

# SEMESTER - IV

## PHYSICS - 6B

### MOST IMP ESSAY QUESTIONS

#### UNIT-1:

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- ① What is Joule - Kelvin effect? Derive an expression for Joule - Kelvin coefficient?
- ② What is Joule - Thomson effect (or) Joule - Kelvin effect? Describe the porous plug experiment and indicate the results? Obtain an expression for the cooling produced when a gas suffers Joule - Thomson effect?

#### UNIT-2:

- ① What is a Thermocouple and give its working Principles & Applications

#### UNIT-3:

- ① What is Refrigeration cycle? Explain with block diagram.
- ② What is vapour absorption refrigeration system?

## UNIT-4:

- ① What are the types of Air Compressors?
- ② What is Evaporator and how it works

## UNIT-5:

- ① What is safe storage temperatures for biological materials.
- ② What is freezing of food?

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# MOST IMP SHORT QUESTIONS

## UNIT-1:

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- ① Explain Joule-Kelvin effect
- ② What are the applications of super conductors?
- ③ What is superconductivity

## UNIT-2:

- ① Explain the concepts of correction and calibration in gas thermometer.

## UNIT-3:

- ① What is refrigerant and how does it help your Air Conditioner?
- ② Explain about ideal refrigerant.

## UNIT-4:

- ① What is coefficient of performance of Refrigerator.
- ② What is Energy Efficiency Ratio (EER)?

## UNIT-5:

- ① Explain Working of Water Cooler?
- ② Uses of Cold Storage?

# MOST IMP VERY SHORT QUESTIONS

## UNIT-1:

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- ① What is superconductivity explain?
- ② Why is adiabatic demagnetization?

## UNIT-2:

- ① How does a magnetic thermometer work and what is used for?
- ② What is resistance temperature?

## UNIT-3:

- ① What do you mean by natural refrigeration
- ② What is meant by vapour compression refrigeration system?

## UNIT-4:

- ① What is performance coefficient?
- ② What is meant by Energy Efficiency Ratio?

## UNIT-5:

- ① What is food preservation and give its method?
- ② What does cryogenic treatment do for metal?