SECTION-C

Note: Long answer type questions. Attempt any one questions out of two questions. (10x1=10)

Q.19 Explain the production of X-rays with the help of neat diagram.

Q.20 Explain the concept of Radiation intensity and Exposure. How both of the parameters are measured.

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Level 4, 2nd Sem. / Medical Imaging Technology
Subject : Physics and Technology in Imaging

Time : 2 Hrs. M.M. : 50

SECTION-A

Note: Objective/ Completion type questions. All questions are compulsory. (10x1=10)

Q.1 To obtain high X ray energy one of the following must be changed

a) Tube current (mA) b) Exposure Time

c) Tube voltage d) Filament Voltage

Q.2 The most important characteristic of a diagnostic image is

a) It must look nice

b) It must be fast to acquire

c) It must contain sufficient information

d) It must be of high resolution

Q.3 Which of the following should not be used as an agent in Fluoroscopy

a) Silver

b) Tungsten

c) Thoria

d) Bismuth

Q.4 Units of measuring the absorbed doses of radiations are expressed in

a) Rad b) Centipoises

c) tau d) tesla

Q.5 Fluoroscopy normally requires a tube current of

a) 0.1-1.0 mA b) 1-5 mA

c) 5-10 mA d) 10-100 mA

Q.6 Tell the name of florescent materials

Q.7 Define inherent filters

Q.8 Infer the meaning of UH

Q.9 Expand KVp and mA

Q.10 List the source of light used in photochemistry

SECTION-B

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 Define photoelectric effect. How it is related to diagnostic radiology?

Q.12 List the essential properties of X-rays?

Q.13 Outline the importance of development-time factor in the use of developers

Q.14 Explain the principle and working of Thermo-luminescent dosimeter.

Q.15 Discuss the relation between absorbed dose and equivalent dose

Q.16 Describe the constitution of fixing solution

Q.17 Discuss Bremsstrahlung radiations.

Q.18 Analyze replenishment rates in manual and automatic processing.