

Seat No: \_\_\_\_\_

Enrollment No: \_\_\_\_\_

**PARUL UNIVERSITY**  
**FACULTY OF ARCHITECTURE**  
**B.arch, I.D, Winter 2016 Examination**

**Semester: III**

**Subject Code: 01101205**

**Subject Name: Architecture and Environment-III**

**Date: 14/12/2016**

**Time: 10:00 am to 12:00 pm**

**Total Marks: 50**

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**Instructions:**

1. Each section carries 25 marks.
2. Q1 and Q2 (a) are compulsory questions of each section.
3. Q2 (b) has sub optional questions.
4. Only one question must be attempted between Q3 and Q4.
5. Draw sketches wherever necessary.
6. Figures to the right indicate full marks.
7. Write section-A, section-B on separate answer sheets.

**SECTION: A**

- Q.1** Enlist and explain in brief with sketches the following Passive cooling techniques: **(10)**  
1. Earth sheltering  
2. Wind tower  
3. Earth Air Tunnel
- Q.2 (a)** Enlist design guidelines for 'Cold & Dry' climate **(05)**  
**Q.2 (b)** Enlist design guidelines for 'Warm Humid' climate **(05)**
- OR**
- Q.2 (b)** Explain briefly: Sun-path diagram as a climate analysis tool. **(05)**  
**Q.3** Write a short note on: Light and its behaviour **(05)**  
**Q.4** Write a short note on: Significance of 'Daylighting' in Architecture **(05)**

**SECTION: B**

- Q.1** Enlist and explain in brief with sketches the following Passive heating techniques: **(10)**  
1. Trombe wall  
2. Water wall  
3. Solar chimney
- Q.2 (a)** Enlist design guidelines for 'Hot & Dry' climate **(05)**  
**Q.2 (b)** Explain briefly: Psychrometric chart as a climate analysis tool. **(05)**
- OR**
- Q.2 (b)** Write a short on: 'Daylighting Strategies' in Architecture **(05)**  
**Q.3** Explain in detail: The concept of 'Solarium' **(05)**  
**Q.4** Explain in detail: Vary-therm wall **(05)**