2017-18
ALIGARH MUSLIM UNIVERSITY, ALIGARH
B. ARCH-IV YEAR VIII-SEMESTER EXAMINATION
AR-402 | MODERN AND CONTEMPORARY ARCHITECTURE

Max. Marks: 60 Credits: 03 Time: 02 hrs

Note: Attempt all FIVE questions
All questions carry equal marks
Answers supported by neat sketches will be credited more

1. What is Modern Architecture and how can it be seen differently from the architecture that we see in the present day? Use examples of prominent architects, their work, and illustrations.

OR

1'. Describe the impact of the industrial revolution on change in construction material and technology.

2. What were the reasons behind the decline of modern architecture styles? Explain with the help of a timeline and examples.

3. Explain postmodern architecture and its beginnings specially with reference to the writings of Robert Venturi.

OR

3'. Highlight the differences in principle, between Modern and Postmodern Architectural styles. Explain with the help of examples.

4. "Less is more" or "less is a bore?" Defend and argue for any one of the two you abide by.

5. Differentiate between Deconstruction and Deconstructivism, and explain Deconstructivism in detail, using the examples of architects and architecture.

OR

5'. Explain De Stijl. Who were its most famous proponents? Describe their famous works.
Q.1.a) Write in brief about the following terms (any four): [4X4=16]
   i) Vernacular region
   ii) Ribbon development
   iii) Ground Coverage
   iv) Conurbation
   v) Confirming land use
   vi) Commercial street

Q.2. What are the governing principles of mixed land use? Explain in detail the various categories of activities permitted under mixed land use as per Master Plan for Delhi-2021? [15]

OR

Q.2'. What are the various types of land uses permitted in a town? Explain in detail. [15]

Q.3.a) A residential sector measures 800m x 600m. The population of the sector is 8000. The net residential area is 50%. Find the gross and net residential density of the sector. [Take 1 acre = 4000 sqm] [07]

If the distribution of population is as under:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Income Group</th>
<th>% of population</th>
<th>Total no. of plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>HIG</td>
<td>10</td>
<td>?</td>
</tr>
<tr>
<td>2.</td>
<td>MIG</td>
<td>25</td>
<td>?</td>
</tr>
<tr>
<td>3.</td>
<td>LIG</td>
<td>30</td>
<td>?</td>
</tr>
</tbody>
</table>

contd... 2
4. EWS 35 ?

Find the total number of plots needed by each income group.

*(Take average size of the family = 05 persons)*

Q.3.b) The population of a town is 50000. The shelter less population is 10000. The decadal growth of population is expected to be 10% in the next 20 years. The housing survey has given the following picture regarding the quality of housing stock.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Future life</th>
<th>Gradation of building</th>
<th>% of dwelling units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>51yrs and above</td>
<td>Very good</td>
<td>35</td>
</tr>
<tr>
<td>2.</td>
<td>36-50 yrs</td>
<td>good</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>21-35 yrs</td>
<td>moderate</td>
<td>20</td>
</tr>
<tr>
<td>4.</td>
<td>6-20yrs</td>
<td>bad</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>5yrs and below</td>
<td>Unit for habitation</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hence to be replaced</td>
<td></td>
</tr>
</tbody>
</table>

If the dwelling units having remaining life span of less than 5 years are to be put in dilapidated category and need to be replaced, find out the total housing backlog to be projected after 20 years in a long term plan.

*(Take average no. of persons/dwelling unit = 05 persons)*

Q.4. How can regional planning be used as a tool for balanced growth and development of a developing country like India? Explain formal region in detail giving relevant examples.
Maximum Marks: 60
Credits: 04
Duration: Two Hours

Assume suitable data if missing.

Q.No. Question M.M.

SECTION A

1. Explain different phases of Project Management. Also discuss any five important issues of project management which need to be focussed by an architect. [15]

2 (a). What is the role of an architect in controlling the quality of construction projects? [05]

2 (b). What are the different types of construction equipment? Specify works performed by equipment in each category. Name at least four equipment in each category. [10]

OR

2'(a). What is Motivation? Discuss ways of building up motivation and increasing efficiency of staff in an organization. [05]

2'(b). Explain the following terms: [10]
   i. Crash cost of project
   ii. Dummy activity
   iii. Indirect cost in a project
   iv. Latest allowable occurrence time
   v. Float in network

3. A project has been defined to contain the following list of activities along with their required times for completion.

   (a). Prepare a CPM network diagram for the project. [05]
   (b). Calculate the earliest expected completion time for the project. [02]
   (c). What is LST for activity I? [02]
(d). What would happen if activity F were revised to take 6 weeks instead of 2 weeks? [02]

(e). What is float for critical path? [02]

(f). What is EST for activity D? [02]

<table>
<thead>
<tr>
<th>Activity Name</th>
<th>Time (weeks)</th>
<th>Immediate Predecessors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>4,5</td>
</tr>
<tr>
<td>H</td>
<td>5</td>
<td>6,7</td>
</tr>
<tr>
<td>I</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td>8,9</td>
</tr>
</tbody>
</table>

4. Various activities for a network are shown below in the table. The project overhead cost are @ 400 per day. In addition to the overheads, there is an outage loss of Rs. 200 per day. Find the cost duration relationship and specify the optimum project duration and minimum cost. Draw the three curves to represent optimum cost and time.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Normal Duration (days)</th>
<th>Normal Cost (Rs./=)</th>
<th>Crash Duration (days)</th>
<th>Crash Cost (Rs./=)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>9</td>
<td>8000</td>
<td>5</td>
<td>9500</td>
</tr>
<tr>
<td>2-3</td>
<td>5</td>
<td>5000</td>
<td>3</td>
<td>5500</td>
</tr>
</tbody>
</table>
Design problem

Aligarh is a fast growing city known world-wide for its lock industry besides location of famous A.M.U.Aligarh. It also has important and prosperous lock manufacturers association. The association desires to establish a locks museum at Aligarh for local, regional, national and international visitors as apart of lock manufactures market having offices of large numbers of lock manufactures and also some recreational facilities to attract visitors. It has appointed you as an architect for the museum project considering your past works/expertise in museum designs in U.P. as per local laws/byelaws and socio-climatic conditions. It has provided an exclusive space for the museum of rectangular shape measuring 80m x 120m, located on east side of the 30 m main road running north-south such that shorter side faces the road.

For the above project provide the following

1. List of requirement with area chart. 08
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. 06