SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act,1956)

Course & Branch :B.E/B.Tech – Common to ALL Branches
Title of the Paper :Applied physics Max. Marks :80
Sub. Code :6C0003 Time : 3 Hours
Date :07/12/2009 Session :FN

PART - A (10 x 2 = 20)

Answer ALL the Questions

1. Mention the different modes of heat transfer.

2. Define the coefficient of thermal conductivity.

3. Define the term “Coma”

4. What is meant by f-number in a camera?

5. Define sound absorption coefficient of a material.

6. Calculate the increase in the acoustic intensity level, when the sound intensity is doubled.

7. What is a Cantilever?

8. What is meant by the bending moment of a beam?

9. Mention any two properties of matter waves.

10. State De Broglie’s equations.

PART – B (5 x 12 = 60)

Answer All the Questions

11. Explain the experimental determination of thermal conductivity of a bad conductor by Lee's Disc method.

(or)

12. Explain the process of heat conditions in a compound media arranged in parallel.

13. What is meant by aberration in lenses? Explain in detail the different types of aberrations in lenses.

(or)

14. What is meant by achromatism in lenses? Determine the condition for achromatism of two lenses placed in contact.

15. Explain in detail, the various factors which affect the acoustics of building and mention their remedy.

(or)

16. Derive Sabine's equation for reverberation time.

17. Derive an expression to find the depression in a cantilever fixed at one end and loaded at the other end.

(or)

18. How will you determine the Young;s modulus of a given cantilever statically, when the beam is loaded in the center.

19. Derive the Schrodinger time independent and time dependent wave equation.

(or)

20. Explain with a neat sketch, the experimental verification of matter waves using Davission – Germar experiment.