

## II PUC Basic Mathematics 2021-22

### Syllabus Distribution

Duration	Chapters to be Covered	Alloted Time
I Term	From 15.07.2021 to 15.09.2021	
	1) Matrices and Determinants	13 hours
	2) Partial Fractions	4 hours
	3) Ratios and Proportions	10 hours
	4) Learning Curve	4 hours
	5) Trigonometry – Compound angle, multiple and sub-multiple angles, transformation formulae	8 hours

	I Test from 13.09.2021 to 15.09.2021	
	Note: Portions above 5 chapters covered in I term.	

Assignment-I
<b>1) Matrices and Determinants</b> (i) Problems on solutions to system of equations by matrix method. (ii) Problems on $A \cdot \text{adj } A = \text{adj } A \cdot A =  A I$ (iii) Problems based on verifying $(AB)^{-1} = B^{-1}A^{-1}$ (only for $2 \times 2$ matrices)
<b>2) Partial fractions</b> (i) Problems based on repeated linear factors and non-repeated linear factors for a proper rational fraction.
<b>3) Ratios and proportions (All 5 marks questions)</b> (i) Problems based on time and work. (ii) Problems based on time and distance. (iii) Problems based on mixtures.
<b>4) Learning curve:</b> Problems using tabular method only.
<b>5) Trigonometry</b> Problems on transformation formulae; of the kind (i) Prove: $\frac{\sin 5x + \sin 4x + \sin 2x + \sin x}{\cos 5x + \cos 4x + \cos 2x + \cos x} = \tan 3x$ (ii) Prove: $\frac{\sin 6A + \sin 2A + 2\sin 4A}{\sin 7A + \sin 3A + 2\sin 5A} = \frac{\sin 4A}{\sin 5A}$