Quadrant IV– Assessment

Programme : Bachelor of Science (Second year)

Subject : Physics

Semester : IV

Paper Code : PYC104

Paper Title : Optics and Modern Physics

Name of the Unit : **6** – X-Rays

Module Name : Coolidge tube generator, Continuous X-ray spectra and its dependance on voltage, Duane and Hunt's law.

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Short answer (20 to 50 words):

1) What are X-rays?
2) What is Bremsstrahlung radiation and characteristic radiation?.
3) Sate Duane Hunt's law.

Short Answer – II (extended – say 50 to 100 words)

1) Describe the construction and working of Coolidge tube for generation of X-rays.

Numerical problem:

1) The Potential difference applied to cathode and the target in Coolidge tube is 35KV. Find the minimum wavelength of X-rays generated from this.