

QP CODE:103018

Reg.No:

First Year B.Sc (MRT) Degree Supplementary Examinations March 2018

General Physics and Electronics

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essay

(2x20=40)

1. Explain the production of ultrasonic using magnetostriction method and its demerits
2. Explain eddy current and how to minimize it and describe its application

Short notes:

(8x5=40)

3. Prove Brewsters law
4. Distinguish between paramagnetic and diamagnetic materials.
5. What is multi vibrator and explain mono stable multi vibrator.
6. Explain characteristics of Zener Diode and mention its applications.
7. Explain polarization by reflection and refraction.
8. Explain the formation of p-type and n-type semiconductor.
9. State Faradays law of electromagnetic induction and explain three methods of producing induced emf.
10. The transformer losses.

Answer briefly:

(10x2=20)

11. Derive the expression for equivalent resistance when two resistor are connected in series.
12. Explain the merits and demerits of eddy current.
13. Why AC current is preferred for long distance transmission.
14. Define curie and Becquerel and its relation.
15. What is meant by interference of light. Give example.
16. Define radioactive isotope. Give example.
17. Define single and three phase circuit diagram.
18. Few properties of electromagnetic radiation.
19. Define an ideal transformer and mention the efficiency of an ideal transformer.
20. Express quality factor in the form of L, C and R.
