B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
I Year I Semester
Thermal Physics

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. Define thermometry and thermometer.
2. Give an application of a thermistor.
3. Define specific heat capacity at constant pressure.
4. State Mayer's relation.
5. What is temperature of inversion?
6. Give the principle of refrigeration.
7. Define thermal conductivity.
8. Define conduction.
9. State Rayleigh Jean's law of radiation.
10. State Kirchhoff's law.
11. Define thermal diffusivity.
12. State Dulong and Petit's law.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Explain the principle of platinum resistance thermometer.
14. Describe Joly's method to determine C_v.
15. With neat diagram explain the working of Electrolux refrigerator.
16. Explain rectilinear flow of heat along a bar.
17. Explain the experimental verification of Stefan's law.
18. Explain Linde's method of liquefying of air.
19. Describe energy distribution in the black body spectrum.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Describe the Callendar and Griffith's method of determining the temperature coefficient of platinum.
21. Give the principle of method of mixtures and describe how the specific heat capacity of liquid is measured by this method.
22. Describe Joule-Kelvin effect and give its theory.
23. Explain the method of Lee's disc to determine the co-efficient of thermal conductivity of a bad conductor.
24. Derive Planck's formula for black body radiation.

B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
I Year I Semester
Thermal Physics

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. Define thermometry and thermometer.
2. Give an application of a thermistor.
3. Define specific heat capacity at constant pressure.
4. State Mayer's relation.
5. What is temperature of inversion?
6. Give the principle of refrigeration.
7. Define thermal conductivity.
8. Define conduction.
9. State Rayleigh Jean's law of radiation.
10. State Kirchhoff's law.
11. Define thermal diffusivity.
12. State Dulong and Petit's law.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Explain the principle of platinum resistance thermometer.
14. Describe Joly's method to determine C_v.
15. With neat diagram explain the working of Electrolux refrigerator.
16. Explain rectilinear flow of heat along a bar.
17. Explain the experimental verification of Stefan's law.
18. Explain Linde's method of liquefying of air.
19. Describe energy distribution in the black body spectrum.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Describe the Callendar and Griffith's method of determining the temperature coefficient of platinum.
21. Give the principle of method of mixtures and describe how the specific heat capacity of liquid is measured by this method.
22. Describe Joule-Kelvin effect and give its theory.
23. Explain the method of Lee's disc to determine the co-efficient of thermal conductivity of a bad conductor.
24. Derive Planck's formula for black body radiation.