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B

B.Arch. Degree VIII Semester Examination April 2019

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) Architects Act 1972
(b) Scale of professional charges as per CoA guidelines.
(c) Essential characteristics of a tender notice.
(d) Earnest Money Deposit
(e) Functions and duties of Arbitrator
(f) Role of Umpire in arbitration
(g) Duties and responsibilities of the Principal Architect while running an Architects' Office
(h) Structure of an Architect's office

PART B

(4 × 15 = 60)

II. Discuss in detail 'Comprehensive Architectural Service'.

OR

III. Analyse the code of conduct specified for architects by Council of Architecture.

IV. What is a Contract Document? Explain the necessary steps to make a contract binding on the parties.

OR

V. Mention the different types of tenders. Explain the merit and demerit of each type of tenders.

VI. Define Arbitration. What are the main advantages of settling disputes and differences by arbitration?

OR

VII. Write short notes on:
(i) Shop drawing
(ii) Engineer in charge
(iii) Defects after completion

VIII. What are the options open to an architect at the commencement of his career and discuss relative merits of each?

OR

IX. What is management? What are the important principles of Management?

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B

B.Arch. Degree VIII Semester Examination April 2019

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 note on:

(a) Environmental Hazard.
(b) Predictability of disaster.
(c) Natural disaster.
(d) Cause of soil erosion.
(e) Disaster forecasting.
(f) Retrofitting.
(g) Post disaster stages.
(h) Disaster management cycle.

PART B

(4 × 15 = 60)

II. Describe the vulnerability of different natural disasters that has occurred in India.

OR

III. Explain briefly the different types of disasters.

IV. Differentiate between endogenous hazards and exogenous hazards.

OR

V. Enumerate the disaster profile of your state strategies for reducing the risks.

VI. Discuss in detail the community based disaster preparedness plan in India.

OR

VII. What are the different techniques adopted for forecasting and warning the occurrence of Tsunami?

VIII. Describe the application of remote sensing and GIS in real time disaster management.

OR

IX. Explain the role of National, State and District disaster management authorities during a disaster.

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B

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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:

(a) Types of construction projects.

(b) Advantages and disadvantages of Bar charts in scheduling.

(c) Work breakdown structure.

(d) Time-Cost trade off.

(e) Project Management Triangle.

(f) Network crashing.

(g) Project Scheduling and the difference between 'resource oriented scheduling' and 'time oriented scheduling'.

(h) Types of Delays in construction projects.

PART B

(4 × 15 = 60)

II. Describe in detail the scope of construction management in the construction sector. Describe the major activities involved in the management of construction projects. Highlight the importance of planning in construction management by describing the process and stages of planning.

OR

III. Explain in detail Cost-Benefit Analysis. When is it used? Explain with an example.

IV. (a) Differentiate between PERT and CPM. Briefly explain the Principles and applications of CPM.

(b) A project consists of 8 activities-A, B, C, D, E, F, G and H with their completion times as follows. Draw the bar chart for the project and calculate the total project completion time.

Activity	A	B	C	D	E	F	G	H
Duration (weeks)	2	4	2	4	6	4	5	4

The precedence relationships are as follows

- A and B can be performed in parallel.
- C and D cannot start until A is complete.
- E cannot start until half the work of activity C is complete.
- F can start only after activity D is complete
- G succeeds C.
- H is the last activity and should succeed E.

OR

(P.T.O)

V. (a) What are networks? Briefly describe the various elements of a network.

(b) Using the data given below, draw the Network, Number the nodes, find the Critical path, total float, free float and independent float.

Activity	A	B	C	D	E	F	G	H	I	J	K
IPA	-	-	-	A	B,C	C	B,C	E	D,G	E	F,H
Duration	5	3	8	4	9	7	4	7	5	13	6

End of activities I, J & K signifies the end of the project.

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

OR

VII. A project consists of 7 activities with interdependencies shown as below. Draw the network, find the critical path & the probability of completing the project in 35 days.

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Activity	A	B	C	D	E	F	G
IPA	-	-	A	B	A	B	C,D
t_o	6	5	4	4	4	2	4
t_m	9	8	7	7	7	5	10
t_p	18	17	22	16	10	8	22

VIII. Explain the various avenues in which project management software can be used in Construction Management. List and explain any 2 construction management software that you are aware of.

OR

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

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B

B.Arch. Degree VIII Semester Examination April 2019

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 the following:
   (a) Energy efficiency in architecture
   (b) HVAC systems
   (c) ICT
   (d) Smart/intelligent buildings
   (e) Lighting control and video surveillance
   (f) Access controls and fire alarms
   (g) Defenition of Biophelia and need for Biophilic design.
   (h) Patterns of Biophelic design

PART B

(4 × 15 = 60)

II. Explain renewable energy systems and how it helps in energy efficient architectural practice.

OR

III. Explain any three methods in detail to conserve energy during the construction and working of a building.

IV. What are the merits of a smart building over an ordinary building? Discuss.

OR

V. What is the need of ICT, how it works in smart buildings and explain its merits.

VI. Explain any three smart building systems in detail and its mode of working.

OR

VII. Explain how smart building systems help in providing services like fire safety, water supply and the role of the same in differently abled and aged.

VIII. Explain in detail nature –design-health relationship with any two suitable examples.

OR

IX. Explain the principles and benefits of biophilic design.

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C

B.Arch. Degree VIII Semester Examination April 2019

AR 1806 (a) ARCHITECTURAL CONSERVATION

(2014 Scheme)

(Support answers with neat sketches wherever necessary)

Time : 3 Hours Maximum Marks : 100

PART A

(Answer *ALL* questions)

(8 × 5 = 40)

I. Write short notes on the following:

(a) Definition and scope of architectural conservation
(b) ASI and INTACH
(c) Wooden wall and roof construction
(d) Spanning elements
(e) Defects caused by climatic causes
(f) Natural causes for decay of structures
(g) Documentation
(h) Identification of values

PART B

(4 × 15 = 60)

II. Describe the beginning of conservation movement. What are the contributions given by John Ruskin and William Morris in conservation?

OR

III. Explain in detail any three agencies involved in conservation with suitable examples.

IV. Explain with an example the contributions of traditional building construction techniques with reference to Kerala context.

OR

V. Elaborate with suitable examples the defects in construction techniques for structures.

VI. Elaborate with examples the botanical, biological and micro biological decays in construction.

OR

VII. What are the man-made caused decays affecting build heritage? Support with examples.

VIII. What are the various strategies involved in preparatory procedures for conservation.

OR

IX. Support with suitable examples any four degrees of intervention.

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