ANJUMAN-I-ISLAM'S
AIKTC KALSEKAR TECHNICAL CAMPUS
INNOVATIVE TEACHING · EXUBERANT LEARNING

Knowledge Resource & Relay Centre (KRRC)

AIKTC/KRRC/SoA/ACKN/QUES/ 2022-23 /   Date: **25/01/23**

School: SoA-CBSGS   **Branch: SoA**   **SEM: III**

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,   ✓   Reg.

Received with thanks the following **Semester/Periodic** question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format SC	Format HC	No. of Copies
1	Architectural Building Construction & Materials – III			✓	
2	Theory and Design of Structures				
3	Architectural Building Services			✓	
4	Humanities			✓	
5	Environmental Studies				
6	Architectural Representation & Detailing				

Note: SC – Softcopy, HC - Hardcopy

.(Shaheen Ansari)
Librarian, AIKTC

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Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,
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SEM III - REGULAR EXAMINATION

Subject - Architectural Building Construction and Materials III
Date - 19/12/2022

Max Marks - 70
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.
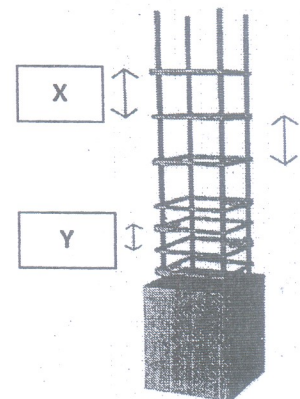Attempt any 6 from Q.2 to Q.10
Q.1, Q.11 & Q.12 is compulsory; Attempt any 1 out of the 2 questions of Q.9.

Q.1 (A) Draw a slab size of 5m x 3m with a typical section of a one way slab in detail *(10 marks)*
OR
Q.1 (B) Draw a slab size of 4m x 4m with a typical section of a two way slab in detail *(10 marks)*

Q.2 What are Slabs and their supports? Write down the types of slabs? Draw relevant sketches
(5marks)

Q.3 Draw a typical section of a one way and two-way slab and explain its differences.
(5marks)

Q.4 Explain the construction process of slab with relevant sketches
(5marks)

Q.5 What are the rules of Column design with sketches?
(5marks)

Q.6 Write down the definition of column and the reasons for column failure?
(5marks)

Q.7 Write down the purpose of stirrups in reinforcement?
(5marks)

Q.8 Explain concrete cover in beams, columns & slabs with relevant sketches
(5marks)

Q.9 Explain the construction process of Column with relevant sketches
(5marks)

Q.10 Explain the construction process of Beam with relevant sketches
(5marks)

Q.11 The height of the column is 4 m and having a cross-sectional area of 300 x 400 mm and having a 40 mm of clear cover. Six bars are going to be used having a diameter of 16 mm. The diameter of the stirrup is 8 mm and having spacing @ 150 mm and @200 mm at L/3 respectively. The length of the beam is 4 m. The main bars used in this beam are 20 mm and the support bar diameter is 16 mm. The diameter of the stirrup for the beam is 12 mm and the spacing of stirrup is at an end is 100 mm and 150 mm at the mid support of the beams.
Draw necessary Plan & Section proportionately with correct labeling.
(20 marks)

Q.12 MCQ type questions:
A. What should be the measurement at X and Y *(2 marks)*

   a. A:200mm and B:100mm
   b. A:400mm and B:200mm
   c. A:800mm and B:1000mm
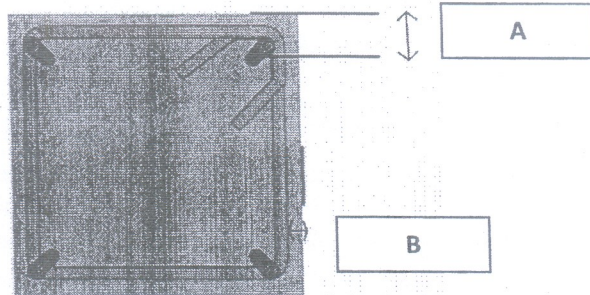   d. A:100mm and B:50mm

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B. What should be the dimension of the concrete cover space main bar
(X) and ties (Y)   *(2 marks)*
   a. A: >25mm ad B: >15mm
   b. A: >35mm ad B: >25mm
   c. A: >50mm ad B: >25mm
   d. A: >15mm ad B: >10mm

C. Minimum spacing of Vertical Stirrups in a rectangular beam should not exceed-   *(2 marks)*

   a. 0.75d/300mm
   b. 0.50d/200mm
   c. 0.60d/200mm
   d. 0.85/300mm

D. The maximum spacing between two secondary parallel bars in a beam shall be: *(2 marks)*

   a. 5d or 450mm whichever is less
   b. 3d or 300mm whichever is less
   c. 4d or 400mm whichever is less
   d. 5d or 300mm whichever is less

E. The maximum spacing of bars shall not exceed Main Steel(A) – _____ whichever is smaller Distribution steel(B) –
_____ whichever is smaller   *(2 marks)*

   a. (A): 2d or 300mm, (B): 5d or 450mm
   b. (A): 5d or 300mm, (B): 3d or 450mm
   c. (A): 3d or 300mm, (B): 5d or 450mm
   d. (A): 2d or 450mm, (B): 3d or 300mm

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

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SECOND YEAR B.ARCH - SEM III REGULAR EXAMINATION
DECEMBER 2022

Subject - Architectural Building Services
Max Marks - 50
Date - 20/12/2022   **Duration - 2hrs.**

Read questions carefully and write down with neat drawn sketches.
Proper sketches will carry more weightage of marks.
Answer according to the marks allotted.
Q.1 is compulsory, Attempt any 4 out of remaining.

Q. 1 Design a water supply system for a residential building of Stilt+7 with 4 flats on each floor. Calculate the capacity of the underground and overhead storage tanks. Explain the design of underground storage tank with sketches in detail.   (10M)

Q. 2 Explain the direct and indirect water supply system with examples and sketches.   (10M)

Q. 3 Explain the water Distribution systems from a natural source to the tap with its types. Explain with neat sketches.   (10M)

Q. 4 Write brief note on the following (any four)   (10M)
    a) Average daily water consumption
    b) Bottle trap
    c) Grey water and black water
    d) Ferrule
    e) Freeboard

Q. 5 Explain the underground connection from water mains to the underground water tank.
                    (10M)

Q. 6 Define traps. Explain different types of traps with neat sketches, uses as per appliances.
                    (10M)

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SECOND YEAR B. ARCH - SEM III EXAMINATION DEC 2022

Regular.

Subject - Humanities
Max Marks - 50
Date -13/07/2022

Duration – 2 hrs.

Read questions carefully and write down with neat drawn sketches or infographics wherever necessary. Proper sketches will carry more weightage of marks. Answer according to the marks alloted.

NB : Question No. 1 is compulsory, answer any 4 from remaining 5. All questions carry 10 marks each

Q.1 Answer if True or False from the following statements, **if false, give correct answers**.

    a. Flying Buttresses are a feature of Islamic Architecture

    b. The central passage of a cathedral is called a nave

    c. The basilica was originally a roman gathering space

    d. The Torah is a holy scripture in Judaism

    e. The holocaust was a tragic event in Indian history

Q2. Short Note on any 2 of the following with appropriate sketches:

    a. The Holocaust

    b. Renaissance architecture and art

    c. Jewish place of worship

Q3. Write in brief about the architecture of the Hagia Sophia with sketches

Q4. Describe in detail the holy site in Jerusalem with reference to important sites to Judaism, Christianity and Islam

Q5. Explain the planning of basilica church with sketches and examples

Q6. Write brief **definitions** for 2 the following:

    a. Gothic Architecture

    b. Greek Cross Plan

    c. Pendentives

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