Session: 2023-24   **Semester: II**   **Section: Common to All**

Course Code: BAS-201   **Course Name: Engineering Physics**

Assignment 1

Date of Assignment: **Date of submission:**

1. a) What are inadequacies of classical mechanics? (K1, CO1)
    b) What is Wien's law and Rayleigh -Jeans law? (K1, CO1)
2. a) What is Stefan's law and Wien's displacement Law? (K1, CO1)
    b) Write down the Planck's expression(formula) for spectral energy density in black body
    radiation. (K1, CO1)
    c) Explain basic postulates of Planck's law of radiation? (K1, CO1)
3. a) What is de-Broglie's hypothesis of matter waves? (K1, CO1)
    b) State two properties of matter waves. (K1, CO1)
4. a) What was the objective of conducting Davisson and Germer experiment? (K1, CO1)
    b) What is the difference between matter waves and electromagnetic waves? (K1, CO1)
5. a) What is the physical significance of wave function ψ ? (K1, CO1)
    b) Give the essential conditions or requirements that a wave function must fulfil. (K1, CO1)
6. a) What do you mean by modified and unmodified radiation in Compton effect? (K1, CO1)
    b) Explain, why Compton effect is not observed with visible light? (K1, CO1)
7. a) What are phase and group velocities of a wave? (K1, CO1)
    b) What do you mean by eigen value and eigen function. (K1, CO1)