# Shree H.N.Shukla group of colleges

**PHYSICS**
**S.Y.B.Sc. (Sem. IV) (CBCS)**
**Unit Test examination**
**PAPER- 401**
**UNIT - 2 : ENTROPY & RADIATION**

**DATE :**                                    **TOTAL MARKS : 30**

**Instructions:** All questions are compulsory.
The right side figure indicates total marks of the question.
Draw the figure wherever necessary.
Write answers of all the questions in main answer sheets.

## SECTION-A

**Q.1: One marks questions:**                                    **[5 MARKS ]**

1    In isothermal process entropy of the system remains _____.

2    Write the unit of Entropy.

3    Write the formulla for stefen's law.

4    What is the realtion of Wein's law.

5    Whhat is the MKS unit of stefen's constant.

## SECTION – B

**Q.2 (A): Short Questions: Write all three : [2 Marks each]**          **[6 MARKS]**

1    To calculate the change entropy when 50 gm of water at 100 °C converted into steam at same temperature .

2    Describe the change of entropy in adiabatic process.

3    Define : Kirchoff's law.

**Q.2 (B) : Short questions: Write all three: [3 Marks each]**          **[9 MARKS]**

1    Explain the change in entropy in reversible process.

2    Explain the wein's disaplacement law.

3    Explain : Black body.

**Q.2 (C): Write Detail Note on [Any two]: [5 Marks each]**          **[10 MARKS]**

1    Explain temperature - entropy (T-S) diagram in detail.

2    Prove that wein's law rayleigh jean's law in relation to palnk's law.

3    Descirbe entropy of a perfect gas , obtain the change in terms of T,V and T, P.

4    Explain change in entropy in reversible and irreversible process.