MANIPAL UNIVERSITY

FOURTH SEMESTER B.A. (ID)/B.DES (ID) DEGREE EXAMINATION – MAY 2016

SUBJECT: BID 210 – PRINCIPLES OF ARCHITECTURAL RESEARCH
(2014 SCHEME)

Wednesday, May 25, 2016

Time: 14:00 – 17:00 Hrs.   Max. Marks: 50

✍ **Answer any FIVE questions from Question No: 01 - 06**

1A. Write any five points to be considered while doing a literature review from journals.

1B. Explain any five methods to remove artefact and bias.

(5+5 = 10 marks)

2A. What are the design tactics and traps?

2B. Explain the Piaget's space schemata theory and it's use in design process.

(5+5 = 10 marks)

3. Explain the key aspects of roman style with any one example.

(10 marks)

4. Do the geometric analysis of the plan and section w.r.t.

4A. Basic geometry

4B. Division and proportioning system

4C. Transformation and development
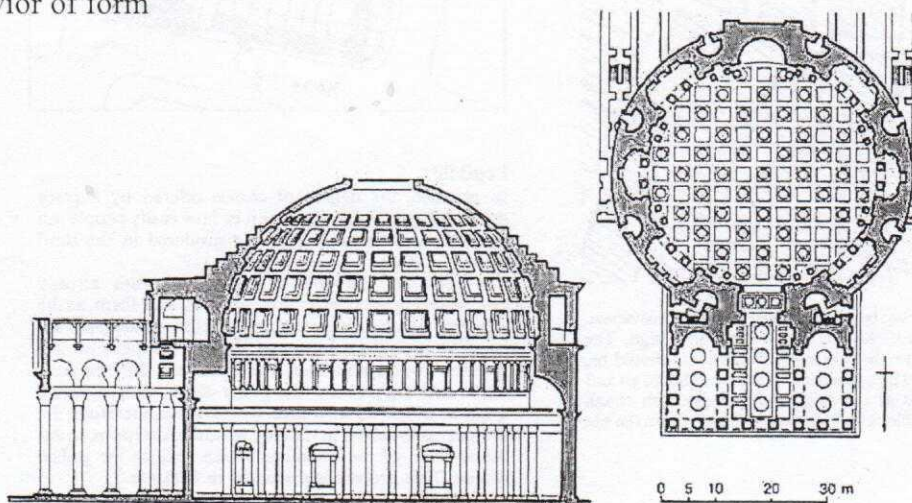
4D. Behavior of form

Fig 1. Plan of Pantheon, Rome.

(1+3+3+3 = 10 marks)

5. How is character defined through culture and region explain with sketches of examples.

(10 marks)

6A. What are the ends / purpose of good criticism?

6B. Read the following passage and identify the type of criticism it is, giving detailed explanation for the same.

THEY THINK
THEY'RE GREAT.
BUT AFTER 500 YEARS
THEY CAN STILL
ONLY GO WHERE
I LET THEM!

How does design affect choice?

The design of a place affects the choices people can make, at many levels:

- it affects *where people can go*, and where they cannot: the quality we shall call *permeability*.
- it affects the *range of uses* available to people: the quality we shall call *variety*.
- it affects how easily people can *understand* what opportunities it offers: the quality we shall call *legibility*.
- it affects the degree to which people can use a given place for *different* purposes: the quality we shall call *robustness*.
- it affects whether the detailed *appearance* of the place makes people *aware* of the choices available: the quality we shall call *visual appropriateness*.
- it affects people's *choice of sensory experiences*: the quality we shall call *richness*.
- it affects the extent to which people can put their *own stamp* on a place: we shall call this *personalisation*.

This list is not exhaustive, but it covers the *key* issues in making places responsive. Our purpose is to show how these qualities can be achieved in the design of buildings and outdoor places.

Permeability

Only places which are accessible to people can offer them choice. The quality of *permeability* - the number of alternative ways through an environment - is therefore central to making responsive places.

Permeability has fundamental layout implications. In the diagram below, the upper layout offers a greater choice of routes than the lower one: it is therefore more permeable.
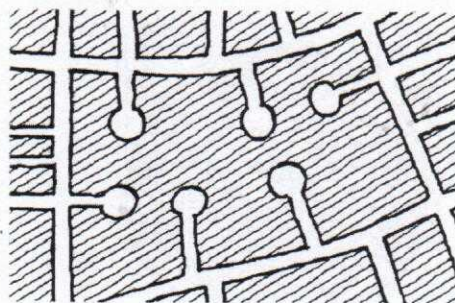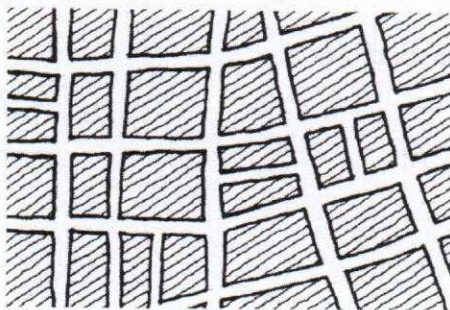
Because it is so basic to achieving responsiveness, permeability must be considered early in design. The designer must decide how many routes there should be, how they should link together, where they should go and - the other side of the coin - how to establish rough boundaries for blocks of developable land within the site as a whole.

Robustness

Places which can be used for many different purposes offer their users more choice than places whose design limits them to a single fixed use. Environments which offer this choice have a quality we call *robustness*.

By this fourth stage in design, we have begun to focus on individual buildings and outdoor places. Our objective is to make their spatial and constructional organisation suitable for the widest possible range of likely activities and future uses, both in the short and the long term.

Variety

Permeability is of little use by itself. Easily accessible places are irrelevant unless they offer a choice of experiences. *Variety* - particularly variety of *uses* - is therefore a second key quality.

The object of this second stage in design, is to *maximise* the variety of uses in the project. First we assess the levels of demand for different types of uses on the site, and establish how wide a mix of uses it is economically and functionally feasible to have. Then the tentative building volumes already established as *spatially* desirable are tested to see whether they can feasibly house the desired mix of uses, and the design is further developed as necessary.
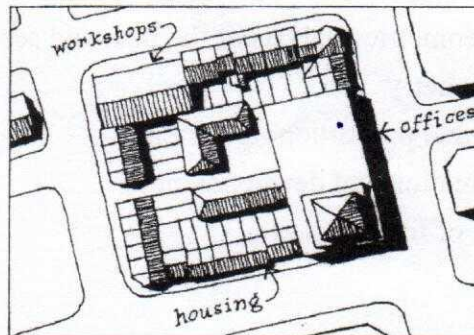
Legibility

In practice, the degree of choice offered by a place depends partly on how *legible* it is: how easily people can understand its layout. This is considered in the third stage of design.

The tentative network of links and uses already established now takes on three-dimensional form, as the elements which give perceptual structure to the place are brought into the process of design. As part of this process, routes and their junctions are differentiated from one another by designing them with differing qualities of spatial enclosure. By this stage, therefore, the designer is involved in making tentative decisions about the *volumes* of the buildings which enclose the public spaces. This process is discussed in Chapter 3.

Visual appropriateness

The decisions we have already made determine the *general* appearance of the scheme. Next we must focus on what it should look like in more detail.

This is important because it strongly affects the *interpretations* people put on places: whether designers want them to or not, people *do* interpret places as having *meanings*. A place has *visual appropriateness* when these meanings help to make people aware of the choices offered by the qualities we have already discussed.

Designing for visual appropriateness forms
First a vocabulary of visual cues must be found, to communicate the levels of choice already designed into the place. The appearance of the project is then developed in detail, using these cues as the basis for design.

(10 marks)