



Knowledge Resource & Relay Centre (KRRC)

AIKTC/KRRC/SoA/ACKN/QUES/ 2021-22 /

Date: 02/08/2022School: SoA-CBSGSBranch: SoASEM: I

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following ^{ATKT} Semester/Periodic question papers from your exam cell:

| Sr. No. | Subject Name | Subject Code | Format | | No. of Copies |
|---------|---|--------------|--------|----|---------------|
| | | | SC | HC | |
| 1 | Architectural Building Construction & Materials | | | ✓ | |
| 2 | Theory & Design of Structures | | | ✓ | |
| 3 | Humanities | | | ✓ | |
| 4 | Environmental Studies | | | | |
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Note: SC – Softcopy, HC - Hardcopy

(Shaheen Ansari)
Librarian, AIKTC



**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

Subject - Architectural Building Construction and Materials I
Max Marks - 70

Date - 30/03/2022

Duration - 3hrs.

Read questions carefully and write down with neat drawn sketches.

Proper sketches will carry more weightage of marks.

Answer according to the marks allotted.

Attempt any 4 from Q.1 to Q.8. Q.10 & Q.11 is compulsory

Q.1 List down the factors which define the depth of foundation (5marks)

Q.2 List down the sequence of construction processes in foundation work (5marks)

Q.3 What are the precautions to be taken while doing foundation work (5marks)

Q.4. List down the advantages of load bearing systems (5marks)

Q.5. List down the disadvantages of load bearing systems (5marks)

Q.6 Explain cellular wall structure (load-bearing) with a schematic plan or view (5marks)

Q.7 Explain simple cross structure (load-bearing) with a schematic plan or view (5marks)

Q.8 Distinguish between King post truss & Queen post truss (5marks)

Q.10 For a structure 7m by 12m and 6m in height with wall thickness of 350mm in stone masonry
Stone size: 350mm (W) x 230mm (D) x 150mm (H), design the foundation & roofing based on the following information:

Identify the width of the foundation based on the wall thickness & depth

Draw a schematic foundation where the depth of foundation is 1200mm. (15marks)

- Plan 1:20
- Section 1:20

Describe and illustrate the various types of stone masonry (5 marks)

Suggest an appropriate roofing type/system (2 marks)

Suggest appropriate truss with justification (3 marks)

Design a timber roofing system with all necessary members to be represented in (10 marks)

- plan 1:20,
- section 1:20

Describe the role of a wall plate in any roofing system (5 marks)

(40marks)

Q.11 MCQ type questions:

- Which of the following are metamorphic rocks?
 - Laterite
 - Limestone
 - Marble



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- d. Quartzite
- e. Sandstone
- f. Slate stone

(2 marks)

- B. A good building stone should be
- a. Hard, tough, compact grained, uniform in texture and color, crack free
 - b. Hard & tough
 - c. Soft, brittle, compact grained, uniform in texture and color, crack free
 - d. Hard, tough, compact grained, crack free

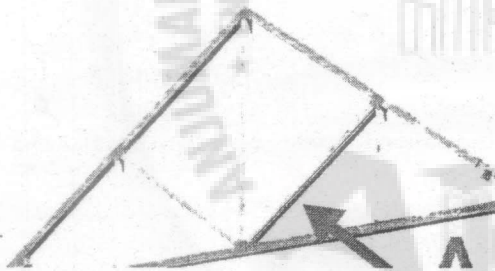
(2 marks)

C. If span increases, what aspect of the spanning member increases

- a. Width
- b. Thickness
- c. Weight
- d. Depth

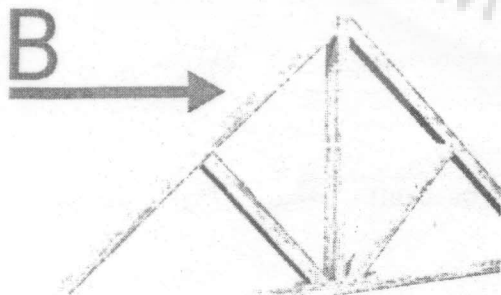
(2 marks)

D. Identify the member A



(2 marks)

E. Identify the member B



(2 marks)

***** END OF PAPER *****



B. ARCH. FIRST YEAR- SEMESTER I - MARCH 2022

Subject: Theory of structures - I

Note:

Question no.1 is compulsory
Attempt any 2 questions from the remaining
Use of scientific calculator is permitted

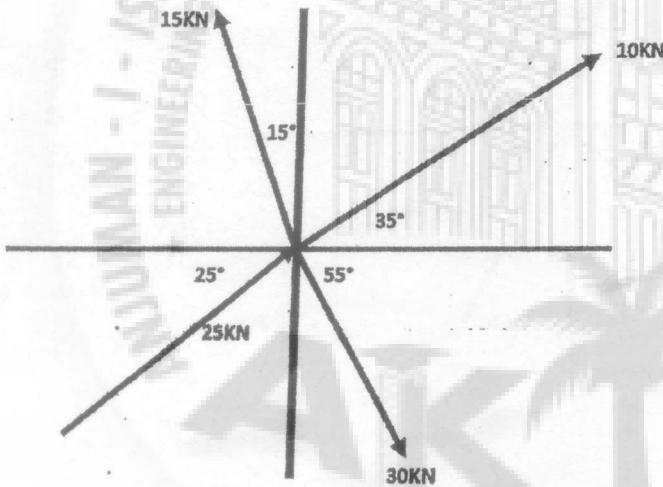
Duration: 2hrs
Total Marks:50
Date - 28-03-2022

1. Write short note on (any two) [10]

- a. What is effect of a force?
- b. Enlist the various load acting on a structure/building
- c. Why it is important to understand theory of structure as an architect?

2.

- a. For the given force system determine the resultant force and its direction [15]



- b. What do you understand by equilibrium conditions? Write down the equations for equilibrium condition. [5]

3.

- a. Explain rigid bodies and deformable bodies [5].
- b. With a neat sketch explain simple support and hinged support [5]
- c. With a neat sketch explain fixed support and roller support [5]
- d. What is couple? explain with example [5]

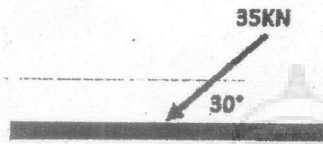


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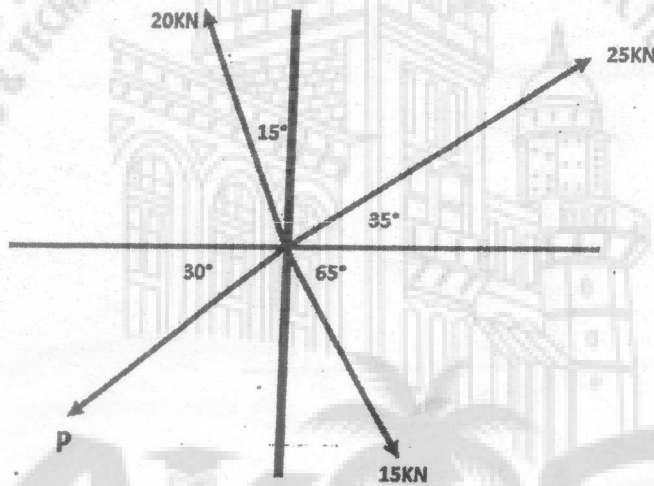
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- a. Explain different structural parts of building along with their functions [5]
- b. For the given figure determine the horizontal and vertical force [5]



- c. Write the units of force and moment, determine the unknown force P from the system of forces given below [10]



**FIRST YEAR B.ARCH - SEM I EXAMINATION MARCH 2022**

Subject - Humanities

Max Marks - 50

Date - 29/03/2022

Duration 2hrs

Please note:

Read questions carefully and write down with neat drawn sketches or infographics wherever necessary.

Proper sketches will carry more weightage of marks.

All questions are compulsory.

Q.1 Write short notes on any 3 of the following:

15 Marks

- A. Architecture and city planning of any river valley civilisation
- B. Bhimbhetaka Caves
- C. Paleolithic era
- D. Stone age tools

Q.2 Give salient features of the Kalibangan ruins

OR

10 Marks

Q. 2 Describe in detail the Neolithic period of the Stone Age**Q. 3 Answer any 5 of the following questions:**

10 Marks

1. The earth is _____ years old

- a. 4.5 billion years
- b. 7 light years
- c. 3.8 zillion years
- d. 2022 years

2. The buddha was born about _____ years ago

- a. 5000 years ago
- b. 2600 years ago
- c. 1000 years ago

3. Genghis Khan was the leader of this nomadic empire

- a. Huns
- b. Caucasians
- c. Mongols
- d. Mughals

4. USA dropped the atomic bomb on which of these cities

- a. Hiroshima
- b. Ittarkonashi
- c. Nagasaki
- d. Tokyo

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5. True or False: Michaelangelo painted the Sistine Chapel

6. True or False: Which modern day country would the Mesopotamian civilisation currently be in:

- a. Australia b. South Africa c. Brazil d. Vietnam

Q. 4 Write short note on the following aspects of the stone age:

15 Marks

- a. Food
- b. Art and Architecture
- c. Tools and technology

