Introduction to Radiographic Equipment – Key Terms

1. X-ray Tube – Device that produces x-rays by accelerating electrons onto a metal target.

2. Cathode – Negatively charged side of the x-ray tube that contains the filament and produces electrons.

3. Anode – Positively charged side of the tube that receives electrons and produces x-rays.

4. Focal Spot – Area on the anode where electrons strike to produce x-rays.

5. Tube Housing – Protective casing around the x-ray tube that reduces leakage radiation.

6. Collimator – Device that limits the size and shape of the x-ray beam.

7. Bucky – A moving grid device under the x-ray table that reduces scatter radiation.

8. Grid – Device made of lead strips that absorbs scatter before it reaches the image receptor.

9. Image Receptor (IR) – Device that captures the x-ray image (film, CR cassette, DR detector).

10. Control Console – Panel where the technologist selects exposure factors such as kVp, mA, and time.

11. kVp (Kilovoltage Peak) – Controls x-ray beam penetration and image contrast.

12. mA (Milliamperage) – Controls the number of x-ray photons produced (beam quantity).

13. Exposure Time – The length of time x-rays are produced; combined with mA to form mAs.

14. Transformer – Electrical device that adjusts voltage to proper levels for x-ray production.

15. AEC (Automatic Exposure Control) – Device that automatically terminates exposure once the correct amount of radiation has reached the receptor.

16. X-ray Table – Radiographic table that supports the patient, often with a tilting or floating top.

17. C-arm – Mobile fluoroscopy unit shaped like a “C” used in surgery and procedures.

18. Fluoroscopy – Real-time x-ray imaging often used for dynamic studies.

19. Protective Apparel – Lead aprons, thyroid shields, and gloves used to protect from scatter radiation.

20. Tube Stand / Suspension System – Mechanical support that allows the x-ray tube to move and lock into position.