

QP CODE:103018

Reg.No:

First Year B.Sc (MRT) Degree Examinations August 2017

General Physics and Electronics

Time: 3 Hours

Total Marks: 100

Essay

- Answer all Questions.
- Draw Diagrams wherever necessary. **(2x20=40)**

Define interference of light. what are the conditions for sustained

1. interference pattern. obtain a relation for fringe width in Young's double slit experiment".
2. Explain self-induction and mutual induction by stating its application

Short notes:

(8x5=40)

3. write and explain production and properties of ultrasonics
4. State the law of radioactive decay and prove $N=N_0 e^{-\lambda t}$.
5. explain the working of electronic oscillators
6. write a short note on rectifiers.
7. Distinguish between fluorescence and phosphorence.
8. Give the statement of Rayleigh criterion.
9. Mention the sources of electromagnetic waves.
10. What is transistor. Explain.

Answer briefly:

(10x2=20)

11. What is a logic gate. Name any two logic gate.
12. Difference between emf and potential difference.
13. Distinguish between extrinsic and intrinsic semiconductor.
14. A transformer steps up 120 to 1200. What is transformation ratio.
15. What is constructive and destructive interference.
16. What is coercivity and retentivity.
17. Define magnetic intensity (H) and explain.
18. Explain Doppler's effect.
19. Define quality factor.
20. Give properties of ferromagnetic substances.
