

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
Mid Semester Examination – OCTOBER - 2018**

Branch: M.Arch. (Environmental)

I- Year

Sem.:- I

Subject:- Sustainable Development & Planning

Subject Code: - MAREA10100004

Marks: 40

Date: 10/ 10/ 2018

Time: - 2 Hr.

Instructions: - 1. Answer all the questions.

2. Support your answers with sketches wherever necessary.

Q. No.1:-Answer in one sentence:

(5 X 2 = 10) Marks

- a) What is urban design?
- b) Smart city concept
- c) Define land-use planning
- d) Climate change
- e) Define the term 'carbon footprint'.

Q. No. 2:- Answer the following:

(2 X 5 = 10) Marks

- a) Design process for neighbourhood development
- b) Urban planning theories

Q. No.3: What is brownfield redevelopment? What are the scope, need and elements of brownfield redevelopment?

10 Marks

Q. No. 4: Elaborate on the housing problems in India.

10 Marks

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
Mid Semester Examination – OCTOBER - 2018**

Branch: M.Arch (EA) First Year

Sem.:- I

Subject:- Green Building Materials and Construction Technology

Subject Code: MAREA10100003

Marks: 40

Date: - 09-10-2018

Time: - 2 Hour.

- Instructions: -**
- 1. The First question is compulsory**
 - 2. Answer any THREE out of the remaining.**
 - 3. Draw proper sketches wherever needed.**

Q. No.1:- Write Short Notes on any 5

10 Marks

- I. State the STANDARD and FUNCTIONAL unit for measuring Carbon Emission.**
- II. Steel in alternative form as a component of ferrocement**
- III. Use of Aluminum in buildings for different building components**
- IV. One innovative use of bamboo in interiors**
- V. Explain in short an alternative to single glazing**
- VI. Specify embodied energy of any four building materials you know.**

Q. 2. Write about 5 alternative green building materials for building facades as either cladding or main material for the façade. Mention their performance suitability along with other characteristics such that they appear as the most preferred material.

10 Marks

Q. 3. Explain in short all the stages involved in Life Cycle Assessment/Analysis

10 Marks

Q. 4. Where is insulation needed in a building? Write about the most commonly used green materials for insulation in brief.

10 Marks

Q. 5. Write a note on ways and means of reducing embodied energy.

10 Marks

Q. 6. Detail Note on Procedure of LCA

10 Marks

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LONERE – RAIGAD -402 103
Mid Semester Examination – OCTOBER - 2018**

Branch: M-Arch (Environmental)

First Year

Sem.:- I

Subject: Climate Responsive Design -I

Subject Code: - MAREA10100002

Marks: 40

Date: 08/10/2018

Time: - 2 Hr.

Instructions: - 1. The First question is compulsory

2. Answer any THREE out of the remaining.

Q. No.1:- Write Definition in and units/sketch/formula if applicable.

10 Marks

1. True air temperature
2. Wind rows
3. Relative humidity
4. Sun path chart
5. Thermal balance of body
6. Convection
7. Conduction
8. Climate and weather.
9. Macro and micro climate.
10. Heat balance equation for buildings.

Q. No. 2:- Write about different aspect involved in Earth sun relationship

10 Marks

Q. No.3:- Write in detail about hot and dry climate and cold and cloudy.

10 Marks

Q. No. 4:- Write about climatic analysis methods and describe

10 Marks

Q. No. 5:- Calculate Qc for the and Qv

10 Marks

Given data:

Room = 3.00m x 6.00m x 3.00m each wall having window of 1.5m x 1.2 m

Wall section U value is 0.63 W/m² deg C. Consider summer temperature as To -42 Ti -24

Consider winter temperature as To -28 Ti -24

Q. No. 6:- Write about elements of climate. What are factors affecting global climate.

10 Marks

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
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Mid Semester Examination – OCTOBER - 2018**

Branch: M.Arch (General) First Year

Sem.:- I

Subject: - Urban Design

Subject Code: - MAR10100003

Marks: 40

Date: - 09-10-2018

Time: - 2 Hr.

Instructions: - 1. The First question is compulsory

2. Answer any THREE out of the remaining.

Q. No.1:-

(2X5) = 10 Marks

Define the following. Support with sketches.

- a) Permeability
- b) Transition Space
- c) Urban Grain
- d) Edges
- e) Context

Q. No. 2:-

10 Marks

Explain streetscape as an important element of urban design, with the help of its objective, importance, and its sub-elements etc. Draw suitable sketches wherever necessary.

Q. No.3:-

10 Marks

Write an essay of evolution of Urban Design as a separate professional discipline. Write the comparative factors which makes urban design distinctively different than other design disciplines.

Q. No. 4:-

10 Marks

Expand with a suitable example: "Social practices as a determinant of Urban Form".

Q. No. 5:-

10 Marks

Explain the five elements of Lynch Analysis with the help of sketches and suitable examples.

Q. No. 6:-

10Marks

Discuss in detail the factors responsible for creating 'Image of the City'. Give suitable examples to support your answer.

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Mid Semester Examination – OCTOBER – 2018**

Branch: M.Arch (General)

Year- 2018-19

Sem.: - I

Subject: - C.A.T & T

Subject Code: - MAR10100002

Marks: 40

Date: - 8 -10-2018

Time: - 2 Hr.

Instructions: - 1. The First question is compulsory

2. Answer any THREE out of the remaining.

Q. No.1:- Fill in the blanks (any Five)

10 Marks

1. The most elegant bridges have been designed by structural engineer architect _____.
2. The main pioneer architects of Post Modernism were _____.
3. The Deconstructivist style is mostly without _____.
4. The term "Form Follows Function" was coined by _____.
5. _____ says, Emphasis, should be on topography, climate, light; on tectonic form rather than on scenography.
6. _____ is also known as Structural Expressionism, is a type of Late Modern architectural style that emerged in the 1970s.
7. The post modernism style has also been described as _____.

Q. No. 2:- High-tech architecture was, in some ways a response to growing disillusionment with modern architecture. Justify the statement and give at least two examples to explain. 10 Marks

Q. No.3:- What is blobitecture? And how architects have been able to design structures to create new and Unusual forms. 10 Marks

Q. No. 4:- Discuss De constructivist philosophy and explain the architectural character of any two famous buildings in this style. 10 Marks

Q. No. 5:- What are the ideas of Art Nouveaue movement and the features of this architectural style. 10 Marks

Q. No. 6:- Briefly discuss Frank Lloyd Wright's view on organic architecture with example. 10 Marks

----- END OF PAPER-----

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103**

End Semester Examination – OCT/NOV - 2018

Branch: M.Arch (GEN)

Sem.: - III

Subject:- Advance Landscape and Design Materials

Subject Code: - MAR20300003

Marks: 60

Date: - 25/10/2018

Time: - 3 Hrs.

Instructions: 1. Q. No. 1 is compulsory.
2. Answer any FOUR out of the remaining.

- Q. 1 Define the following.** 20 Marks
- | | |
|------------------------|----------------|
| a. Annual Plants | f. Festoon |
| b. Perennial Plants | g. Raised Beds |
| c. Biennial Plants | h. Edging |
| d. Self-seeding Plants | i. Mulching |
| e. Barrier Plants. | j. Grading |
- Q. 2 Explain with neat Sketches (any Two out of the following)** 10 Marks
- a. Terracing
b. Espalier
c. Parterre
- Q. 3 Write Short notes on (any Two out of the following)** 10 Marks
- a. Ha-Ha Walls
b. Characteristic Features of Italian Garden style.
c. Land Restoration and Reclamation
- Q. 4 Draw sketch and explain in details any One out of Two** 10 Marks
- a. Sustainable Landscaping Solutions
b. Cradle To Cradle with any example.
- Q. 5 Explain Rain Gardens in Detail.** 10 Marks
- Q. 6 Difference between Chinese and Japanese Architecture garden Style.** 10 Marks
- Q. 7 What are the design measures to be followed to allow wildlife to flourish in your garden?** 10 Marks

*** End ***

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End Semester Examination – OCT/NOV – 2018

Branch: M.Arch (GEN)

Sem: III

Subject:- Advanced Building Technologies

Subject Code: MAR20300004

Marks: 60

Date: 26/10/2018

Time: 3 Hrs.

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

2. Answer any FOUR out of the remaining.

Q. 1 Answer in single sentence / filling the blanks / match the columns / True or false 20 Marks

- 1) _____ is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as ventilation, lighting, power systems, fire systems, and security systems
- central processing unit (CPU)
 - Structural health monitoring System (SHM)
 - Building management system (BMS)
 - None of above

- 2) _____ is a highly energy efficient system that provides air-conditioning in various zones of the city or neighborhood.
- HVAC
 - VRV/Variable Refrigerant Volume
 - VRF/Variable Refrigerant Flow
 - District Cooling System

- 3) Fire extinguishers with a _____ rating are effective against fires involving paper, wood, textiles, and plastics
- Class A
 - Class B
 - Class C
 - Class D

- 4) _____ is a philosophical movement that, along with cultural trends and changes, arose from wide-scale and far-reaching transformations in Western society during the late 19th and early 20th centuries
- Modernism
 - Postmodernism
 - contemporary
 - None of the above

- 5) _____ is used to describe a situation in which the occupants of a building experience acute health- or comfort-related effects that seem to be linked directly to the time spent in the building.
- Asthma
 - The sick building syndrome
 - Blackout
 - Structural health monitoring

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RAIGAD -402 103

Mid Semester Examination – August 2018

Branch: M. Arch (G) Second Year

Sem.:- III

Subject: - Advanced Landscape Design and Materials.

Subject Code:-MAR20300003

Marks:40

Date:-20/08/2018

Time:- 2 Hr.

Instructions:-

1. Question no.1 is compulsory.
2. Solve any three questions out of remaining.

1. Answer in one or two sentences only (ANY FIVE)

Marks: 10

- A. Define Pruning.
- B. State any four types of natural landscape.
- C. State botanical name of Amla and Neem.
- D. Give examples of formal garden styles.
- E. State elements of landscape categories in hardscape and softscape.
- F. Name plant species widely used for formal hedges.

2. Give detailed morphology of any two of the following trees/plants. **Marks: 10**

- A. Peepal
- B. Mango
- C. Money Plant

- 3.i. Write short note on Cultural Landscape. **Marks: 5**

- ii. Elaborate on the elements controlling Macro and Micro climate. **Marks: 5**

- 4.i. Explain Xeriscaping. **Marks: 5**

- ii. Name the plants to be used in water gardens. **Marks: 5**

5. Explain in detail characteristic of following garden type. Support with examples and diagrams. (ANY ONE) **Marks 10**

- i. Japanese garden
- ii. French garden
- iii. Mughal garden

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Mid Semester Examination – August 2018**

Branch: M.Arch (G) Second Year

Sem.:- III

Subject :- Advanced building technologies

Subject Code:-705

Marks:40

Date:-

Time:- 2 Hr.

Instructions:-

- 1] Questions No. 1 is compulsory and Attempt any THREE from Question No. 2
- 2] Figures / structures to the right indicate full marks.
- 3] Assume suitable data, if necessary.
- 4] Neat diagrams must be drawn wherever necessary.

Q. No. 1 Answer in single sentence / filling the blanks / match the columns / True or false
[COMPULSORY QUESTION] **4+ (3X3) =13**

- i) Write name of any four advance building material. (4)
- ii) Which construction technique is most appropriate to cover railway station platform
a) RCC Frame structure
b) AEISS
c) Geodesic dome
d) None of above (3)
- iii) True or false: - A tensile structure is a construction of elements carrying only tension and no compression or bending. (3)
- iv) _____ was the time period which took place between 17th and 18th century . Started in Britain and spread throughout the world.
a) Industrial Revolution
b) Modernism
c) Post-Modernism
d) None of above (3)