QP CODE:103018   Reg. No: …………………..

First Year B.Sc (MRT) Degree Supplementary Examinations September 2021
General Physics and Electronics

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 table/diagrams/flow charts wherever necessary*

Essays   **(2x20=40)**

1. Explain the production, properties and application of different types of LASERS.

2. Explain the construction and working of Transformer, types of transformer and its losses detail.

Short notes: **(8x5=40)**

3. Explain different types of amplifiers.

4. Give the statement Rayleigh criterion.

5. Define half-life and mean life of radioisotope with an example and a diagram.

6. Explain about He Ne laser productions and its application.

7. State the law of radioactive decay and derive it.

8. Construction and working of moving coil galvanometer.

9. Explain self induction briefly

10. RMS value of AC current. Give its formula

Answer briefly: **(10x2=20)**

11. Define magnetic susceptibility. Give a formula.

12. Derive the expression when three resistors are connected in series.

13. Define single and three phase circuit with diagram.

14. Zener diode. Write its use.

15. Diffraction of light.

16. Few properties of electromagnetic radiation.

17. L C oscillation.

18. Define impedance and mention its unit.

19. Characteristics and application of Mosfet.

20. Application of Doppler effect.

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