

Question for Internal exam of Sem III physics (Hons)

Core paper - (5)

Answer any two questions of the following

- ① State and explain Fourier series theorem.
- ② What is law of equipartition of energy
- ③ What do you mean by 'Mean free path'. Derive expression for mean free path
- ④ Write basic ~~postulates~~ assumptions of Kinetic theory of gases.
- ⑤ Why gases have two sp. heat, ^{heat} Capacity c_p & c_v .

Core paper 6,

Answer any two questions

- ① What is ~~zeroth~~ Zeroth Law of thermodynamics
- ② State and explain first Law of thermodynamics
- ③ Deduce relation two sp. heat of gases c_p & c_v .
- ④ What do you mean by Entropy of a thermodynamical system
- ⑤ Distinguish between reversible and irreversible system or process.

Physics Core 7

Answer any two of the following

- ① What are p and N type Semiconductor?
- ② What is a zener diode
- ③ Explain Half wave and Full wave rectifier diodes.
- ④ What are Forward and reverse biasing in a PN junction diode.
- ⑤ Explain n-p-n and p-n-p transistor

physics Core (practical)

Answer any one of the following

- ① Write the theory for the determination of Thermal Conductivity of Copper by Searle's Apparatus
- ② Write the theory for the determination of Thermal Conductivity of bad conductor by Lee's disc method
- ③ Write the theory of determination of temperature Coefficient of Resistance by platinum resistance thermometer
- ④ Define ~~with truth table~~ truth table of different types of Logic Gates OR, AND, NOT, NAND, NOR

Questions for Internal exam. physics (generic) Theory

Answer any two questions

- ① What is zeroth law of thermodynamics.
- ② state and explain first law of thermodynamics.
- ③ What do you mean by 'Mean free path'?
- ④ Define isothermal and adiabatic process with example.
- ⑤ What do you mean by a 'Black Body'.

Questions for Internal exam. of physics (generic) practical

Answer any 'ONE'

- ① Write the theory of determination of Coefficient of thermal conductivity of copper by steady state method.
- ② Write the theory of determination of Coefficient of thermal conductivity of a bad conductor by Lee's disc method.