

QP CODE:103018

Reg. No:

**First Year B.Sc (MRT) Degree Regular/Supplementary Examinations
March 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 with a neat circuit diagram of different types of rectification and its advantages one over another.
2. Explain the construction and working of the transformer, Mention the types of transformer and its losses

Short notes:

(8x5=40)

3. State and explain Brewsters law of polarization
4. Explain the formation of P-type and N-type.
5. Distinguish between fluorescence and phosphorescence
6. Differentiate between diffraction and interference.
7. What is multivibrator explain monostable multivibrator
8. Characteristics and applications of UJT
9. Distinguish between self-induction and mutual induction
10. Establish the rectilinear propagation of light for Fresnel's assumption.

Answer briefly:

(10x2=20)

11. Characteristics and application of Field Effect transistor.
12. Difference between e.m.f and potential difference.
13. Mention the properties of ferromagnetic materials.
14. Distinguish between conductor and insulator on the basis of band theory of solids.
15. What are eddy currents and its demerits.
16. Derive the expression when three resistances are connected in parallel.
17. Why AC current is preferred for long distance transmission.
18. Explain about super conductors.
19. Define Curie and Becquerel and its relation.
20. What is coercivity and retentivity
