



SEM-1
TOS

ANJUMAN-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

FIRST YEAR B.ARCH- SEM I EXAMINATION January 2017

Subject: Theory and Design of Structures I.

Max Marks: 50

Date: 03/01/2017

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.

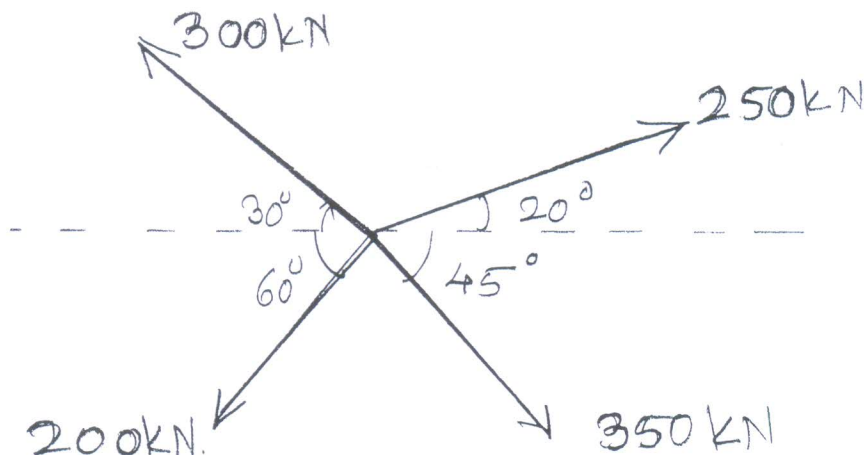
Q 1] Attempt any 4.

[20]

- a) What are the different types of loads acting on a structure.
- b) Define Force, what are its characteristics and effects.
- c) State and explain Lami's theorem.
- d) Explain Resultant and Equilibrant of forces.
- e) Differentiate between Load Bearing structure and Framed structure.

Q 2] a) Explain what is a free body diagram. Explain method of resolution for finding Resultant of forces. [4]

b) Find the Resultant in Magnitude and Direction of the Force system shown in Fig 1. [6]



Q. 2. b]
Fig [1.]

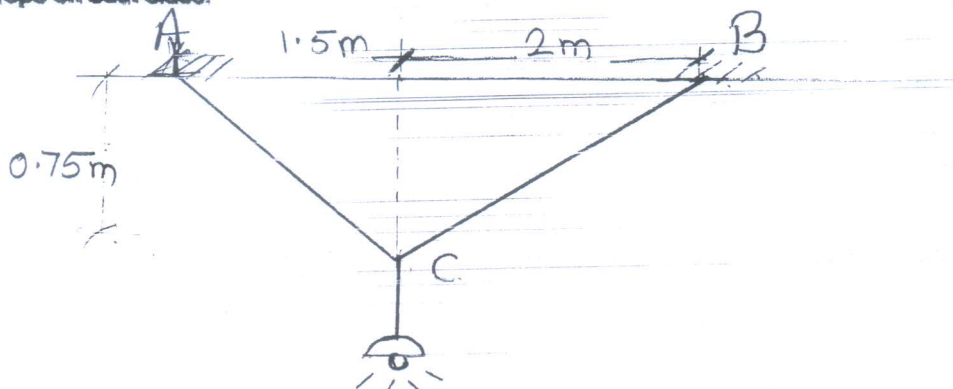
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Q 3] a) Explain the Triangle law of forces and Parallelogram law of Forces.

[4]

b) A lamp weighing 40 N is supported by a rope as shown in Fig 2 below. Find the Tension developed in the rope on both sides.

[6]



Q. 3. b]. Fig. 2.

Q 4] a) Explain the Conditions of Equilibrium.

[3]

b) Define Coplanar, Non Coplanar and Collinear Forces.

[3]

c) Explain with a vertical section load transfer in a two storey building.

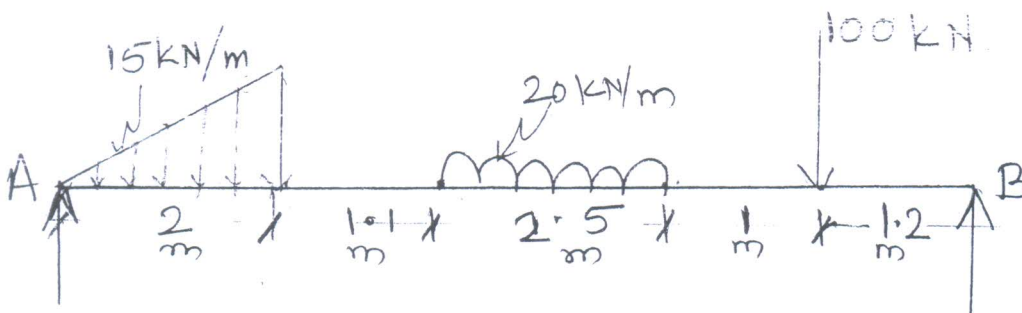
[4].

Q.5] a) Explain what are Simple, Continuous, Hinge and Fixed supports.

[4]

b) Find the Support Reactions of the Beam shown in Fig. 3.

[6]



Q. 5. b]. Fig. 3.



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SEM - 1
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Directorate of Technical Education, Govt. of Maharashtra Affiliated to: University of Mumbai

FIRST YEAR B.ARCH- SEM I EXAMINATION JAN 2017

Subject: Architectural Building Construction

Max Marks: 70

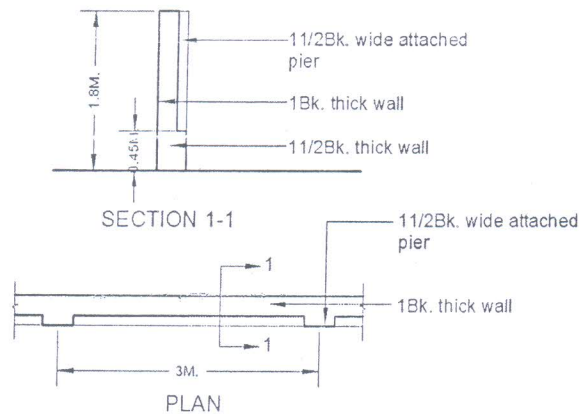
Date: 05/01/2017

Duration: 3 Hrs

Answer all questions through info-graphics and write answers in pointers.

Q.1 is compulsory, Attempt any 6 out of remaining.

- Q1. A compound wall (1Bk. thk.) of 15m. length and 1.8m. height needs to be constructed for an architect's office. Attached brick piers needs to be provided at 3m centre to centre distance. The details are given below.



Draw plans of two distinct courses and elevation at appropriate scale.

10M

Also draw plans of attached brick pier for the same given wall.

- Q.2. Explain the following with the help of sketches(ANY 5)

10M

- Stretcher face
- Perpend
- Lap
- Course
- Header face
- Arris

G. Frog

Q3. Explain the following building materials with reference to their use in current building construction industry. (ANY-2) 10M

- A. Any two types of stones
- B. Cement
- C. Concrete

Q.4. Draw 1/2Bk. thick wall in stretcher bond. 10M

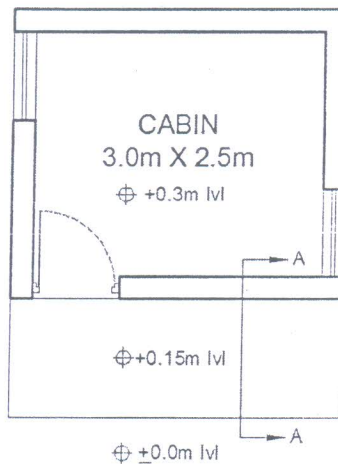
OR

Draw 1Bk. thick wall in header bond.

Q.5. Explain the following terminologies with the help of sketches (ANY5) 10M

- A. Bat
- B. King closure
- C. Quarter bat
- D. Bevelled closure
- E. Mitred closure
- F. Bevelled bat small

Q.6. A watchmen's cabin needs to be constructed in 1Bk. thick load bearing construction.



Draw plans of two consecutive courses in any type of bond.

Also draw section AA till plinth level in 1:10 scale. 10M

Q.7. Explain differential aspects in load bearing and frame construction.

Draw appropriate sketches. 10M

Q.8. Explain in brief with sketches the following building elements (ANY 2) 10M

- A. Jamb
- B. Parapet wall
- C. Floor beam
- D. Lintel



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SEM - I
HUMANITIES

FIRST YEAR B.ARCH- SEM I EXAMINATION Jan 2017

Subject: Humanities

Max Marks: 50

Date: 04/01/2017

Duration: 2 Hrs

Question one is compulsory. ANSWER according to the marks allotted.
The marking shall be based on the creativity of the individual in their writing and representation.

1.

Draw, stick or attach the piece of artwork that is an expression of who you are. The piece of artwork could be a tile of 10 x 10 cm or of any larger scale as per your convenience. Any medium of colouring, representation and expression is accepted. Write a brief note along with the tile. What experience did you draw out of the social experiment? How is art perceived in public places? Has your perception towards art in general changed after the coursework?

25marks

2. Answer any ONE of the three.

10marks

A)

"Srinagar had been raised upon a massive platform of almost a hundred hectares in size. The platform built of earth, towered almost five metres high. On top of the platform were the city walls, which were another twenty metres in height and four metres thick. The simplicity and brilliance of building an entire city on a platform astounded the Gunas....."

..... All the houses looked like simple multiple-storeyed block structures from the outside. The only way to differentiate a rich man's house was that his block would be bigger."

How has Amish projected the meaning of religion and sect and culture in the book 'Immortals of Meluha'?

OR

B)

Identify the images given below and write a brief description about the same.

Explain the artwork, the thought behind and discuss about street art, vandalism and expression.



OR

C)

Write a review of the movie 'KILLA'. What scene inspired you the most?

3. Answer any ONE

15 marks

A)

History is made up of stops and starts, of presences and absences.....where history ends memory begins.

Discuss about memory, about relativity of time and the significance of memory. How art is a crucial sub-conscious element of this memory. The ability of art as a physical memory, ephemeral memory and meta physical memory. Use burning man or the Berlin wall as an example to reinforce your answers. Other examples and ideas will be appreciated.

OR

B)

The Taliban thought it had destroyed one of the world's wonders, the monumental Buddha statues of the Bamiyan Valley. But the Buddhas shine again in the towering cutouts in the mountainside where they stood for centuries. They are back, thanks to 3-D light projection. And they look great. "

What are your views on this ?