



SEM-III
T.O.S.

ANJUMAN-I-ISLAM'S

KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

School of Architecture

Approved & Recognised by: All India Council for Technical Education and Council of Architecture, New Delhi

Directorate of Technical Education, Govt. of Maharashtra Affiliated to: University of Mumbai

SECOND YEAR B.ARCH- SEM III EXAMINATION NOVEMBER 2016

Subject: Theory and Design of Structures III.

Max Marks: 50

Date: 03/11/2016

Duration: 2 Hrs

Note : 1) **Question no. 1 is compulsory.** Attempt any 3 from remaining Q 2 to Q5.

- 2) Figures to the right indicate full marks.
- 3) Assume suitable data wherever necessary, and state clearly the same.
- 4) Use of non-programmable scientific calculators is allowed.

Q 1] Attempt any 4.

[20]

- a) Write the assumptions in the Theory of Simple Bending.
- b) Explain slope and deflection with respect to a simply supported beam, subjected to ecc pt ld.l.
- c) Explain with sketches the concept of Limit of Eccentricity.
- d) Explain maximum slope and deflection of a Cantilever Beam with udl throughout the span.
- e) Write the Flexural Formula and explain the terms.

Q 2] A Beam 230mm wide by 400mm deep is Simply Supported over a span of 4m. It carries a pt ld of 50kN at a dist of 1.5m from left support. Find Maximum stresses induced in its cross-section. Draw stress diagram.

[10]

Q 3] A Cantilever Beam 2m span carries a udl of 5kN/m over its entire span. Calculate the Slope and Deflection at the free end. Given $I_{xx} = 4 \times 10^8 \text{ mm}^4$ and $E = 2.1 \times 10^5 \text{ N/mm}^2$.

[10]

Q 4] A Column 800mm by 1000mm is being subjected to a load of 1000kN, at an eccentricity of 250mm along its longer axis and 200 along its shorter axis. Find the maximum stresses induced at its corners.

[10]

Q 5] Draw reinforcement details of an RCC one way slab, and an RCC column, in plan and section. Explain need of reinforcement in RCC.

[10]

SEM - III
ABCM



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SECOND YEAR B.ARCH EXAMINATION 2016

subject : Building construction (sem III)
Date: 08/11/2016

Marks :50
DURATION : 3Hrs.

Q.1) DEFINE AND SKETCH THE FOLLOWING (ATTEMPT ANY 4) (20 marks)

- Castellated beam and its use.
- Joinery between glass and steel member
- Characteristic of steel structure.
- Advantages and Disadvantages of steel structure.
- Collapsible and rolling shutters.

Q.2) Draw a typical section through steel column from footing to the terrace level, showing reduction of column in elevation .
consider structure to be G+2 storeys. (15 marks)

Q.3) Explain moisture protection in steel . (10 marks)

OR
Steel staircase details .

Q.4) Junction between beam section and column section in steel structure . (05 marks)



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SEM-III
HUMANITIES

FIRST YEAR B.ARCH- SEM III EXAMINATION NOV 2016

Subject: Humanities

Max Marks: 50

Date: 5/11/2016

Duration: 2 Hrs

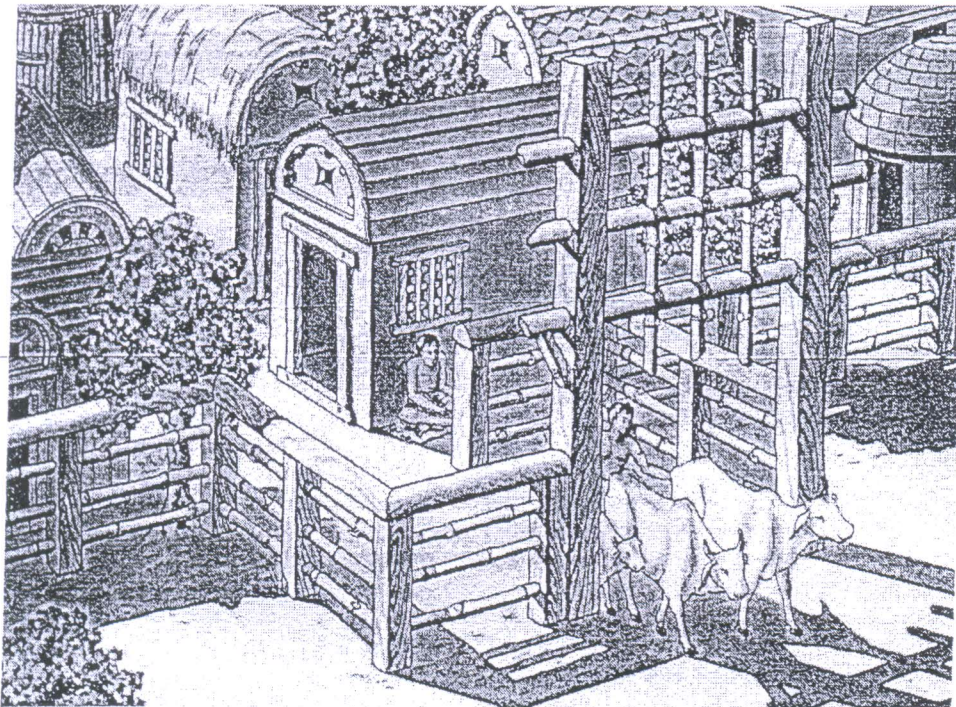
ANSWER ALL QUESTIONS THROUGH INFO-GRAPHICS AND WRITE WHERE REQUIRED.
ANSWER ONE IS COMPULSORY.
ANSWER ACCORDING TO THE MARKS ALLOTTED.

1.

Pune heritage walk is an experience in itself. Looking at conservation and urban landscaping, Trace the route which you took, propose an intervention along the walk inspired by the architecture of the place. Talk about concepts, ideas and style of architecture.

OR

Look at the image below. Talk about Vedic villages, style of Vedic town planning and architecture that was inspired from Vedic architecture.



15 marks

2. Write short notes on

- Jaali pattern in Islamic architecture and
- Water features in Mughal architecture.
- Qutub minar
- Jahaz mahal
- Got gumbaz

3. Write a short note on influence of Jain architecture on structure built during Ahmed shah's reign.

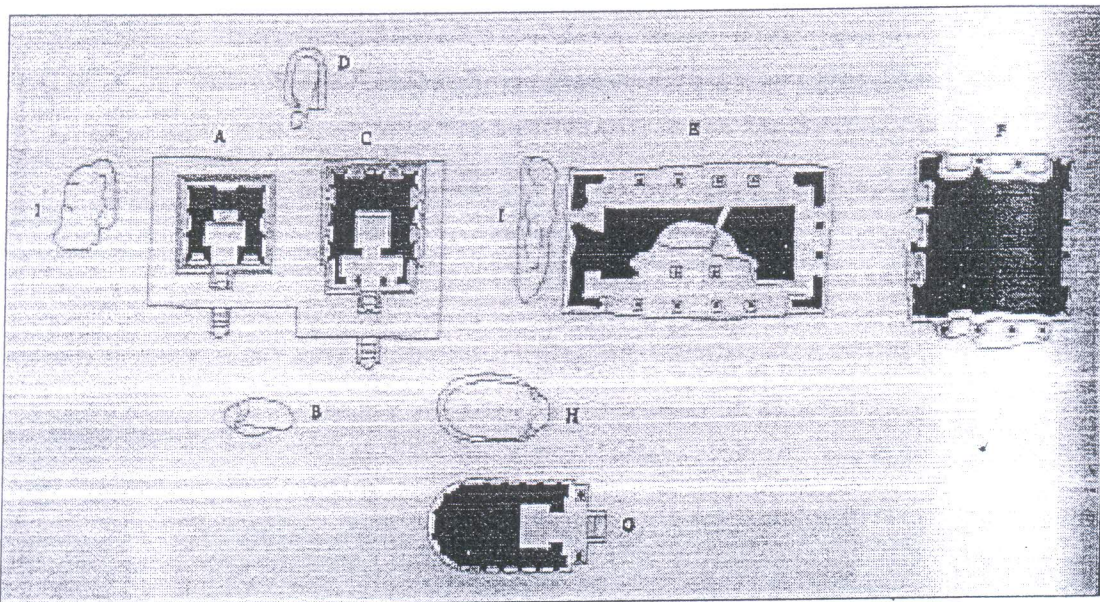
OR

Write a short note on

- Durga temple and
- Ladh khan temple at Aihole.

5 marks

4. Recognize the plan given below and label the structures. Write a brief note about each structure and its significance.



OR

Write a short note on

- Durga temple and Ladh khan temple at Aihole.
- Draw and explain the salient features that distinguish the Dravidian style temples from Nagara style temples.

10 marks

5. Draw the plan and elevation of Sanchi Stupa. Write a brief note on Buddhism.

OR

What are the four underlying principles of hindu temples? What is a vastu-purusha mandala? How does vastu-purusha mandala affect the temple geometry and planning?

10 marks



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SEM-III
SERVICES

SEM-III S.Y.B.ARCH EXAMINATION NOV 2016 (REVISED COURSE)

Subject: Architectural Building Services - I
Max. Marks: 50

Date: 4/11/2016

Duration: 2 Hrs

Notes:

- Attempt any five Questions out of eight.
- All questions carry equal marks.
- Numbers on the right hand side indicate marks.
- No extra marks for optional questions.

Q1. Define the following: (Any Four)

(10)

1. Water mains
2. Coagulation
3. Hard Water
4. Bib taps
5. Water Meter
6. Sources of water

Q2. What is water supply? Give detailed information on Methods of Supply of Water with sketches.

(10)

Q3. What are the natural resources of water? Explain in detail the water cycle with sketches.

(10)

Q4. What is water treatment? Why is it done? Describe in detail any three processes of treatment of water accompanied by sketches.

(10)

Q5. What is rain water harvesting? Explain in detail the process of rain water harvesting with it's types and support with the help of sketches?

(10)

Q6. What is quality of water? Describe hardness and softness of water. On what basis water is considered potable? Write detail information about water consumption in purview of Local Authority. Give sketches wherever necessary.

(10)

Q7. What is water meter? Describe with supporting sketches. What are the two different types of Water supply systems used? Write in detail with sketches.

(10)

Q8. What is back flow protection? Explain with sketches. Draw a typical section of a water storage tank. What is boosted water supply system? Explain with sketches.

(10)