<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials - EM</a>	<a href="#">Study Materials - TM</a>	<a href="#">Practical</a>	<a href="#">Online Test (EM &amp; TM)</a>
	<a href="#">Monthly Q&amp;A</a>	<a href="#">Mid Term Q&amp;A</a>	<a href="#">Revision Q&amp;A</a>	<a href="#">PTA Book Q&amp;A</a>	<a href="#">Centum Questions</a>	<a href="#">Creative Questions</a>
	<a href="#">Quarterly Exam</a>	<a href="#">Half Yearly Exam</a>	<a href="#">Public Exam</a>	<a href="#">NTSE</a>	<a href="#">SLAS</a>	

<b>9<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials</a>	<a href="#">1<sup>st</sup> Mid Term</a>	<a href="#">2<sup>nd</sup> Mid Term</a>	<a href="#">3<sup>rd</sup> Mid Term</a>
	<a href="#">Quarterly Exam</a>	<a href="#">Half Yearly Exam</a>	<a href="#">Annual Exam</a>	<a href="#">RTE</a>		

<b>8<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials</a>	<a href="#">1<sup>st</sup> Mid Term</a>	<a href="#">2<sup>nd</sup> Mid Term</a>	<a href="#">3<sup>rd</sup> Mid Term</a>
	<a href="#">Term 1</a>	<a href="#">Term 2</a>	<a href="#">Term 3</a>	<a href="#">Public Model Q&amp;A</a>	<a href="#">NMMS</a>	<a href="#">Periodical Test</a>

<b>7<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials</a>	<a href="#">1<sup>st</sup> Mid Term</a>	<a href="#">2<sup>nd</sup> Mid Term</a>	<a href="#">3<sup>rd</sup> Mid Term</a>
	<a href="#">Term 1</a>	<a href="#">Term 2</a>	<a href="#">Term 3</a>	<a href="#">Periodical Test</a>	<a href="#">SLAS</a>	

<b>6<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials</a>	<a href="#">1<sup>st</sup> Mid Term</a>	<a href="#">2<sup>nd</sup> Mid Term</a>	<a href="#">3<sup>rd</sup> Mid Term</a>
	<a href="#">Term 1</a>	<a href="#">Term 2</a>	<a href="#">Term 3</a>	<a href="#">Periodical Test</a>	<a href="#">SLAS</a>	

<b>1<sup>st</sup> to 5<sup>th</sup> Standard</b>	<a href="#">Syllabus</a>	<a href="#">Books</a>	<a href="#">Study Materials</a>	<a href="#">Periodical Test</a>	<a href="#">SLAS</a>	
	<a href="#">Term 1</a>	<a href="#">Term 2</a>	<a href="#">Term 3</a>	<a href="#">Public Model Q&amp;A</a>		

<b>Exams</b>	<a href="#">TET</a>	<a href="#">TNPSC</a>	<a href="#">PGTRB</a>	<a href="#">Polytechnic</a>	<a href="#">Police</a>	<a href="#">Computer Instructor</a>
	<a href="#">DEO</a>	<a href="#">BEO</a>	<a href="#">LAB Asst</a>	<a href="#">NMMS</a>	<a href="#">RTE</a>	<a href="#">NTSE</a>

<b>Portal</b>	<a href="#">Matrimony</a>	<a href="#">Mutual Transfer</a>	<a href="#">Job Portal</a>
---------------	---------------------------	---------------------------------	----------------------------

<b>Volunteers</b>	<a href="#">Centum Team</a>	<a href="#">Creative Team</a>	<a href="#">Key Answer Team</a>
-------------------	-----------------------------	-------------------------------	---------------------------------

<b>Downloads</b>	<a href="#">LESSON PLAN</a>	<a href="#">Department Exam</a>	<a href="#">Income Tax</a>	<a href="#">Forms &amp; Proposals</a>	<a href="#">Fonts</a>	<a href="#">Downloads</a>
	<a href="#">Proceedings</a>	<a href="#">GO's</a>	<a href="#">Regulation Orders</a>	<a href="#">Pay Orders</a>	<a href="#">Panel</a>	



**Padasalai – Official Android App – [Download Here](#)**



Kindly Send Your Study Materials, Q&A to our Email ID – [Padasalai.net@gmail.com](mailto:Padasalai.net@gmail.com)