

QP CODE:103018

Reg. No:

**First Year B.Sc (MRT) Degree Supplementary Examinations
March 2019**

General Physics and Electronics

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Draw Diagrams wherever necessary.

Essays

(2x20=40)

1. What is rectifier. Explain half wave and full wave rectifiers with suitable diagrams
2. Explain about Fresnel diffraction

Short notes:

(8x5=40)

3. Explain the construction and working of moving coil galvanometer.
4. Mention the limitation of wave theory of light.
5. Distinguish between inductive reactance and capacitive reactance.
6. Optic fibre.
7. Explain the action of pn junction when its forward biased
8. Prove Brewsters law
9. The transformer losses.
10. Explain the working of half wave rectifier.

Answer briefly:

(10x2=20)

11. Define radioactive isotope. Give example.
12. Write few properties of electromagnetic radiation.
13. Express quality factor in the form of L, C and R.
14. Difference between emf and potential difference.
15. A transformer steps up 120 to 1200. What is transformation ratio
16. Give properties of ferromagnetic substances
17. What are RMS and peak values of current
18. Explain Einstein mass energy relation.
19. What is power factor of an ac circuit containing pure: resistor, capacitor
20. Mention the unit of mutual induction and name a device working on this principle
