

Engineering Physics
Question Paper Pattern (End Semester Examination)

Q1. Attempt all questions (MCQs)

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|---|--------|
| (a) Unit 1 - Fundamentals of Photonics (Laser) | 1 mark |
| (b) Unit 1 - Fundamentals of Photonics (Optical Fibers) | 1 mark |
| (c) Unit 2 - Quantum Physics | 1 Mark |
| (d) Unit 2 - Quantum Physics | 1 Mark |
| (e) Unit 3 - Wave Optics (Interference) | 1 Mark |
| (f) Unit 3 - Wave Optics (Polarization) | 1 Mark |
| (g) Unit 4 - Semiconductor Physics | 1 Mark |
| (h) Unit 4 - Ultrasonics | 1 Mark |
| (i) Unit 5 - Superconductivity | 1 Mark |
| (j) Unit 5 - Nanotechnology | 1 Mark |

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| Q2 (a) Fundamentals of Photonics (Laser) - Long question | 6 marks |
| (b) Fundamentals of Photonics (Optic Fibers) - Short question | 3 marks |
| (c) Fundamentals of Photonics (Optic Fibers) - Short question / Numerical | 3 marks |

OR

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| Q3 (a) Fundamentals of Photonics (Optic Fibers) - Long question | 6 marks |
| (b) Fundamentals of Photonics (Laser) - Short question | 3 marks |
| (c) Fundamentals of Photonics (Laser) - Short question | 3 marks |

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| Q4 (a) Quantum Physics - Long question | 6 marks |
| (b) Quantum Physics - Short question | 3 marks |
| (c) Quantum Physics - Numerical | 3 marks |

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| Q5 (a) Quantum Physics - Long question | 6 marks |
| (b) Quantum Physics - Short question | 3 marks |
| (c) Quantum Physics - Numerical | 3 marks |

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| Q6 (a) Wave Optics (Interference) - Long question | 6 marks |
| (b) Wave Optics (Polarization) - Short question | 3 marks |
| (c) Wave Optics (Polarization) - Short question / Numerical | 3 marks |

OR

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| Q7 (a) Wave Optics (Polarization) - Long question | 6 marks |
| (b) Wave Optics (Interference) - Short question | 3 marks |
| (c) Wave Optics (Interference) - Short question / Numerical | 3 marks |

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| Q8 (a) Semiconductor Physics - Long question | 6 marks |
| (b) Ultrasonic - Short question | 3 marks |
| (c) Ultrasonic - Short question / Numerical | 3 marks |

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| Q9 (a) Ultrasonic - Long question | 6 marks |
| (b) Semiconductor Physics - Short question | 3 marks |
| (c) Semiconductor Physics - Short question / Numerical | 3 marks |

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| Q10 (a) Physics of Nanoparticles - Long question | 6 marks |
| (b) Superconductivity - Long question / Short question + Numerical | 6 marks |

OR

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| Q11 (a) Superconductivity - Long question / Short question + Numerical | 6 marks |
| (b) Physics of Nanoparticles - Long question | 6 marks |