

**C 83648**

Name.....

Reg. No.....

**FIRST SEMESTER MARCH. DEGREE (2019 SCHEME) EXAMINATION  
APRIL 2020**

**SAR 19-16 (A)—ECOLOGY FOR ARCHITECTURE AND PLANNING**

Time : Three Hours

Maximum : 50 Marks

*Answer any five questions by choosing at least one question from each module.*

**MODULE 1**

1. Discuss the significance of ecology to human health and quality of life.
2. Discuss in detail how bioregionalism directly or indirectly influences the quality of life.

**MODULE 2**

1. Discuss in detail, the impact of bioregionalism on the social wellbeing.
2. Discuss in detail how architecture can contribute to the economic and social aspect of ecology.

**MODULE 3**

1. Explain with an example the concept of resistance stability and resilient stability in ecological cybernetics.
2. What are the principles of sustainable communities ? Explain with an example.

**MODULE 4**

1. With the help of an example, discuss the salient features of an ecologically sensitive building.
2. Discuss the various factors that must be considered while conducting environmental analysis.

**FIRST SEMESTER M.A.R.C.H. DEGREE (2019 SCHEME) EXAMINATION  
APRIL 2020****SAR 19-15 (A)—INTRODUCTION TO SUSTAINABLE DEVELOPMENT AND  
ARCHITECTURE**

Time : Three Hours

Maximum : 50 Marks

*Answer any five questions by choosing at least one question from each module.***MODULE 1**

1. What are the main causes of desertification ?
2. Discuss in detail the aims and importance of the four components of sustainability ?

**MODULE 2**

1. Discuss in detail any four important agenda of the Rio Summit.
2. Explain how you will create an action plan for averting water scarcity in a town.

**MODULE 3**

1. Discuss the approaches to availability and sustainable management of water and sanitation for the developing world.
2. Discuss the significance and salient aspects of The Air (Prevention and Control of Pollution) Act, 1981 in India.

**MODULE 4**

1. Discuss the ways of implementing strategies to mitigate the adverse impact of environmental change on human population and vice-versa.
2. Discuss in detail any four goals of sustainability by the U.N. and its significance to India.

**FIRST SEMESTER M.ARCH. DEGREE (2019 SCHEME) EXAMINATION  
APRIL 2020**

SAR 19-12—SUSTAINABLE BUILDING MATERIALS AND TECHNOLOGIES

Time : Three Hours

Maximum : 50 Marks

*Answer any five questions by choosing at least one question from each module.*

*Each question carries 10 marks.*

**Module 1**

1. Discuss in detail the challenges in using Life Cycle Analysis as a tool for analyzing environmental impact.
2. Discuss how the performance and efficiency of the building can be significantly enhanced if the selection of building materials and construction management practices are integrated in the project to derive maximum benefit.

**Module 2**

1. With the help of sketches explain the construction techniques using Wood as a composite material for foundation, superstructure and roofing.
2. Discuss the various traditional and modern additives used in mud to increase its strength and versatility.

**Module 3**

1. Explain in detail the various coatings on glass which gives customized performance to achieve sustainability.
2. Discuss in detail any four modern innovative building materials which has revolutionized the building industry.

**Module 4**

1. Discuss the criteria for evaluation according to GRIHA.
2. Discuss the environmental and economic repercussions of choosing an appropriate building material with a case example.

(5 × 10 = 50 marks)

**FIRST SEMESTER MARCH. DEGREE (2019 SCHEME) EXAMINATION  
APRIL 2020**

SAR 19-11—DESIGNING WITH CLIMATE FOR SUSTAINABLE BUILT FORMS

Time : Three Hours

Maximum : 50 Marks

*Answer any five questions by choosing at least one question from each module.***MODULE 1**

1. Critically review the climate law and policies around the world which is a deterrent to slowing down climate adversities.
2. With the help of a neat sketch discuss the Earth's Energy Balance system.

**MODULE 2**

1. Discuss the various elements of climate and the ways to measure the same.
2. Discuss the key components in designing an adaptation initiative.

**MODULE 3**

1. Discuss in detail. the steps involved in the design of shading devices.
2. Outline and explain the various factors to be considered while analyzing a site.

**MODULE 4**

1. Explain in detail any four measures by an architect to mitigate climate change while designing buildings.
2. Discuss in detail the sustainable architectural approach of any one vernacular building of your choice.

**FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY)  
[2013—2014 SCHEME] EXAMINATION, APRIL 2020**

**SAR 14 103—BUILDING MATERIALS AND COMPONENTS**

Time : Three Hours

Maximum : 100 Marks

*Answer any five questions by choosing at least one question from each module.*

**Module 1**

1. Discuss in detail, the entire process of LCA, right from material procurement to post consumer use.
2. Discuss how improved resource efficiency of production and consumption is a key requirement for sustainable growth.

**Module 2**

3. What are the various criteria for cost evaluation using whole life cycle cost.
4. Discuss in detail, the key determinants of cost of an item of work and the factors responsible for its change over time.

**Module 3**

5. Discuss in detail the important features/criteria for a building material to be classified as a sustainable one.
6. With the help of sketches, describe the use of any four low energy alternate building materials which can be used in building construction.

**Module 4**

7. Discuss the various resources engaged in the construction of buildings and the methods to optimize the same.
8. Discuss the various strategies for sustainable building construction.

(5 × 20 = 100 marks)

**FIRST SEMESTER M.A.R.C.H. DEGREE (REGULAR/SUPPLEMENTARY)  
(2013—2014 SCHEME) EXAMINATION, APRIL 2020**

**SAR 14 101—PRINCIPLES OF SUSTAINABLE DEVELOPMENT**

Time : Three Hours

Maximum : 100 Marks

*Answer any five questions by choosing at least one question from each module.*

**Module 1**

1. Discuss in detail the measures to be taken to increase the carrying capacity of a place.
2. Discuss in detail the various factors and its interactions comprising bioproductive land, bioproductive sea, energy land, built land and biodiversity in assessing ecological footprint of a place.

**Module 2**

3. India is a party to five major international conventions related to Wild Life conservation. Discuss in detail the agenda of any one of the conventions along with the measures taken to abide by the same.
4. Discuss in detail how the present GATT/WTO regime conflicts with effective policies to cope with transboundary environmental problems, including the protection of global commons.

**Module 3**

5. Discuss how, in addition to environmental laws to achieve sustainability, a wide range of other laws, including land use and property laws, tax laws, laws involving governmental structure are also imperative.
6. Discuss with case studies, the significance of integration across levels of government in order to effectively follow and implement legal rules.

**Module 4**

7. Discuss in detail any *four* out of the seventeen sustainable development goals of the United Nations to enable transforming the world of the future.
8. With the help of an example, discuss how integrated approach to resource protection can help achieve society's overall objectives incorporating among other, human health, economic activities and environmental quality.

(5 × 20 = 100 marks)