Estd. June 1964

"Education for Knowledge, Science and Culture."
– Shikshanmaharshi Dr. Bapuji Salunkhe
Shri. Swami VivekanandShikshanSanstha's
VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR
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Department of Physics

(Syllabus w.e.f. 2020-21)

B. Sc. Part – III Semester -V PHYSICS

Course Code: DSC1001E1

Classical Mechanics and Quantum Mechanics

CO's:

After completion, students are able to

CO_1: demonstrate and understand the knowledge of classical and quantum mechanics.

CO_2: get a proficiency in solving problems in classical and quantum mechanics.

CO_3: understand the basic concepts like Virtual work, D'Alembert's Principle, Lagrangian and Hamiltonian Principle, Euler's Theorem, Elastic and inelastic scattering, De-Broglie's Hypothesis, Schrodinger's Equations, Operators, Hydrogen Problems, Eigen's values and functions.

CO_4: develop the critical skill in students to understand classical and quantum mechanics.

B. Sc. Part – III Semester -V PHYSICS

Course Code: DSC1001E2

Nuclear and Particle Physics and Mathematical Physics

CO's:

After completion, students are able to

CO_1: demonstrate and understand the knowledge of Nuclear and Particle Physics and Mathematical Physics

CO_2: get a proficiency in solving problems in Nuclear and Particle Physics and Mathematical Physics

CO_3: understand the basic concepts like properties of nucleus, nuclear forces, nuclear models, nuclear reactions, accelerators and detectors and various co-ordinate systems, Differential equations, complex numbers, Fourier series and integrals etc.

CO_4: develop the critical skill in students to understand Nuclear and Particle Physics and Mathematical Physics.

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B. Sc. Part – III Semester -VI PHYSICS

Course Code: DSC1001F1

Semiconductor devices and instrumentation and elements of modern physics

CO's:

After completion, students are able to

CO_1: demonstrate and understand the knowledge of Semiconductor devices and modern physics

CO_2: demonstrate a proficiency in solving problems in Semiconductor devices and modern physics

CO_3: understand the basic concepts like transistor, diodes, SCR, Solar cell, Photocell, LRD, etc. and vector atom model, Zeeman effect, laser technology, etc.

CO_4: develop the critical skill in students to understand Semiconductor devices and modern physics.

B. Sc. Part – III Semester -VI PHYSICS

Course Code: DSC1001F2

Solid State Physics I and Solid State Physics II

CO's:

After completion, students are able to

CO_1: demonstrate and understand the knowledge of crystal structure, lattice theory, magnetic properties , etc. and band theory, dielectric properties, X-ray diffraction, etc.

CO_2: demonstrate a proficiency in solving problems in solid state physics.

CO_3: understand the basic concepts like crystal structure, types of crystal, miller indices, defects, lattice constants, etc. and superconductivity, Types of superconductors, etc.

CO_4: develop the critical skill in students to understand the basic theory of solid state physics which is useful for further higher studies.

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HEAD
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