



SEM-1
T.O.S.
2015-16
April

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

FIRST YEAR B.ARCH- SEM I EXAMINATION APRIL 2016

Subject: Theory and Design of Structures I.

Max Marks: 50

Date: 05/04/2016

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) Define Force and state its characteristics.
- b) Write a short note on Moment of a Force.
- c) Explain Resultant and Equilibrant.
- d) State the S.I. units of- Force, Area, Weight and Time.
- e) Explain the Parallelogram law of Forces.

Q 2] a) Explain what is a free body diagram.

[2]

b) Find the Resultant in Magnitude and Direction of the Force system shown in Fig 1. [8]

Q 3] a) Explain what are Simple, Hinge and Roller supports.

[3]

b) Find the Support Reactions of the Beam shown in Fig. 2

[7]

Q 4] a) Explain Lami's Theorem with a sketch.

[4]

b) A sphere weighing 3kN is suspended by a rope as shown in Fig. 3. Calculate the Support Reaction and Tension in the Rope.

[6]

Q 5] a) Explain the Conditions of Equilibrium.

[3]

b) Define Coplanar, Non Coplanar and Collinear Forces.

[3]

c) Find the Resultant in Magnitude and Position of the system of Forces shown in Fig 4 [4].

PTO

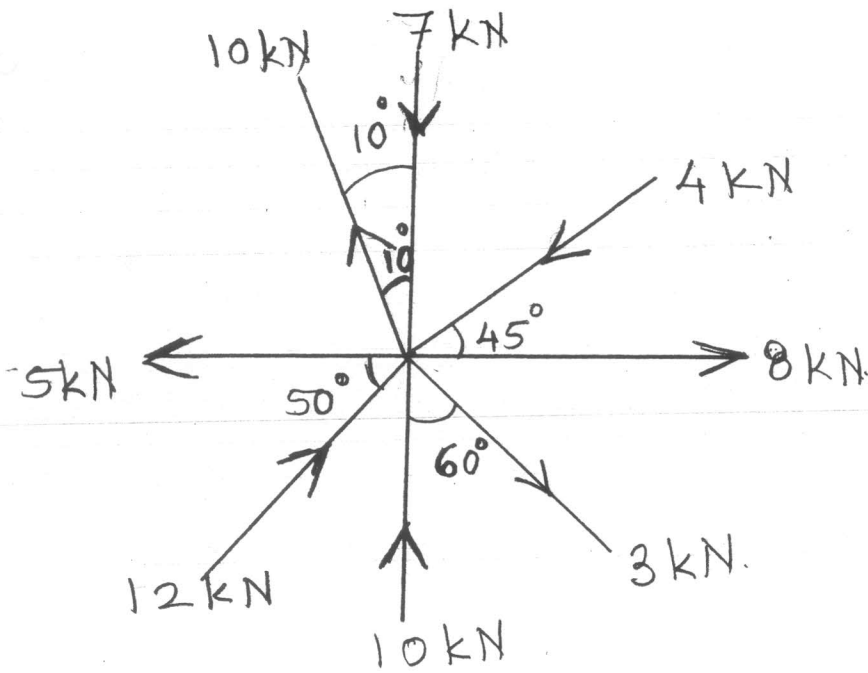


Fig. 1. Q. 2.b.

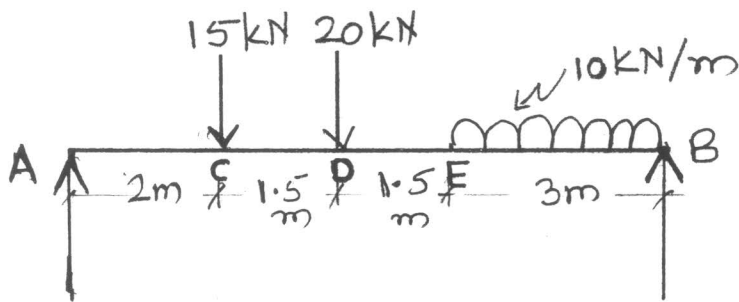


Fig. 2. Q. 3.b.

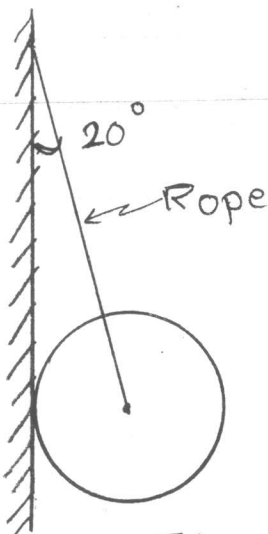
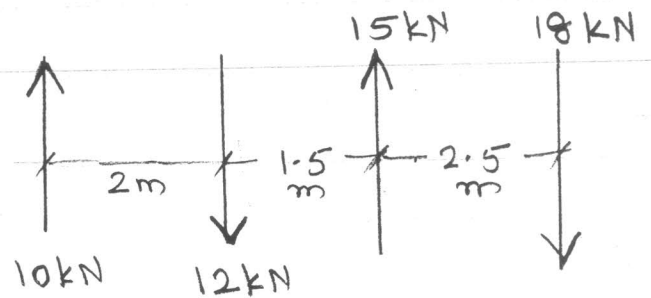


Fig. 3. Q. 4.b.





Symbol of Secularism
& National Integration

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SEM-1
HUMANITIES
2015-16
April

APRIL

FIRST YEAR B.ARCH ATKT- SEM I EXAMINATION 2016

Subject: Humanities

Max Marks: 50

Date: 07/04/2016

Duration: 2 Hrs

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

**I. Read the given extract and answer the question accordingly: (ANSWER ANY ONE)
15M**

- i. Mayan civilization was very superstitious. How did this affect the civilization? What do you think was the reason for their collapse? Infer from the movie "Apocalypto", its story line to answer the question.

*So you fear me?
So you should
All you who are vile..
The sacred time is here
Beware the blackness of the day
Beware the man who brings the jaguar
Behold him reborn from mud and earth
For he will cancel the sky
And scratch out the earth
Scratch you out
And end your world
He is with us now
The day will be like night
And the man that runs along with the jaguar will lead you to your end..*

- ii. What forced the exodus from Egypt? Why did Ramesses feel the need to build super structures and hence the enslavement of the Hebrews. How has the movie portrayed the forces of nature that leads to the collapse of Egyptian civilization?

II. Read the extract and ANSWER ANY ONE. 15M

- i) What civilization matches the description from the extract below? How has Amish projected the meaning of religion and sect and culture in the book?

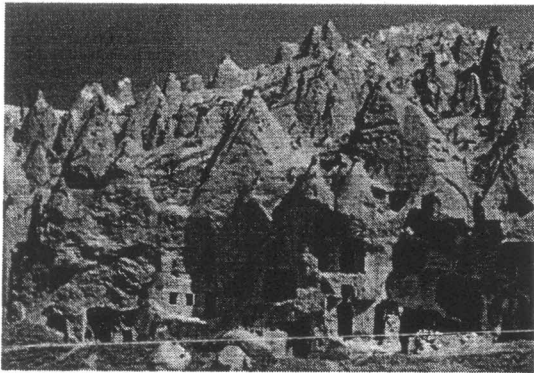
“Srinagar had been raised upon a massive platform of almost a hundred hectares in size. The platform built of earth, towered almost five metres high. On top of the platform were the city walls, which were another twenty metres in height and four metres thick. The simplicity and brilliance of building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

ii) Draw a settlement that you have come upon during your daily commute. Map the activities happening around the house. Label out the materials and write a review of the spatial character of the house.

III . ATTEMPT ANY 2

20M

i. Identify the images given below and write a paragraph on settlements, keeping the images in context.



(a)



(b)

ii. Write a short note on-

- (a) woman of willendorf and
- (b) stone henge

iii) What do you understand by river valley civilization? Use info graphics to explain.



SEM-I
A.B.C.M.
2015-16
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FIRST YEAR B.ARCH- SEM I ATKT EXAMINATION APRIL 2016

Subject: Architectural Building Construction and Materials

Max Marks: 70

Date: 09/04/2016

Duration: 3 Hrs

Notes:

- All questions are compulsory.
- Numbers on the right hand side indicate marks.
- Draw neat and proportionate sketches wherever required.

Q1. Draw a sketch of a standard brick showing its dimensions

{02}

and name the following: **(Any 4)**

{08}

- Stretcher face
- Arri
- Bed
- Frog
- Header face

Q2. a) Draft a plan and elevation of 1 brick thick Header Bond {06}

OR

b) Draw an Isometric view of a typical 1 brick thick wall in a English bond. {06}

c) Draw an Isometric view of a typical 1 Brick thick wall in a Stretcher bond. {04}

Q3. a) What are load bearing and frame structures? {05}

Mention their advantages and disadvantages.

Q4. Draw Sketches of the following (Any 5) {10}

- a. Mitred closers
- b. Single bullnose
- c. Half bat
- d. King Closer
- e. Queen closer
- f. Three Quarter Bat
- g. Bevelled closer

Q5. Answer any one of the following (a or b) {08}

a. What is a kiln? Explain its types with sketches.

OR

b. 1. Comparison of brickwork and stonework.

2. Classification of bricks.

Q6. Answer any one of the following (a or b)

{04}

- a. Comparison between clamp burning and kiln burning.

OR

- b. Draw a sketch of Hoffman's kiln.

Q7. Explain English bond on the basis of the following:

{15}

- a) Features
b) Appearance (Explain with a drafted Elevation of 1 Brick thick wall)
c) Bonding (Explain with a drafted plan of 1 Brick thick wall)

OR

Q7. Explain Flemish bond on the basis of the following:

{15}

- d) Features
e) Appearance (Explain with a drafted Elevation of 1 Brick thick wall)
f) Bonding (Explain with a drafted plan of 1 Brick thick wall)

Q8. Answer any one of the following (a or b)

{05}

- a. Classification of brick earth.

OR

- b. Qualities of good brick.

Q9. Classification of glass.

{03}