

QP CODE:103018

Reg. No:

**First Year B.Sc (MRT) Degree Supplementary Examinations
September 2025
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. Describe and differentiate between diamagnetic, paramagnetic, and ferromagnetic materials with suitable examples.
2. Describe the instruments used to measure electrical power and energy. Explain their construction, working, and applications.

Short notes:

(8x5=40)

3. What is a transistor oscillator. Explain the basic principle of its operation.
4. Differentiate between diffraction and interference.
5. Explain on transformer losses.
6. Explain Briefly on Atomic structure.
7. Distinguish between Fluorescence and Phosphorescence.
8. Explain on standing waveguide.
9. Differentiate between intrinsic and extrinsic semiconductors
10. What are particle-type radiations. Describe the basic types and their sources.

Answer briefly:

(10x2=20)

11. Name the three types of multivibrators.
12. Write on AND, OR gate.
13. Write on Field effect transistor.
14. State and explain Gauss theorem.
15. What is Magnetostriction method of ultrasound production
16. Write the properties of laser.
17. What is regulated power supply.
18. Difference between DC and AC current.
19. Write on application of lasers.
20. Application of optical fiber.
