SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech - AERO/BIN/BME/BTE/CHEM/

CIVIL/M&P/MECH

Title of the paper: Engineering Physics

Semester: II Max. Marks: 80 Sub.Code: 6C0018(2006/2007) Time: 3 Hours Date: 06-12-2008 Session: AN

PART - A

 $(10 \times 2 = 20)$

 $(5 \times 12 = 60)$

Answer All the Questions

- 1. Explain Joule Thomson effect.
- 2. What are the requirements of a good refrigerant?
- 3. State Stress-Optic law.
- 4. Mention the advantages of photo elastic method.
- 5. What are the properties of ultrasonics?
- 6. Give the merits and demerits of Piezo-electric oscillator.
- 7. What is fluoroscopy?
- 8. List the uses of nuclear medicine.
- 9. What are Bravais lattices?
- 10. Obtain the packing factor of Body Centered Cubic structure.

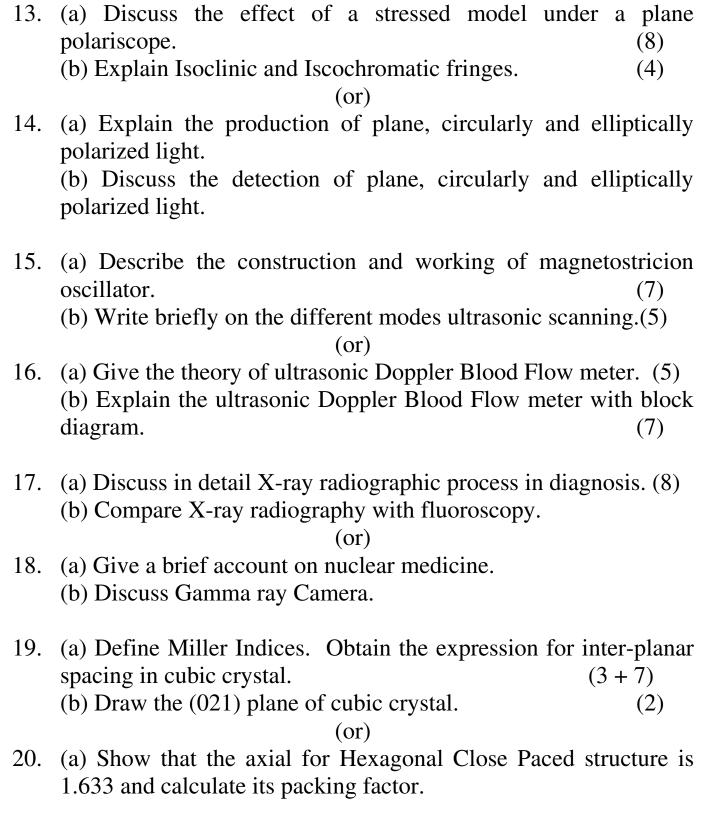
PART – B Answer All the Questions

D D1 . . .

- 11. (a) Discuss the Prous Plug experiment.
 - (b) Explain the cascade process for the liquification of gases.

(or)

- 12. (a) Describe the adiabatic demagnetization process. (5)
 - (b) Explain and Principle and working of Refrigeration. (7)



(b) Calculate density of iron. Given: Atomic weight = 55.8. Atomic radius of Face Centered Cubic iron is 0.123 mm. Avogadro number = 6.023×10^{26} /k mol.