2014-15
B.Arch. (Vth. Semester) Examination
Architecture
Islamic Architecture
AR-301

Maximum Marks: 60
Credits: 03
Duration: Three Hours

Answer all the questions.
Assume suitable data if missing.
Neat sketches shall have suitable weightage.

<table>
<thead>
<tr>
<th>Q.No.</th>
<th>Question</th>
<th>M.M.</th>
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<tbody>
<tr>
<td>1</td>
<td>Explain basic socio-religious values of Islam and regional influences which affects Islamic architecture.</td>
<td>[12]</td>
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<td>2</td>
<td>Explain any ONE of the following Islamic architecture style in detail.</td>
<td>[12]</td>
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<td>Arabian architecture. Turkish architecture. Chinese architecture.</td>
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<td>3</td>
<td>Explain Pathan or Mughal or Rajput dynasty architecture in detail with suitable examples of sketches of important buildings and their salient features.</td>
<td>[12]</td>
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<td>4</td>
<td>Explain Islamic art and decoration as used in various buildings and any ONE of the following Islamic architecture style in detail. Slave dynasty architecture. Gujarat architecture. Golconda and Bijapur architecture/Deccan Architecture. Sikh architecture.</td>
<td>[12]</td>
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<td>5</td>
<td>Explain technologies used in Islamic architectural buildings related to climatic control, acoustical control and earthquake resistance.</td>
<td>[12]</td>
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2014-15
B.Arch. (Autumn Semester) Examination
B.Arch-Ill Year
LandScape Design
AR-303 N

Maximum Marks: 40
Credits: 03
Duration: Three Hours

Answer any four questions.
Draw sketches to support your answer.
Question no 5 is compulsory

Q.No. Question M.M.

1 What are the various forms of vegetation used in landscaping, explain the purpose [10] of using plant materials in landscaping?

OR

1' What are the Principles of Landscape Design, explain with neat sketches the hard [10] and soft landscape?

2 Explain the importance of Landscaping in a project and what are the various [10] purposes of landscaping?

3 Discuss the use of any two of the following with sketches:
   a) Mango Tree
   b) Hedge
   c) Ficus Palm
   [10]

4 Explain with neat sketches the various elements used in Italian Garden? [10]

5 Draw the Landscape Plan and one section of the University Triangle near Arts [10] Gallery with dimensions 70m X 35m X 55m on a suitable scale.
1. What is the relevance of Interior Design in the field of Architecture? Discuss its scope with reference to present day Commercial Design scenario. [6]

2. What are the different colour schemes in Interior Design? Explain any TWO of them. [6]

OR

2' What do you understand by the Colour Psychology? Discuss the psychological impact of any THREE colour from the followings:

a) Red
b) Green
c) Orange
d) Blue
e) Violet

3. What are the different elements of Interior Design? Explain any TWO elements in detail with reference to their typology and application. [8]

4. Design a Shoe Store of Woodland Men’s Shoes in Great India Shopping Mall of having dimensions as 6mX12m having shorter side as the store front with a clear height of 3.6m. Show all the Interior Design details with reference to Visual Merchandising, Flooring, False Ceiling, Wall Finish, Colour Scheme, Fixing detail, Art work, Services, etc. with the help of a Plan and Two Sections or One Point Perspective. [20]
B.ARCHITECTURE (V-SEMISTER) EXAMINATION
(ARCHITECTURE DESIGN III)
(AR-351N)
Credits: 0f
Max Marks: 40
Duration: Six Hours

Note: (i) Neuferts-data and time saver standards are allowed but provision of these is not the responsibility of the department.
(ii) Good drafting shall carry weightage.
(iii) Assume any suitable data wherever desirable.

Design problem

Etah is fast developing town being located on the main high way and having regional importance. It has a local health centre comprising OPDS related to paediatrics, gynaecology, medicine, surgery, ENT, ophthalmology, and orthopaedics. U.P. government desires to develop this further by adding emergency services and attached indoor-patient department with 30 beds each for emergency and epidemics care for males and females. You are expected to design it with suitable requirements and facilities thinking you as an expert in this designing area. It has provided a plot of rectangular shape measuring 90m*150m located on east side of G.T. road running north-south, short side being the front side.

For the above project provide the following

1. List of requirement with area chart. 06
2. Site plan with parking and landscaping. 06
3. Suitable plans to explain your design. 12
4. Section/sections 04
5. Elevations and/ views 04

Viva shall also be conducted to provide you opportunity to explain your concept/design. 08
Questions:

1. (a) What is consistency of soil? Define liquid and plastic limits and discuss their significance in geotechnical engineering.

(b) Soil has been compacted in an embankment at a bulk density of 21.6 kN/m$^3$ and water content of 13%. The value of specific gravity of soil solids is 2.67. The water table is well below the foundation level. Estimate the dry density, voids ratio, degree of saturation and air content of compacted soil.

OR

1’ (a) What do you understand by compaction of soil? Differentiate between Standard and Modified Proctor’s compaction tests.

(b) Discuss activity of soil.

A clay specimen has unconfined compressive strength of 250 kN/m$^2$ in undisturbed state. Later, on remoulding the unconfined compressive strength was found to be 55 kN/m$^2$. Determine sensitivity of soil and classify the soil on the basis of sensitivity.

2. (a) Discuss in detail about the permeability of stratified soil deposits.

(b) Define seepage velocity.

A stratified soil deposit consists of three uniform layers of thickness 4, 6 and 8 m respectively. The permeabilities of these layers are $10 \times 10^{-4}$ cm/s, $60 \times 10^{-4}$ cm/s and $7 \times 10^{-4}$ cm/s respectively; find the effective average permeabilities of the deposit in horizontal and vertical directions.
3 (a) Discuss Newmark’s influence chart method for determining vertical stress under uniformly distributed loaded area of any shape.

(b) A concentrated load of 150 kN acts at the ground surface. Construct isobars for 10% and 20% of load.

OR

3' (a) Discuss in detail about approximate methods for determining vertical stress below loaded areas.

(b) A rectangular area 5m × 4m is uniformly loaded with a load intensity of 150 kN/m². Calculate the vertical stress at a point 3 m below one of its corners and centre by Newmark’s influence chart method.

4 (a) Derive the Terzaghi’s one dimensional consolidation equation by giving the assumption and boundary conditions suggested by Terzaghi.

(b) The voids ratio of clay sample A decreased from 0.670 to 0.605 under a change in pressure from 120 to 160 kN/m². The voids ratio of another sample B decreased from 0.510 to 0.455 under the same increment of pressure. The thickness of sample A was 2.5 times that of B. The time taken for 50% consolidation was 3 times more for sample A than for B. What is the ratio of coefficient of permeability of sample A to that of B.

5 (a) Describe in detail about laboratory vane shear test in detail. Discuss its limitations also.

(b) Vane shear test conducted in a soft clay deposit, failure occurred at a torque of 60 Nm. After wards the vane was allowed to rotate rapidly and the test was repeated in the remoulded soil. The torque at failure in the remoulded soil was 25 Nm. Calculate the sensitivity of soil. In both cases the vane was pushed completely inside the soil. The height and diameter of vane are 110 mm and 80 mm respectively.