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Reg. No.....

Name.....

**M.Sc. (BIO-MEDICAL INSTRUMENTATION) DEGREE
EXAMINATION, JUNE 2023**

Third Semester

BMI 302—MEDICAL IMAGING SYSTEMS USING IONIZING RADIATIONS

(2016 Admissions onwards — Regular/Supplementary/Mercy Chance)

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer any five questions.
Each question carries 10 marks.*

1. Explain in detail interaction of X-rays with matters.
2. Explain exposure switching and control of exposure time.
3. Explain digital subtraction angiographic technique.
4. With a neat block diagram, explain any two CT scanners.
5. Explain the operations of PET scanner.
6. With neat block diagram, explain the operation of pulse height analyser.

(5 × 10 = 50)

Part B

*Answer any ten of the following.
Each question carries 5 marks.*

1. Explain collimator.
2. What are the various components of radiography system ?
3. Write a note on Cath Lab.
4. Give the characteristics of image intensifying television for fluoroscopy.
5. What is a charge coupled device ?
6. Explain scanning principle used in TV systems for fluoroscopy.

Turn over





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7. Write a note on multislice CT.
8. Explain conversion of X-ray data into scan image.
9. What are the differences between PET scan and CT scan ?
10. Discuss rectilinear scanner.
11. Write a note on SPECT imaging technique.
12. How does Cobalt and Caesium therapy work ?

(10 × 5 = 50)

