

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
End Semester Examination – Winter 2019**

Branch: M. Arch (ENV)

Subject:- Climate Responsive Design- I (MAREA10100002)

Date: 03 / 12/ 2019

Sem.:- I

Marks: 60

Time: - 3hrs

Instructions: - 1. Q. No. I is compulsory

2. Answer any FOUR out of the remaining.

3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.

- (Marks)**
- Q. No.1:- Define & briefly explain the following: 20 Marks**
- a) Earth- Sun relationship
 - b) Bio-climatic chart
 - c) Altitude & Azimuth angles
 - d) Thermal Comfort
 - e) Daylight & ventilation
- Q. No. 2:- Explain with neat Sketches: (Any Two) 10 Marks**
- a) Mahoney Tables
 - b) Courtyard planning for Hot-dry climate type
 - c) Perimeter to Area (P/A) ratio
- Q. No. 3:- What is the difference between climate & weather ? Elaborate on the importance of studying climatology. 10 Marks**
- Q. No. 4:- What is a psychrometric chart? How can it be used to evaluate the comfort conditions for a particular climate type ? 10 Marks**
- Q. No. 5:- With the help of a case, explain passive daylighting & ventilation strategies with respect to any climate type. 10 Marks**
- Q. No. 6:-What is the purpose of thermal comfort scales ? Briefly explain the use of 'effective temperature nomogram' & 'bio-climatic chart' . 10 Marks**
- Q. No. 7:- State the thermal balance equation & explain all the terms & formulae related to the equation. 10 Marks**

=====XXXXX Paper End XXXXXX=====