D 94122

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY) [2019 SCHEME] EXAMINATION, JANUARY 2021

Landscape Architecture

MLA 19 15B—SURFACE HYDROLOGY AND HYDROLOGIC SYSTEMS

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 I

1. What are the causes of inconsistency of rainfall records by gauges ? Explain double mass curve method for checking the consistency of rainfall records.

(10 marks)

2. Describe : (i) Continuity equation in water balance ; and (ii) estimation of missing rainfall data.

(10 marks)

Module II

3. Explain the process of infiltration. How will you measure the infiltration using single and double ring infiltrometers ?

(10 marks)

4. Explain : (i) Measurement of evaporation ; and (ii) Penman method of estimation of evapotranspiration.

(10 marks)

Module III

5. Explain : (i) Estimation of depression storage ; and (ii) Methods of baseflow separation.

(10 marks)

6. Define Unit Hydrograph and state its uses. State the assumptions in deriving Unit hydrographs and limitations of Unit Hydrograph theory.

(10 marks)

Module IV

7. Describe the features of any two major hydrological models. (10 marks)

8. Explain the hydrologic and hydraulic approaches of flood routing in detail. (10 marks)

[5 × 10 = 50 marks]

D 94121

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY) [2019 SCHEME] EXAMINATION, JANUARY 2021

Landscape Architecture

MLA 19 15A—HYDROLOGY AND GEOMORPHOLOGY

Time : Three Hours Maximum : 50 Marks

Answer any **five** *questions by choosing at least one question from each module.*
Each question carries 10 *marks.*

1. Define the terms : i) interception & ii) infiltration. Explain hydrological cycle and the impact of climate change on it.

Or

2. Elaborate the rainfall regime with reference to Indian context.

3. Discuss the different strategies of management of ground water along with the different measures to control ground water pollution.

Or

4. How is rainwater harvesting & artificial recharge of ground water an effective tool for water conservation, preservation & augmentation ?

5. The earth's crust is very dynamic and brings about changes in the configuration of the earth. Establish the statement with relevant details on different types of processes occurring on the earth's outer and inner surface.

Or

6. Explain the different types of morphogenie regions of the earth. Detail the characteristics of Karst landscape and Aeolian landscape.

7. Explain in detail the geomorphological features of Indian subcontinent.

Or

8. Discuss the reciprocal adjustments between landforms and living organisms that give geomorphic evolutionary insights, in detail.

(5 × 10 = 50 marks)

D 94120

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE [2019 SCHEME] (REGULAR/SUPPLEMENTARY) EXAMINATION, JANUARY 2021

Landscape Architecture

MLA 19 12—GEOLOGY AND SOILS

Time : Three Hours | Maximum : 50 Marks

Answer any **five** *questions by choosing at least* **one** *question from each module.*
Each question carries 10 *marks.*

1. Discuss the different types of rocks and their formation in relation to the timeline of earth.

Or

2. Define the terms isostasy, plate tectonics and crustal deformation. Explain the formation of mount Everest detailing out the geological process it underwent in course of time.

3. Explain the application of satellite imaging and data interpretation of geological information for landscape illustration

Or

4. What are the different techniques of geological data collection, explain in detail ?

5. Discuss the classification of soil elaborately.

Or

6. The interaction of biotic and abiotic factors in the development of soil beneath forest vegetation is highly complex and unique as compared to soils derived under other vegetation types. Elaborate the statement.

7. Soil degradation control is an essential step in the current day land management. Explain the same and also discuss about land reclamation techniques and its consequences.

Or

8. Explain how soil evaluation and land use planning help in the sustainable development of a region.

(5 × 10 = 50 marks)

D 94119

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY) [2019 SCHEME] EXAMINATION, JANUARY 2021

Landscape Architecture

MLA 19-11—PLANT SYSTEMATICS AND PLANT PROCESSES

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 - I

1. Explain the classification of kingdom plantae with examples.

Or

2. Differentiate the different types of stem modifications with examples.

Module - II

3. Give two examples (Botanical name & Common name) each on each layer of forest ecosystem.

Or

4. Write the binomial nomenclature for the following a) Neem b) Candle stick c) Table rose d) Travellers palm e) Rain tree.

Module - III

5. Explain briefly root-stem-plant relationship. Explain the transportation of water and minerals in plants.

Or

6. Write Short notes on any TWO types of plant growth regulators.

Module - IV

7. Explain the distribution of plant communities according to their geographical regions.

Or

8. Discuss natural and manmade landscape with examples.

D 94118

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. (REGULAR/SUPPLEMENTARY) DEGREE [2019 SCHEME] EXAMINATION, JANUARY 2021

Sustainable Architecture

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	Module 2	Module 3	Module 4
QNo. 1:10 Marks	Q No. 3:10 Marks	Q No. 5:10 Marks	Q No. 7:10 Marks
QNo. 2:10 Marks	Q No. 4:10 Marks	Q No. 6:10 Marks	Q No. 8:10 Marks

Module 1

1. Discuss in detail the relationship between ecology and bio-climate of place.
2. With the help of an example discuss how biourbanism influences architectural design solutions.

Module 2

3. What do you understand by bi-mimicry ? Explain with a suitable example.
4. Discuss the important decisions of an Architect that influences the environmental aspect of ecology.

Module 3

5. Discuss the principles and aims of green infrastructure projects with an example.
6. Discuss the impact of Urban Heat Island on various elements of the ecology and the ways to mitigate the same.

Module 4

7. With an examples, discuss the aims and principles of sustainable infrastrucure project.
8. How does the envelope of a building play an important role in causing minimum disturbance to the environment ?

D 94117

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. (REGULAR/SUPPLEMENTARY) DEGREE [2019 SCHEME] EXAMINATION, JANUARY 2021

Sustainable Architecture

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	Module 2	Module 3	Module 4
QNo. 1:10 Marks	Q No. 3:10 Marks	Q No. 5:10 Marks	Q No. 7:10 Marks
QNo. 2:10 Marks	Q No. 4:10 Marks	Q No. 6:10 Marks	Q No. 8:10 Marks

Module 1

1. What are the devasting effects of desertification ?
2. Discuss in detail the concept of sustainable globalization and the approaches to achieving the same.

Module 2

3. Discuss the aim and resolutions of the Paris Agreement of 2016.
4. As an Architect what will be the action plan you suggest, for implementing reduction of building waster debris for landfills.

Module 3

5. Discuss the salient aspects of the Hazardous Waste Management Regulations of India which supports and aids sustainability.
6. Discuss the significance of The National Green Tribunal Act 2010 as a specific law to maintain sustainability.

Module 4

7. Outline any ten ways of protecting our natural resources from exploitation and complete damage.
8. Outline any four sustainable goals of the U.N. and discuss in brief its significance being listed as a goal.

D 94116

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY) [2019 SCHEME] EXAMINATION, JANUARY 2021

Sustainable Architecture

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.*

Module 1	Module 2	Module 3	Module 4
Q No. 1:10 Marks	QNo. 3:10 Marks	QNo. 5:10 Marks	QNo. 7:10 Marks
QNo. 2:10 Marks	QNo. 4:10 Marks	QNo. 6:10 Marks	QNo. 8:10 Marks

Module 1

1. Discuss in detail the concept of whole building analysis.
2. Explain in detail the concept of Ecological footprint and Ecological capacity and its significance to sustainable development.

Module 2

3. With the help of sketches explain the construction techniques using bamboo for foundation, superstructure and roofing.
4. Discuss the advantages and limitations of reusing Shipping Container as a building component.

Module 3

5. Outline any four types of glass and list its advantages and limitations.
6. Discuss in detail, the features of high performing concrete.

Module 4

7. Outline the characteristics of any state-of-the-art sustainability assessment method.
8. Discuss the importance of material selection in achieving high sustainability.

D 94115

Name.....

Reg. No.....

FIRST SEMESTER M.ARCH. DEGREE (REGULAR/SUPPLEMENTARY) [2019 SCHEME] EXAMINATION, JANUARY 2021

Sustainable Architecture

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	Module 2	Module 3	Module 4
Q No. 1:10 Marks	QNo. 3:10 Marks	QNo. 5:10 Marks	QNo. 7:10 Marks
QNo. 2:10 Marks	QNo. 4:10 Marks	QNo. 6:10 Marks	QNo. 8:10 Marks

Module 1

1. Discuss in detail the various Climate mitigation pathways and measures in the context of sustainable development
2. Discuss the influence of Macro and Micro climate on building design decisions.

Module 2

3. Discuss climate classification in the tropical region of the world along with its characteristics.
4. Discuss in detail the planning and architectural considerations for designing in a hot-dry desert climate.

Module 3

5. Discuss classification of climate in the tropical region of the world along with its characteristics.
6. Discuss in detail the significance of location and size of openings to enhance indoor air movement in buildings.

Module 4

7. Discuss in detail, the climate responsive architecture of any vernacular building of your choice.
8. With the help of sketches, explain the working of an Earth Air Tunnel.

C 83642

Name.....

Reg. No.....

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

AAR 19-16 (A)—INTELLIGENT BUILDING SYSTEMS

Time : Three Hours Maximum : 50 Marks

All questions carry 10 *marks each.*

Unit I

1. Describe the attributes and evolution of intelligent building.

Or

2. Describe in detail the components of Building Automation System.

Unit II

3. What are the steps that building owners and designers can take to ensure that an EMS (Energy Management System) produces maximum benefits ?

Or

4. Are all systems required for an intelligent building need to be cloud-based ? What are the security concerns associated with it ?

Unit III

5. Elaborate on intelligent building network design and management aspects ?

Or

6. Write short notes on :

   a) DDC. b) API.

   c) EMS. d) CP.

   e) Control INET.

Unit IV

7. Elaborate on main subsystems of an intelligent buildings, with example of an building in India.

Or

8. What is Artificial Intelligence (AI) and Expert System (ES) ?

C 83641

Name.....

Reg. No.....

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

AAR 19-15 (B)—CONSTRUCTION MANAGEMENT

Time : Three Hours Maximum : 50 Marks

Unit I

1. Explain in detail, about various types of Rating a construction project.
2. Compare the scope and contents of a pre-feasibility report and a techno-feasibility report for the construction of a large commercial complex project.

Unit II

3. Elaborate in detail about various components of wages and Salaries in the Construction Industry and the methods of their administration.
4. Explain about the different components of a Tender document, explaining in detail the purpose of each of these components.

Unit III

5. Discuss about the essential components of a risk management plan Template for a large Private Educational Institution in a Coastal area.
6. Explain about Accidents, their causes during construction of high-rise residential building complex. Suggest how safety of construction personnel can be achieved in such circumstances.

Unit IV

7. Explain in detail about the methods of managing Inventory in the construction of a large commercial project, and its impact on project cash-flow management.
8. Explain how Capital Investment decisions are taken. Discuss in detail about different techniques of Capital budgeting.

(5 × 10 = 50 marks)

C 83639

Name.....

Reg. No.....

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

AAR 19-12—SITE PLANNING AND LANDSCAPE ARCHITECTURE

Time : Three Hours Maximum : 50 Marks

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

Module 1

1. How are Environment and Behavior related ? Explain the environmental and behavioral theories with reference to the interaction of human societies with the natural environment.

Or

2. Discuss the changing perceptions of human-nature relationship in a historical perspective emphasizing the attitudes and responses as a function of this perception.

Module 2

3. What is grading in landscape architecture ? Explain with suitable illustrations the grading techniques followed in sports fields.

Or

4. What is meant by interpolation of contours ? Explain the process of grading a site, from site analysis to final grading plan with suitable sketches.

Module 3

5. Explain how water can be used as a design element. Highlight the importance of drainage design with regard to landscape design.

Or

6. Discuss in detail the factors affecting the surface runoff and explain how to determine the catchment area.

Module 4

7. Explain with relevant sketches the principles of site lighting focusing on the types of fixtures, their organization and uses in varying situations.

Or

8. Elaborate on the criteria for the selection of materials and specification for street furniture in various environments.

(5 × 10 = 50 marks)

C 83638 (Pages : 2) Name.....

Reg. No.....

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

AAR 19 11—ARCHITECTURE PARADIGM : CHANGING CONCEPTS

Time : Three Hours Maximum : 50 Marks

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

Explain with sketches wherever necessary. Assume the data wherever necessary.

Module 1

1. In Gothic period the construction of Cathedral was more in technical skills.

   Substantiate the statement with suitable example.

   (10 marks)

2. Write a note on the following with suitable examples :

   (a) Modernism. (5 marks)

   (b) Phenomenology. (5 marks)

Module 2

3. Discuss the importance of digital discourse and their indeterminacy in Architecture. Illustrate with suitable examples.

   (10 marks)

4. Discuss the Embodied activity in context by Mc Cullough in Digital Ground. (10 marks)

Module 3

5. Is biomimicry is alternative approach to sustainability. Illustrate the statement with suitable examples.

   (10 marks)

6. Explain the structural systems and its architectural perspective observed from John Ochsendorf Projects.

   (10 marks)

Module 4

7. Is software helping us to define form finding and defining strategies ? Illustrate the statement with suitable examples.

(10 marks)

8. Discuss the Generative designs in cinematic sections with suitable examples.

(10 marks)

[5 × 10 = 50 marks]