Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **15EI2012** | **Duration :** | **3hrs** |
| **Sub. Name :** | **RADIOLOGICAL IMAGING TECHNIQUES** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Illustrate the construction and medical applications of x-rays imaging system. | CO2 | 10 |
| b. | Furnish the applications of soft x-rays. | CO1 | 5 |
| c. | Reveal few devices that are useful in detecting of harmful radiations. | CO3 | 5 |
| (OR) | | | | |
| 2. | a. | Illustrate the applications of computers in diagnostic systems. | CO1 | 10 |
| b. | Present the design parameters of the medical instrument. | CO2 | 5 |
| c. | Identify a medical instrument which meets the design criteria. | CO3 | 5 |
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| 3. | a. | Elaborate the methodology of computed tomography. | CO1 | 10 |
| b. | Compare the merits of the method with X-ray methodology. | CO3 | 5 |
| c. | Mention the limitations of x-ray diagnosis. | CO3 | 5 |
| (OR) | | | | |
| 4. | a. | Discuss the principles of magnetic resonance. | CO1 | 10 |
| b. | Present the working of MR scanner and mention its applications. | CO2 | 10 |
|  |  |  |  |  |
| 5. | a. | Discuss the principles of emission tomography. | CO1 | 5 |
| b. | Construct and explain the positron emission tomography. List the merits of it. | CO2 | 10+5 |
| (OR) | | | | |
| 6. | a. | Elaborate the applications of thermal imaging system. | CO1 | 10 |
| b. | Discuss the merits and applications of infra red imaging system. | CO1 | 10 |
|  |  |  |  |  |
| 7. | a. | Illustrate the methodology of imaging for kidney stone. | CO1 | 10 |
| b. | Implement any one system for stone removal. State its merits. | CO3 | 10 |
| (OR) | | | | |
| 8. | a. | Develop the model of telemedicine based on user applications. | CO3 | 10 |
| b. | Identify the merits and challenges of telemedicine concepts in rural areas. | CO3 | 10 |
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|  | | **Compulsory**: |  |  |
| 9. | a. | Implement a suitable methodology for minimally invasive surgery. | CO2 | 10 |
| b. | Present the merits and challenges in laparoscopic method. | CO3 | 10 |