Baba fateh Singh ji Govt. College, Assandh, Karnal

Department of Mathematics

Class B.A. III (Sem. VI)

Session: 2023-2024 Lesson Plan : Dynamics

Sr.No		
1	Week 1 1 Jan to 6 Jan	• Preliminaries • —do— • Velocity and Acceleration along a plane curve —do— —do— • Radial and transverse Velocities (Polar co-ordinate)
7	Week 2 8 Jan to 13 Jan	• Radial and transverse Acceleration, Radial and transverse velocities (vector method); • Radial and transverse Acceleration, • Tangential and Normal Velocity (Polar-co-ordinate) • Tangential and Normal Acceleration
14	Week 3 15 Jan to 20 Jan.	• Vector method —do— • Relative Velocity. —do— • Relative Acceleration —do—
20	Week-4 22 Jan to 27 Jan	• Simple Harmonic Motion —do— —do— —do— • Elastic string.
28	Week-5 29 Jan to 3 Feb	• Horizontal Elastic string. • Vertical Elastic string. • Mass, Momentum and force —do—
34	Week-6 5 Feb to 10 Feb	• Newton law of Motion. —do— —do— —do—
40		

43	Week7	• Work, Power and Energy.
44	12 Feb	— do —
45	to	— do —
46	17 Feb	— do —
47		• Motion of a particle on a smooth curve in a vertical plane.
48		
49		
50	Week-8	• Motion on the outside of vertical circle
51	19 Feb.	— do —
52	to	— do —
53	24 Feb	
54		• Motion on the inside of a smooth vertical circle.
55		
56		
57		— do — .
58	Week-9	— do —
59	26 Feb	• Cycloid Motion
60	to	
61	2 March	— do —
62		
63		— do —
64		
65		— do —
66	Week-10	• Motion of a Rough curve under gravity.
67	4 March	— do —
68	to	— do —
69	9 March	
70		— do —
71		
72		• Motion of a Projectile.
73	Week-11	— do —
74	11 March	— do —
75	to	
76	16 March	
77		• Velocity at any point of the trajectory.
78		
79		— do —
80	Week-12	— do —
81	18 March	— do —
82	to	
83	23 March	
84		• Range and time of flight on an inclined plane.
85		
86		—do—
87	Week-13	• central orbit
88	1 April	• Differential eqn of central orbit.
89	to	
90	6 April	

Week-14 8 April to 13 April	• Elliptic orbit • Hyperbolic orbit • Examples 9.1 – do – • Apse and apsidal Distances.
Week-15 15 April to 20 April	• Velocity from infinity • Kepler's Law of planetary Motion. • Deductions from keplers Law. • Motion under the inverse square law. – do –
Week-16 22 April to 27 April	• Velocity and Acceleration of a partical. • In polar co-ordinates (spherical). – do – • In term of cylindrical polar co-ordinates. • Velocity and Acceleration of Moving axes.
Week-17 29, 30 April	• Revision • class test • Assignment work.
Week-18	
Week-19	