Q.P. 25290

T.E sem VI MI-1

(Solution set)

| 1. | (a) | Yes + reason | 5 |
|----|------------|---------------------------------------------------------------------------------------------------------------------------|-------|
| | (b) | No + reason | 5 |
| | (c) | Yes + reason | 5 |
| | (d) | Yes + reason | 5 |
| 2 | (a) | Description of digital radiography system with principle of operation, block diagram, explanation of each block in detail | 10 |
| | (b) | Description of General and Characteristic radiation with diagrams | 10 |
| 3. | (a) (b) | Atleast 8 technical specifications of X-ray machine Description of a block diagram the Digital Mammography system | 10 |
| 4 | (a) | List the various types of real time ultrasound scanners and Also, explain steering and focusing in detail with diagrams | 5+5 |
| | (b) | Explain Doppler shift principle with equations. And Explain Pulsed Doppler system used for blood flow measurements | 05+05 |
| 5. | (a) | Description on different types of grids, collimators and filters (with diagrams wherever possible) | 10 |
| | (b) | Explain either 6 pulse or 12 pulse of three phase X-ray generator. | 10 |
| 6. | (a) | Applications of Thermography | 5 |
| | (b) | Latent image formation in X-ray film | 5 |
| | (c) | Compton Effect | 5 |
| | | B and TM Mode of Ultrasound Imaging | 5 |
| | (e) | Ultrasound Transducer | 5 |