

Roll.No.

20UPHCT1002

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.Physics - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - I

20UPHCT1002-Thermal Physics

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. What are all the thermometers used to measure high temperatures? Explain.
2. Describe the effects of CF_2Cl_2 on ozone layer.
3. Apply Lee's disc method to find thermal conductivity of bad conductor.
4. Explain the distribution of energy in black body radiation.
5. State and explain Dulong and Petit's law.
6. Compute the principle and working of a refrigerator.
7. Explain thermal conductivity and Give expression for coefficient of thermal conductivity.
8. Justify the concept behind Wien's displacement law.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Describe Callendar and Griffith's bridge for measuring the resistance of a platinum resistance thermometer at various temperatures.
10. Apply Regnault's method to find specific heat of a gas at constant pressure with a neat sketch.
11. Examine the theory of Porous plug experiment.
12. Compute the theory of rectilinear flow of heat along a bar with neat diagram.
13. Evaluate Stefan's constant by using Stefan's law.
