



R-7607

B. Arch. IV (Sem. VIII) Examination
May / June - 2010
AR-805 : Energy Efficient Architecture

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

नीचे दशांशक निशानीवाणी विगतो उत्तरवडी पर अवश्य कभवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
B. Arch. 4 (Sem. 8)

Name of the Subject :
AR-805 : Energy Efficient Architecture

Subject Code No. : **7 6 0 7** Section No. (1, 2,.....): **Nil**

Seat No. :

Student's Signature

- (2) Figures to the right indicate full marks.
(3) Illustrating your answer through sketches, along with write-up is essential.

1 Fill in the blanks : 10

- (1) L.E.D. stands for _____ an energy efficient light source.
- (2) Single phase domestic supply voltage in India is _____ volts and three phase supply voltage totals to _____ volts.
- (3) Two types of energies available to human beings for use are _____ and _____.
- (4) A building material widely used in Pondicherry for wall construction is _____ .
- (5) C.F.L. stands for _____ .
- (6) Electricity generated from any water source is known as _____ power.
- (7) The highest consumption of electrical energy in a residence is for either _____ or _____.
- (8) A CFL can save up to _____ % of electricity and lasts up to _____ times more than an ordinary incandescent light bulb.
- (9) _____ gas is primarily responsible for green house effect on the Earth.

2 Which naturally available energy sources are you aware of ? Write in brief about any one such energy, illustrating how it could be tapped, stored and used. **10**

3 Explain with sketches, any **two** topics in brief : **10**

- (a) Igloo of Eskimos, as a climate responsive structure.
- (b) Bhungas of Kutch, as a climate responsive structure.
- (c) Earth air tunnel, as solution to thermal comfort.
- (d) Solar panel array and its energy storage system.

4 Give a schematic diagram of a wind-mill and show how it can be linked to a residential building wiring circuit. **10**

OR

4 List ways in which one can harness solar energy for use in a residential building and show how it can be linked to a house wiring circuit. **10**

5 Name the building that your group studied this semester and briefly explain the energy efficient features of the same building along with sketches or diagrams. **10**
