SATHYABAMA UNIVERSITY
(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech - AERO/BIN/BME/M&P/MECH
Title of the paper: Applied Physics - II

Semester: II   Max. Marks: 80
Sub.Code: 3ET203B/4ET203B/5ET203B   Time: 3 Hours
Date: 06-12-2008   Session: AN

PART – A   (10 x 2 = 20)
Answer All the Questions

1.   Define critical velocity.

2.   Distinguish streamline and turbulent motion.

3.   What is cascade process?

4.   State Joule Thomson effect.

5.   What are isoclinic fringes?

6.   State stress optic law.

7.   State the four factor formula of fission chain reaction.

8.   What are thermal reactors?

9.   Distinguish radiography and fluoroscopy.

10.   List out the safety measures to be taken while handling nuclear medicine.

11. State Bernoulli's Theorem. Describe the working of Venturi meter.   (4+8)

(or)

12. Deduce Poiseuille's formula for the flow of the liquid through a capillary tube. Using this formula how will you determine the coefficient of viscosity of water experimentally?   (8+4)

13. State the principle of refrigeration. Discuss the working of a refrigerator.   (4+8)

(or)

14. What is adiabatic demagnetization? Explain How this method is useful in decreasing the temperature.

15. What is the effect of stressed model in a plane Polaris copes? Explain with theory.

(or)

16. Give the block diagram of a photo elastic bench and describe its components. Discuss the advantages of the photo elastic method.   (8+4)

17. Describe the different types of nuclear reactors with their efficiencies.

(or)

18. Distinguish nuclear fission and fusions. Explain stellar energies with reactions.

19. What are ultrasonic? Explain the working of phonocardiography.   (4+8)

(or)

20. Explain the construction and working of scintillation detector.