

**SYLLABUS FOR ENTRANCE EXAM 2024-25**  
**MASTER OF SCIENCE IN RENEWABLE ENERGY TECHNOLOGY**  
**PT. RAVISHANKAR SHUKLA UNIVERSITY**  
**RAIPUR, CHHATTISGARH**

The question paper for entrance test will comprise of 50 questions from General Science, Environment & Climate Change, Current Affairs & General Aptitude, Govt sensitization schemes for Youth as Swacchh Bharat Mission, Digital India, Make in India and other, Proficiency in English, Analytical reasoning, Quantitative ability.

**BASICS OF RENEWABLE ENERGY**

Introduction to Energy, Types of renewable sources, effect of renewable on environment, Photoelectric effect, PV technologies, Solar Spectrum, History & Basics of the Technologies, Renewable energy in Indian & world Context, Government Plans related to renewable energy sources, Biomass, Green House effect.

**WORK ENERGY AND POWER**

Work done by force, energy, power, Elastic collisions, Potential energy, Gravitational potential energy and its angular conversion to kinetic energy, Potential energy of a spring.

**CURRENT ELECTRICITY**

Electric current, Ohm's law, Kirchhoff's laws, resistances in series and parallel, temperature dependence of resistance, wheat stone bridge, and potentiometer. Measurement of voltages and currents.

**ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENT**

Magnetic flux, Electromagnetic induction induced emf Faraday's law, Lenz's law, self and mutual inductance, Alternating currents impedance and reactance growth and decay of current in L-R circuit, elementary idea of dynamo and transformer.

**ELECTRONICS**

Elementary ideas of conductor, semiconductor and insulator, intrinsic and extrinsic semiconductors, Diode, transistor, Field effect transistor(FET), Metal oxide Semiconductor Field Effect Transistor(MOSFET), Transducers, Feedback Amplifiers, thyristor, inverters oscillator, Microprocessor, digital circuit and logic gates.

*10/5/24*

*10/5/2024*

*10/5/2024*  
**COORDINATOR**  
Institute of Renewable Energy Technology & Management  
PT. Ravishankar Shukla University, Raipur (C.G.) 492010