

**TED (10) 5002**

Register No-----

Revision- 2010

Signature-----

SIXTH SEMESTER DIPLOMA EXAMINATION IN ARCHITECTURE

**COST-EFFECTIVE TECHNOLOGY AND GREEN BUILDING**

(MODEL QUESTION PAPER)

(Maximum Marks-100)

(Time :-3 Hours)

PART-A

(Maximum Marks: 10)

I. Answer the following questions in one or two sentences.

marks

1. Suggest any two low energy alternatives to burn bricks
2. What is meant by ferro cement?
3. What is meant by pre-engineered building construction?
4. What is meant by energy efficient building?
5. What is BREEAM?

(5X2)

PART-B

(Maximum Marks: 30)

II. Answer any five questions from following.

1. What is meant by stabilized mud block? Is it energy efficient than conventional brick?
2. Find any six ways to recycle concrete
3. Draw plan of odd and even courses of a corner wall comprising rat trap bond. Also draw elevation.
4. Write notes on cavity wall construction

5. Calculate the total energy per cubic meter, consumed by un-plastered wall made with SMB of size 230x190x100 mm in cement-soil mortar 1:2:6. Energy per SMB is 2.60MJ. Energy per cubic meter of cement-soil mortar 1:2:6 is 865MJ
6. What is life cycle cost of building?
7. What are the criteria for a building to be rated as one star, two star, three star, four star and five star as per GRIHA? (5X6)

PART-C

(Maximum Marks: 60)

(Answer one full question from each unit)

UNIT--I

- III a. What is meant by fibre-reinforced cement composite? Explain materials used in fibre-reinforced cement composite (12)
- b. What is meant by fibre-reinforced polymer composite? (5)

OR

- IV. a. Explain environmental issues related to brick-making industry. Explain how bricks are classified. (11)
- b. What are the benefits of adding lime to cement mortar (4)

UNIT--II

- V. a. Write short notes on (i) filler slab, (ii) composite beam and panel roof (iii) ferro concrete (3x5)

OR

- VI. a. Explain role of Nirmithi Kendra and Habitat in developing and propagating cost-effective construction (2x5)
- b. Write any five advantages of pre-engineered buildings (5)

UNIT--III

- VII a. What is meant by global warming? (3)
- b. Explain the effect of global warming (7)
- c. Explain contributions of buildings towards global warming (5)

OR

- VIII. a. Define green building. Explain why green buildings are necessary (5)
- b. Write any five features of green buildings (5)
- c. Explain environmental benefits of green buildings (5)

UNIT--IV

- IX . a. What is meant by GRIHA? (3)
- b. Explain the mandatory rules in GRIHA related to construction (12)

OR

- X. a. Write any eight features of sustainable buildings? (12)
- b. What is meant by integrated life cycle design of materials and structures (3)