

4S-Mathematics – Paper-VIII (Mechanics)

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	Sr no.	Topic	Link
Unit I	1	Coplanar forces : Forces acting at a point	https://www.youtube.com/watch?v=syJSt--H2sl
	2	Triangle law of forces.	https://www.youtube.com/watch?v=FWj3M2gNhDw
	3	Equilibrium of forces	https://www.youtube.com/watch?v=NzZZxKyOUH8
	4	Lami's theorem.	https://www.youtube.com/watch?v=R9zb_les7fU
	5	Analytical conditions of equilibrium of coplanar forces	https://www.youtube.com/watch?v=aU5OI-ibuCY
Unit II	1	Virtual work.	https://www.youtube.com/watch?v=1Y5Px6pqnV8
	2	Uniform Catenary	https://www.youtube.com/watch?v=X1oqQkhBMuU
Unit III	1	Velocities and accelerations along the coordinate axes	https://www.youtube.com/watch?v=eGudkoRID1g
	2	radial and transverse directions	https://www.youtube.com/watch?v=zLmt5tgYNCI
	3	tangential and normal directions	https://www.youtube.com/watch?v=UIkk98LOpwI
	4	Projectile	https://www.youtube.com/watch?v=iUi1M7YkDe4
Unit IV	1	Constraints	https://www.youtube.com/watch?v=RvFF4GUMJHA
	2	Generalised Coordinates D'Alembert's principle	https://www.youtube.com/watch?v=OTfPjQr9zbA
	3	Lagrange's equations of motion	https://www.youtube.com/watch?v=QGCdoGoZb9A
Unit V	1	Central force motion	https://www.youtube.com/watch?v=BebZVFKoPfA
	2	Areal velocity	https://www.youtube.com/watch?v=FOzobS0rdeg
	3	Equivalent one body problem	https://www.youtube.com/watch?v=Cm6QdFZdKFM
	4	Central Orbit	https://www.youtube.com/watch?v=NfCh_nMWD6s
	5	Virial theorem	https://www.youtube.com/watch?v=Wrr4d2De5IE
	6	Kepler's laws of motions	https://www.youtube.com/watch?v=XvoCWe6gsEU