

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF MEDICINE
DEPARTMENT OF PARAMEDICAL AND HEALTH SCIENCES
B.Sc. Med. Sci. April – 2023 Examination,

Year : 3

Subject Code: 19110301

Subject Name: Radiography-I

Date:11/04/2023

Time:10:00am to 1:00pm

Total Marks: 70

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1(A): Answer the following questions in details (2 out of 3) (Each worth 7.5 marks) 15

- (i) Explain the production of X-Ray and it's properties?
- (ii) Explain the types of generators in briefly?
- (iii) What are filters and its type

Q.1(B): Answer in short (5 out of 7) (Each worth 1 marks) 05

- (i) Define circuit
- (ii) Define Line focus principle
- (iii) Filament current and voltage
- (iv) Coherent Scattering
- (v) Space Charge
- (vi) Rectifier
- (vii) Aim of AERB

Q.2(A): Write short notes on any of the following (3 out of 5) (Each worth 5 marks) 15

- (i) What is Anode effect?
- (ii) What is the need of performing quality control test in Radiology Department
- (iii) Write a short note on Screens
- (iv) Write a short note on darkroom
- (v) Write a short note on half and full wave rectification & three phase circuits

Q.2(B): Answer in short (5 out of 7) (Each worth 1 marks) 05

- (i) Define Diodes
- (ii) 10 day Rule
- (iii) Define Filtration
- (iv) Central beam for pelvis
- (v) Position of Central beam in PNS
- (vi) Gas filled X-ray tube
- (vii) focusing cup

Q.3: Write a detailed note on the following (2 out of 3) (Each worth 7.5 marks) 15

- (i) What are the different kinds of transformer used in x-ray equipment?
- (ii) Explain filament circuit with a diagram?
- (iii) Explain p-n junction

Q.4: Write short notes on any of the following (3 out of 5) (Each worth 5 marks) 15

- (i) Describe the Principle of automatic exposure control (AEC)
- (ii) Explain filament circuit with diagram
- (iii) Write in detail about factors affecting image quality
- (iv) Draw a layout, construction and Installation of X-Room as per AERB
- (v) Short note on Mobile X-Ray Equipment