ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.
☐ SCHOOL OF ENGINEERING & TECHNOLOGY
☐ SCHOOL OF PHARMACY
☑ SCHOOL OF ARCHITECTURE

B.ARCH. FIRST YEAR- SEMESTER I -DECEMBER 2017

SUBJECT: **Architectural Building Construction & Materials.** **DURATION: 3 hours**

TOTAL MARKS: 70 Date: 06/12/2017

Notes:

- Numbers on the right hand side indicate marks for each question.
- Support all answers with neat sketches.

Q.1. Draw and Label Elements of the structure (Roof, Flooring, Foundation) of **ANY 1** of the below ***(10 mks)***

1. MUD BRICKS STRUCTURE.
2. STONE STRUCTURE.
3. R.C.C. STRUCTURE.
4. STEEL STRUCTURE.
5. TIMBER STRUCTURE.

And explain

What is a **Superstructure** and **Substructure**?

OR

Q.1. I) Sketch **Joineries** from Any 1 of the ABOVE TOPICS ***(10 mks)***

Foundation to Column

Column to beam

AND

ii) Sketch **Any** 3 Timber Joineries.

Q.2. What are **Load bearing** structure and **Framed** structures? ***(12 mks)***

State the **Advantages and Disadvantages** of the same.

Q.3. Draw a sketch of a **Standard Brick** with Dimensions **and label** the following ***(12 mks)***

3.1. Stretcher face.
3.2. Header face.
3.3. Frog.
3.4. Bed.
3.5. Arris.

And **Explain Properties of Good bricks** and **Classes of the same.**

Q.4. Sketch The Following *(12 mks)*

4.1. King Closer.
4.2. Queen Closer.
4.3. Half Bat.
4.4. Bevelled Closer.
4.5. Three Quarter Bat.
4.6. Mitred Closer.

Q.5. State the Advantages of Brick Construction over Stone Construction *(12 mks)*
And
Advantages of Steel Construction over R.C.C Structure

Q.6. Draft a Plan, Elevation and Isometric of 1 brick thick wall. *(12 mks)*

Header Bond OR Stretcher bond.

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FIRST YEAR B. ARCH- SEMESTER I EXAMINATION DECEMBER 2017

SUBJECT: Theory and Design of Structures I. Duration: 2 hours

TOTAL MARKS: 50 Date: 5/12/2017

Notes:

1) **Question no 1 is compulsory, attempt any 3 questions from the remaining 4 questions.**
2) Figures to the right indicate full marks.
3) Assume suitable additional data, if necessary and state clearly the same.
4) Use of non- programmable scientific calculator is permitted.

Q.1. Attempt any 5. **[20]**

a) Explain with a sketch the different elements of a G+3 building.

b) Differentiate between Load Bearing and Framed Structures.

c) Explain the different types of loads coming on a building.

d) State and Explain Lami's Theorem.

e) Define: Span, Force, Moment, Resultant, Reaction.

Q.2. a) State and explain the Law of parallelogram of Forces, also the triangular law of forces. [6]

b) Find the Magnitude of 2 forces, such that, if they act at right angles, the Resultant is 40N and if they act at 60^0, the Resultant is 60N. [6]

Q.3. a) State and Explain Lami's Theorem. [4]

b) A sphere weighing 15 kN is suspended by a rope as shown in fig.1. Calculate the Support Reactions and Tension in the Rope. [6]

Q.4 a) Explain the different Loading patterns, how much is the total load and where is it supposed to act.[5]

b) What are the characteristics and effects of Force. [5]

Q.5. Find the support Reactions of the Simply supported beam shown below, in Fig 2. [10]

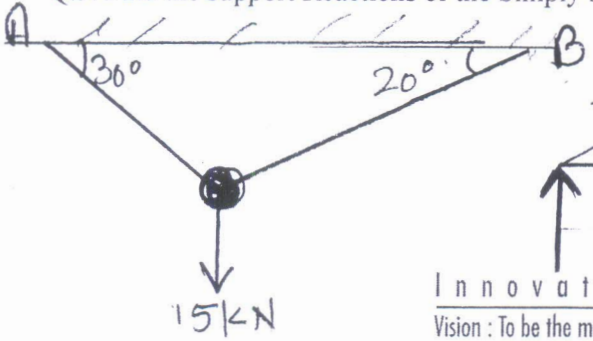

Fig. 1. Q. 3b)

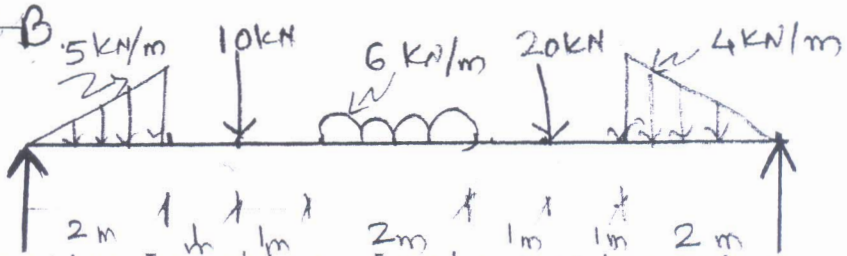

Fig. 2. Q. 5.

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B.ARCH. FIRST YEAR- SEMESTER I (NOV-DEC 2017-18 REGULAR EXAM)

SUBJECT: HUMANITIES Duration: 2 hours

TOTAL MARKS: 50 Date: 07/12/2017

Notes:

- Attempt any five
- Numbers on the right hand side indicate marks for each question.
- Support all answers with neat sketches.

Q1. World Systems Theory by Immanuel Wallerstein explain with sketches. (10 M)

Q2. Write A short note on following terminologies,(Any two) (10 M)

a. Humanities & Architecture
b. Culture & Architecture
c. Community & Architecture
d. Society & Architecture

Q3. Explain the following abbreviations. (10 M)

a. A.D.
b. B.C.
c. Ca.

Q4. Explain the design and relevancy of the following products with respect to the period (any two). (10 M)

a. Army Knife.
b. Coco-Cola Bottle.
c. Compass.

Q5. Explain in brief timeline and chronology of India. (10 M)

Q6. Write a short note on rock cut architecture with an example of Ajanta or Ellora. (10 M)

Q7. Write a short note on Leonardo da Vinci. (10 M)

Q 8. Sketch the part of world map and write about your understanding on it. (10 M)