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| **PERIOD** | **DATE**  **{Tentative}** | **TOPIC** | **UNIT**  **No** | **TEACHING**  **METHODOLOGY** | **REMARKS** | **CORRECTIVE**  **ACTION UPON**  **REVIEW** |
|  |  | **UNIT I - Interference** |  | **C.R Lecture** |  |  |
| 1 | 16/2/15 | Interference introduction | I | ,, |  |  |
| 2 | 18/2/15 | Principle of superposition of waves, coherence | I | ,, |  |  |
| 3 | 19/2/15 | Young’s double slit experiment | I | ,, |  |  |
| 4 | 20/2/15 | Intensity distribution | I | ,, |  |  |
| 5 | 23/2/15 | **Fringe width** | I | ,, |  |  |
| 6 | 24/2/15 | Interference in plane parallel films by reflection | I | ,, |  |  |
| 7 | 25/2/15 | Determination of wave length |  |  |  |  |
| 8 | 2/3/15 | Radius of curvature | I | ,, |  |  |
| 9 | 3/3/15 | Diffraction: introduction | I | ,, |  |  |
| 10 | 4/3/15 | Types of diffraction | I | ,, |  |  |
| 11 | 4/3/15 | Fraunhofer diffraction due to single slit |  |  |  |  |
| 12 | 5/3/15 | Intensity distribution | I | ,, |  |  |
| 13 | 5/3/15 | Differences between interference and diffraction | I | ,, |  |  |
| 14 | 23/3/15 | Laser: introduction | II | ,, |  |  |
| 15 | 24/3/15 | Characteristics of laser | II | ,, |  |  |
| 16 | 24/3/15 | Principle of laser | II | ,, |  |  |
| 17 | 25/3/15 | Absorption. Spontaneous emission, stimulated emission |  |  |  |  |
| 18 | 26/3/15 | **Einstein co-efficients** | II | ,, |  |  |
| 19 | 27/3/15 | Population invertion, optical resonator | II | ,, |  |  |
| 20 | 30/3/15 | Lasing action, Ruby laser | II | ,, |  |  |
| 21 | 31/3/15 | He-Ne laser | II | ,, |  |  |
| 22 | 1/4/15 | Applications of laser in various fields | II | ,, |  |  |
| 23 | 2/4/15 | Fiber optics: introduction, principle of optical fiber | II | ,, |  |  |
| 24 | 2/4/15 | Total internal reflection, conditions of light to propagate |  |  |  |  |
| 25 | 3/4/15 | Acceptance angle and numerical aperture | II | ,, |  |  |
| 26 | 6/4/15 | Optical fiber construction | II | ,, |  |  |
| 27 | 7/4/15 | Types of optical fibers | II |  |  |  |
| 28 | 8/4/15 | Step index and graded index fibers | II | ,, |  |  |
| 29 | 9/4/15 | Differences between step index and graded index fibers | II | ,, |  |  |
| 30 | 10/4/15 | Differences between single mode and multimode fibers |  |  |  |  |
| 31 | 13/4/15 | Advantages of optical fibers in communication | II | ,, |  |  |
| 32 | 14/4/15 | Crystal structure introduction, basic terms, lattice, basis | III | ,, |  |  |
| 33 | 15/4/15 | Crystal structure, coordination number, atomic radius, packing fraction | III | ,, |  |  |
| 34 | 16/4/15 | Free volume, lattice parameters | III | ,, |  |  |
| 35 | 17/4/15 | Unit cell, primitive cell |  |  |  |  |
| 36 | 20/4/15 | Crystal systems and Bravais lattices | III | ,, |  |  |
| 37 | 21/4/15 | Structure and packing fraction of S.C., B.C.C., | III | ,, |  |  |
| 38 | 23/4/15 | Packing fraction of F.C.C | III | ,, |  |  |
| 39 | 24/4/15 | X-Ray diffraction: crystal planes and crystal directions | III | ,, |  |  |
| 40 | 27/4/15 | Miller indices | III | ,, |  |  |
| 41 | 28/4/15 | Distance of separation between successive planes h k l |  |  |  |  |
| 42 | 29/4/15 | Diffraction of x-rays by crystal planes, Bragg’s law |  | ,, |  |  |
| 43 | 30/4/15 | Magnetic properties: introduction | IV | ,, |  |  |
| 44 | 1/5/15 | Basic terms: flux, flux density | “ |  |  |  |
| 45 | 18/5/15 | Intensity, magnetization, permeability, relative permeability | V |  |  |  |
| 46 | 19/5/15 | Susceptibility | “ |  |  |  |
| 47 | 20/5/15 | Relation between B,H and I,  RELATION BETWEEN RELATIVE PERMEABILITY AND SUSCEPTABILITY | “ |  |  |  |
| 48 | 21/5/15 | ORIGIN OF MAGNETIC MOMENT, BOHR MAGNETON | “ |  |  |  |
| 49 | 22/5/15 | Classification of dia, para, and ferro magenetic materials | “ |  |  |  |
| 50 | 25/5/15 | Domain theory of ferro magnetism | “ |  |  |  |
| 51 | 26/5/15 | Hysteresis curve | “ |  |  |  |
| 52 | 27/5/15 | Soft and hard magnetic materials | “ |  |  |  |
| 53 | 28/5/15 | Dielectric properties: introduction | “ |  |  |  |
| 54 | 29/5/15 | Electric fields, permittivity, polarization | “ |  |  |  |
| 55 | 1/6/15 | Displacement vector | “ |  |  |  |
| 56 | 2/6/15 | Permittivity and susceptibility | “ |  |  |  |
| 57 | 4/6/15 | Relation between D, E and P | “ |  |  |  |
| 58 | 5/6/15 | Relation between Eand x | “ |  |  |  |
| 59 | 8/6/15 | Electric polarization | “ |  |  |  |
| 60 | 9/6/15 | Ionic polarization | “ |  |  |  |
| 61 | 10/6/15 | Total polarizability, ferro, piezo electricity | “ |  |  |  |
| 62 | 11/6/15 | Free electron theory: introduction | V |  |  |  |
| 63 | 12/6/15 | Drift velocity, electrical conductivity | “ |  |  |  |
| 64 | 15/6/15 | Current density, mobility | “ |  |  |  |
| 65 | 15/6/15 | Relaxation time | “ |  |  |  |
| 66 | 16/6/15 | Quantum mechanics: introduction | “ |  |  |  |
| 67 | 16/6/15 | Wave, particle properties |  |  |  |  |
| 68 | 17/6/15 | Wave particle duality |  |  |  |  |
| 69 | 17/6/15 | De-Broglie hypothesis |  |  |  |  |
| 70 | 17/6/15 | G.P. Thomson experiment |  |  |  |  |
| 71 | 18/6/15 | Time independent wave equation |  |  |  |  |
| 72 | 19/6/15 | Physical significance of wave function  Particle in one dimensional box |  |  |  |  |