

Dayanand Science College Latur

E-Content (Video Lectures)

Mathematics

Class: M. Sc. II Year (Sem-IV)

Name of Paper: Classical Mechanics

Sub: Mathematics

Paper No: XXI(A)

SRTMUN, SPPU, MU, KUD, AMU, RTMNU, BAMU, NMU, SGBAU etc. Universities
Curriculums

Links of Video Lectures for UG, PG: Dr. Sidheshwar Bellale

Director, Mathematics Research Centre, Dayanand Science College, Latur

Sr. No.	Name of Units / Articles	Video Lecture Link
	Unit-I, II, III,IV	https://youtube.com/playlist?list=PL7TANb4Sj71r5Z2T4xqWyMbfUgAwHpcwk
I	Unit-I	
1	Syllabus and Pattern	https://youtu.be/wJLq5i1jHY4
2	Mechanics of Particles	https://youtu.be/MYIIA2fWjEw
3	Conservation theorem on Linear Momentum	https://youtu.be/HFIZmN1JTfU
4	Mechanics of system of Particles	https://youtu.be/oSLconKZ8Ig
5	Conservation theorem	https://youtu.be/EWZTVMFHzKE
6	Constraints	https://youtu.be/BnN0lgb7CRY
7	Types of Constraints	https://youtu.be/kqNXJL154sA
8	Degree of Freedom	https://youtu.be/zH4GMvDmTz8
9	Generalized Coordinates	https://youtu.be/oVf6PEtIDFo
10	D'Alembert's Principle	https://youtu.be/3aiJ2NWPqtQ
11	Lagrange's Equation of Motion	https://youtu.be/y_adduq2t-A
12	Lagrange's Equation of Motion (II kind)	https://youtu.be/WGI7AvKJ4dc
13	Examples on Lagrange's Equation	https://youtu.be/8vIOTfG3Zbw
14	Equation of Motion for Atwood Machine	https://youtu.be/683A9edri-s
15	Equation of Motion for Compound Pendulum	https://youtu.be/Z3V8ghB8PZ0
16	Simple Harmonic Motion	https://youtu.be/sadta-9Wax0
17	Conservative Fields	https://youtu.be/e0oNOSQanIU
18	The Hamilton Equation	https://youtu.be/1b2zkX6MCeQ
19	Examples on The Hamilton Equation	https://youtu.be/Z8-NRBYaPuo
20	Examples on The Hamilton Equation	https://youtu.be/kwjcyKC5gK0
21	The Hamilton Equation of Simple pendulum	https://youtu.be/cI1S78eF0WE
22	Cyclic Coordinates	https://youtu.be/LANUCSbXbIc
23	Lagrange's equation from Hamiltonian	https://youtu.be/1QIbETfk8rQ
24	Two Dimensional Harmonic Oscillator	https://youtu.be/VEcGNMI3m5A
25	Hamiltonian of Sliding bead	https://youtu.be/YQMhJsjJ1iU
26	Rouths Procedure	https://youtu.be/yruPC_K5LRI
28	Variational Principle	https://youtu.be/8B8HYSDI1JY

28	Principle of least Action	https://youtu.be/QwchGsp7F2A
29	Functional	https://youtu.be/o_nWeXEf9I0
30	Fundamental lemma of calculus of variations	https://youtu.be/5Z6DAIENXUE
31	Examples on Fundamental Lemma	https://youtu.be/5Z6DAIENXUE
32	Eulers Equation of several variables	https://youtu.be/-tG_p7k0Nnk
33	Simple variational problems	https://youtu.be/Nju2QzLmu4U
34	Special Form Euler Equation	https://youtu.be/1D5AU0qfh5g
35	Examples on Special Form Euler Equation	https://youtu.be/fL0jSROtogc
36	Special Form Euler Equation II	https://youtu.be/F0dodCKQ3EE
37	Condition of Extreme	https://youtu.be/XOXcjCuR21w
38	Examples on Condition for Extreme	https://youtu.be/k7Ot6AXaxt4
39	Brachistochrone	https://youtu.be/xyp09Mg-6S8
40	Isopermic Problems	https://youtu.be/ZjBYmW5MTXQ
41	Invariance of Euler Equation	https://youtu.be/br_hPR6Upn4
42	Geodesic	https://youtu.be/7YOlhHyfDvk
43	Geodesic on a Sphere	https://youtu.be/bLvsFy2sBiI
44		
	Continue Lectures	https://www.youtube.com/c/SidheshwarBellale/live
	Basics for Perfection in Mathematics	
1	Real Analysis-I	https://www.youtube.com/playlist?list=PL7TANb4Sj71omv0tRaWWrMxG1B1XgzjF7
2	Real Analysis-II	https://www.youtube.com/playlist?list=PL7TANb4Sj71qVY4Tb7oZZwanyzqb3ctJl
3	Mechanics	https://www.youtube.com/playlist?list=PL7TANb4Sj71pLT9rJJN1XIDpqv9Lythw2
4	For All Lectures Visit	https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg
5	Basics for Real Analysis	https://www.youtube.com/playlist?list=PL7TANb4Sj71okEsD3aX8ABnhxX5XfwXcU
6	LIVE LECTURES 8:00pm-9pm (Mon to Friday)	https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg/live
7	For Updated Quality Video Links Register/ Visit	https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg