

**Third Year B.Sc MLT Degree Supplementary Examinations June 2021**  
**Electronics, Computer Science & Biomedical Instrumentation Technology**  
**(2010 & 2015 Scheme)**

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers • Draw diagrams wherever necessary

**Essay****(2x10=20)**

1. Compare common emitter, common base and common collector amplifiers with their circuit, voltage gain and current gain. Which type of amplifier is more suited for biological measurements. (5+5)
2. Explain the instrumentation of a modern CT scanner with the help of a block diagram. Explain about the source and detectors used. (5+5)

**Short notes****(10x5=50)**

3. Rectifier-Different types
4. Common emitter transistor amplifier
5. LED Display
6. Bio amplifier
7. Comparison of LAN and WAN
8. Calorimeter
9. EMG recorders
10. Cardiac pacemaker
11. Cyclotron
12. Multiparameter monitor

**Answer briefly****(10x3=30)**

13. Zener diode applications
14. Detectors in SPECT
15. lead electrode system for ECG
16. Ventilator assist mode
17. Digital subtraction angiography
18. Echo cardiography
19. Treadmill ECG
20. Breakdown maintenance
21. Magnets used in MRI
22. Color Doppler