

**QP CODE:103018**

**Reg. No: .....**

**First Year B.Sc (MRT) Degree Regular/Supplementary Examinations  
August 2019  
General Physics and Electronics**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Draw Diagrams wherever necessary.

**Essays**

**(2x20=40)**

1. Explain production and properties of LASER.
2. Explain self-induction and mutual induction by stating its application

**Short notes:**

**(8x5=40)**

3. Explain different types of amplifiers
4. Explain the formation of p-type and n-type semiconductor.
5. Distinguish between voltmeter and ammeter
6. Describe Frenels bi prism method and explain how it is use for the determination of wavelength of light.
7. What is secular and transient equilibrium. Give example for each.
8. Mention the sources of electromagnetic waves.
9. What is a transistor.
10. A resistor of  $10\ \Omega$  and  $40\ \Omega$  are connected in parallel against a battery of 220V find the current passing in the circuit.

**Answer briefly:**

**(10x2=20)**

11. Explain the merits and demerits of eddy current
12. Why AC current is preferred for long distance transmission
13. Derive an equation for equivalent resistance for resistor connected in series
14. Mention the uses of polaroid.
15. What is coherent and incoherent source give example
16. Define curie and becquerel and its relation.
17. Name four basic forces of nature
18. What is a logic gate. Name any two logic gate.
19. Distinguish between extrinsic and intrinsic semiconductor.
20. What is coercivity and retentivity

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