



ST. JOSEPH'S DEGREE & PG COLLEGE

Autonomous

Affiliated to Osmania University

Re-accredited by NAAC with 'A' Grade.

S. No	COURSE	TOPIC	E-RESOURCE/LINKS
1	Physics-1 (Mechanics)	1. Vector ANALYSIS 2. Mechanics of particles 3. Mechanics of Rigid bodies 4. Gravitation 5. Special Theory of Relativity	1. https://www.youtube.com/watch?v=Pm9QS4fyxPI 2. http://www.astro.uwo.ca/~houde/courses/PDF%20files/physics350/Rigid_bodies.pdf 3. https://www.slideshare.net/stkrajan/unit-5-rigid-body-dynamics 4. http://galileo.phys.virginia.edu/classes/152.mf1i.spring02/GravityLectures.pdf 5. https://www.google.com/search?q=special+theory+of+relativity+ppt&oq=SPECIAL+THEORY&aqs=chrome.7.0j69i57j0l6.9782j0j8&sourceid=chrome&ie=UTF-8
2	Physics-2 (Waves & Oscillations)	1. Fundamentals of Vibrations – Lissajous figures 2. Damped oscillations-GENERAL SOLUTIONS & Forced Oscillations-Equation. 3. Transverse wave propagation along a stretched string	1. https://www.iosrjen.org/Papers/vol2_issue5/G025971978.pdf 2. https://www.youtube.com/watch?v=fPbjAOmOvnw https://courses.lumenlearning.com/suny-osuniversityphysics/chapter/16-3-wave-speed-on-a-stretched-string/ https://www.youtube.com/watch?v=rhvBDN1OQJ4
3.	Physics-3 Thermodynamics	1. Deduction of Maxwell's law of distribution of molecular Speeds 2. Adiabatic demagnetization – Production of low temperatures	https://www.khanacademy.org/science/physics/the-rmodynamics/temp-kinetic-theory-ideal-gas-law/v/maxwell-boltzmann-distribution https://nptel.ac.in/content/storage2/courses/112105129/pdf/RAC%20Lecture%208.pdf
4	Physics-4 (Optics)	1. Aberrations-types & methods 2. Fresnel's Bi-prism – determination of wave length of light 3. Newton's rings in reflected light 4. Fresnel diffraction	https://www.slideshare.net/GauriSShrestha/aberrations-12130806 https://www.maths.tcd.ie/~dbennett/kazan/fresnel.pdf http://www.iiserpune.ac.in/~bhasbapat/phy221_files/NewtonsRing.pdf https://www.slideshare.net/GyanraoPhysics/newton-rings-mohit-sharma-ppt https://www.powershow.com/view/94417-NTliZ/Chap_4_Fresnel_and_Fraunhofer_Diffraction

			powerpoint ppt presentation?varnishcache=1
5	Physics-5 (Waves & Oscillations)	<ol style="list-style-type: none"> 1. Fundamentals of Vibrations – Lissajous figures 2. Damped oscillations-GENERAL SOLUTIONS & Forced Oscillations-Equation. 3. Transverse wave propagation along a stretched string 	<ol style="list-style-type: none"> 1. https://www.iosrjen.org/Papers/vol2_issue5/G025971978.pdf 2. https://www.youtube.com/watch?v=fPbjAOmOvnw https://courses.lumenlearning.com/suny-osuniversityphysics/chapter/16-3-wave-speed-on-a-stretched-string/ https://www.youtube.com/watch?v=rhvBDN1OQJ4
6	Physics-6A (Spectroscopy & Quantum Mechanics)	<ol style="list-style-type: none"> 1. Bohr's theory of hydrogen atom 2. Raman effect-theory and applications 3. Heisenberg's uncertainty principle 4. Schrödinger time independent and time dependent wave equations 	https://www.slideshare.net/sidrajaved2/bohrs-model https://www.slideshare.net/vaishurathi/raman-spectroscopy-78853864 https://ocw.mit.edu/ans7870/6/6.007/s11/MIT6_007S11_lec37.ppt https://www.slideshare.net/akshaydandavate/schrodinger-wave-equation
7	Physics SEC-A (Applied Optics)	<ol style="list-style-type: none"> 1. Lasers-theory and applications 2. Fiber optics 	https://www.slideshare.net/shivam5667/laser-ppt-61564598 http://hank.uoregon.edu/experiments/Dispersion-in-Optical-Fiber/Ch24%20fiber%20optics.ppt
8	Physics-7 (Solid State Physics)	<ol style="list-style-type: none"> 1. Crystalline nature of matter- Simple crystal structures 2. Specific heat capacity of solids. Einstein and Debye theories of specific heat of solids. 3. Hall Effect & Hall coefficient 4. Magnetic Properties of Matter-dia, para and ferro. 	https://web.iit.edu/sites/web/files/departments/academic-affairs/academic-resource-center/pdfs/Crystal_Structures.pdf https://www.youtube.com/watch?v=QqYAKuVsqqQ https://www.youtube.com/watch?v=J4CwGFpgt1I https://www.youtube.com/watch?v=RIC9oaoP5iQ https://www.slideshare.net/vaishnavibathina/unit-4-35590162
9	Physics-8A (Basic Electronics)	<ol style="list-style-type: none"> 1. Energy band in solids 2. Bipolar Junction Transistor (BJT) 3. Feedback Concept & Oscillators-ppt 4. Network theorems 5. Logic gates: 	https://www.slideshare.net/vaishnavibathina/unit-1-35589930 https://slideplayer.com/slide/10835707/ https://slideplayer.com/slide/13022705/ https://www.youtube.com/watch?v=bnjiLg4xfh8&list=PLmJ90L1wsHRnHf01eyqH0CvIvq0J-Om_f https://www.youtube.com/watch?v=tRe6VrMHfzU