







# RADIOGRAPHIC TECHNIQUES HSE

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100

**Time allowed: 2:35 Hours**

**Total Marks Sections B & C**

**NOTE:** Answer any ten parts from Section 'B' and any three questions from Section 'C' on the separate provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION – B (Marks 50)

**Q. 2 Attempt any TEN parts. The answer to each part should not exceed 2 to 4 lines. ( 10 x 5 = 50 )**

- (i) What is Matter?
- (ii) What is Power?
- (iii) What is Energy?
- (iv) What is Ampere?
- (v) What is Coulomb's Law?
- (vi) What do you know about the Laws of Resistance?
- (vii) How will you calculate total resistance of 4, 5, 6 ohm in parallel?
- (viii) What is Current if a heater has 500 ohm resistance and is connected across 220 volts?
- (ix) What is the resistance of a wire having 1000 metre length, 10 sq. millimetre area and 0.0072 m-ohm specific resistance?
- (x) What is Motor effect of current?
- (xi) What is the Magnetic effect of current?
- (xii) Why is the Series circuit used?
- (xiii) Why is a Parallel circuit commonly used?
- (xiv) What is the role of current and voltage in working of an X-Ray Machine?
- (xv) What are the most common films used in an X-Ray department?

## SECTION – C (Marks 30)

**Note: Attempt any THREE questions. All questions carry equal marks. (3 x 10 = 30)**

- Q. 3** Explain Ionization and Excitation.
- Q. 4** Explain the working of a Transformer.
- Q. 5** Describe cardinal principle of Radiation Protection.
- Q. 6** How does a high tension generator work?
- Q. 7** Define Faraday's law of electromagnetic induction.