

QP CODE:103018

Reg.No:

First Year B.Sc (MRT) Degree Supplementary Examinations –

November 2015

General Physics and Electronics

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essay

(2x20=40)

1. Derive the expression for the band width of interference pattern in double slit experiment. What are the differences between Interference and diffraction. Distinguish between Fresnel class of diffraction and Fraunhofer class of diffraction.
2. Explain in detail about mutual induction and self induction with figure

Short notes:

(8x5=40)

3. Strong and weak nuclear force; mention its two characteristics each
4. What is fluorescence and phosphorescence and its applications
5. Explain magnetic flux and flux density and its formula.
6. Explain the multi meter with circuit diagram
7. Explain 3 phase circuit with neat diagram
8. Production and properties of laser
9. What is half life and mean life, explain with formula
10. What is rectification and explain working of a bridge rectifier

Answer briefly:

(10x2=20)

11. Define conductor and insulator on the basis of electrical conductivity. Give its examples
12. What is transistors and mention its characteristics.
13. State faraday's laws of electromagnetic induction
14. Define Brewster's law and its applications
15. What is Piezo electric effect
16. Differentiate between interference and diffraction.
17. What is avalanche breakdown
18. Properties of electromagnetic radiations.
19. What is transistor and functions of NPN and PNP transistor
20. What is resonance
