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***B.Arch. Degree VIII Semester Regular/Supplementary Examination  
April 2022***

**AR 1802 PROFESSIONAL PRACTICE  
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A**  
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- (a) Comprehensive architectural services.
  - (b) Architects Act 1972.
  - (c) Earnest money deposit.
  - (d) Bill of quantities.
  - (e) Role of umpire in Arbitration.
  - (f) Kinds of arbitration.
  - (g) Tax planning for architects.
  - (h) Double entry and single entry.

**PART B**

(4 × 15 = 60)

- II. As per COA guidelines explain architectural scale of professional charges.
- OR**
- III. (a) What is 'professional negligence' of an architect?  
(b) What are the professional liabilities of an architect?
- IV. Explain tender document and tender notice. Discuss types of tenders in detail.
- OR**
- V. What is building contract? Explain types of contract with sums and bill.
- VI. Define Arbitration? What are the main advantages of settling the disputes and differences by Arbitration?
- OR**
- VII. Explain duties and liabilities of architect, contractor and employer in detail.
- VIII. Explain duties and responsibilities of principal architect while running his own office with the help of staff structure.
- OR**
- IX. Define different system of accounting in building construction. Explain various principles and practice of management.

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**B.Arch. Degree VIII Semester Regular/Supplementary Examination  
April 2022**

**AR 1803 DISASTER PREPAREDNESS AND MANAGEMENT  
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes of the following.
- Mitigation.
  - Early warning and risk.
  - Vulnerability and predictability of disaster.
  - Soil erosion – prevention methods.
  - Hazard Zonation Map.
  - Weather forecast in preparedness for cyclone.
  - Phases of Disaster Management.
  - Community health and casualty management.

**PART B**

(4 × 15 = 60)

- II. What is meant by disaster? What are its classifications? Explain in detail with example.
- OR**
- III. What are the various types of flood? What are the causes of floods? Also explain the various effects and mitigation strategies adopted.
- IV. Explain the vulnerability map of India explained with incidents of various disasters.
- OR**
- V. Briefly explain the major disasters that occurred in your state. Also explain the main authorities related to disaster management and mitigation at National level.
- VI. What is retrofitting? Explain various retrofitting techniques with the help of sketches.
- OR**
- VII. Describe various Community preparedness measures for Disaster.
- VIII. Describe various measures to be taken for Rehabilitation and Reconstruction in Post Disaster Management phase.
- OR**
- IX. What is remote sensing and GIS? Explain the application of remote sensing and GIS in Disaster Management.

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**B.Arch. Degree VIII Semester Regular/Supplementary Examination  
April 2022**

**AR 1804 CONSTRUCTION MANAGEMENT  
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on the following:
- Project feasibility report.
  - Objectives of construction management.
  - Advantages and disadvantages of Gantt chart.
  - Network crashing.
  - Define 'optimistic time', 'pessimistic time' and 'most likely time'.
  - Project control.
  - Types of delays in Construction Management.
  - Duration cost trade off.

**PART B**

(4 × 15 = 60)

- II. Explain life cycle of a construction project. Illustrate how costs and expenditure varies during the different stages of a construction project.
- OR**
- III. Explain time value of money. Explain in detail cost benefit analysis. When is it used? Explain with an example.
- IV. Draw the network diagram and mark the critical path. Calculate the Early Start (ES), Late Start (LS), Early Finish (EF), Late Finish(LF), Total Float(TF), Free Float ( FF), Independent Float (Ind Float), Interfering Float ( Int Float).

Activity	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Immediate predecessor	-	-	-	B	A	A	B	C,D	C,D	E	F,G,H	F,G,H	I	J,K
Duration (months)	3	4	6	3	9	1	4	5	4	3	6	3	6	9

**OR**

- V. Explain in detail Work Breakdown Structure with an example. Describe its advantages and disadvantages.

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- VI. What is resource allocation? What is the difference between resources smoothing and levelling? Describe in detail the steps involved in resource smoothing and levelling.

**OR**

- VII. A project consists of nine activities shown below. Draw the network diagram, expected duration and variance of each activity, calculate expected project length.

Activity	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
$t_o$	1	2	2	2	7	5	5	3	8
$t_m$	7	5	14	5	10	5	8	3	17
$t_p$	13	14	26	8	19	17	29	9	32

- VIII. What is project monitoring? Explain the importance of delay analysis and documentation in managing a construction project.

**OR**

- IX. Explain the various avenues in which project management software can be used in construction management. List and explain any two construction management software that you aware of.

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***B.Arch. Degree VIII Semester Regular/Supplementary Examination  
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**AR 1805 (a) ENERGY EFFICIENT ARCHITECTURE  
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on:
- (a) Energy efficient lighting
  - (b) Embodied energy
  - (c) Intelligent buildings
  - (d) IoT
  - (e) Actuator
  - (f) Access Control
  - (g) Benefits of biophilic design
  - (h) Nature – design – health relationship.

**PART B**

(4 × 15 = 60)

- II. Explain how solar passive techniques in building design can be utilised to bring in energy efficiency.
- OR**
- III. Define life cycle energy of a building. Explain it in terms of embodied energy and operational energy.
- IV. What is a smart building? How does the information and communications technology (ICT) work in a smart building?
- OR**
- V. How did smart building evolve over time? How does a smart building differ from an ordinary building?
- VI. Explain how HVAC and lighting control can be achieved in a smart building.
- OR**
- VII. How do the different building system such as voice network, power management, video surveillance and fire safety work in a smart building?
- VIII. Why should be practised biophilia in building design? What benefits does it have on the human beings?
- OR**
- IX. What are the different Biophilic Design Strategies to be adopted when designing a building along with its landscape and master plan?

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***B.Arch. Degree VIII Semester Regular/Supplementary Examination  
April 2022***

**AR 1806 (a) ARCHITECTURAL CONSERVATION  
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. (a) Write short note on INTACH.
- (b) Difference between Built Heritage and Natural Heritage.
- (c) Explain wooden wall in Kerala's traditional Architecture.
- (d) Explain the role of conservation in defected old structures.
- (e) Effect of earthquake on historic buildings.
- (f) List down various natural and manmade causes for building/structure decay.
- (g) Explain Restoration in Architectural conservation.
- (h) What is the seven degree of Intervention in conservation?

**PART B**

(4 × 15 = 60)

- II. Brief the Conservation Movement.
- OR**
- III. Explain any two agencies involved in conservation
  - IV. Explain Traditional Building with an example from Kerala.
- OR**
- V. Explain various building compounds of Kerala traditional Architecture.
  - VI. Explain various climates caused decay in traditional materials and structures.
- OR**
- VII. Explain various natural and manmade causes for building/structure decay.
  - VIII. Explain 'Values' associated with historic monuments.
- OR**
- IX. Discuss the importance of documentation in conservation. What are the various means of documenting the essence of a built heritage?

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