



ANJUMAN-ISLAM'S

AIKTC KALSEKAR TECHNICAL CAMPUS

INNOVATIVE TEACHING · EXUBERANT LEARNING

School of Architecture

School of Engineering & Technology

School of Pharmacy

Knowledge Resource & Relay Centre (KRRC)

AIKTC/KRRC/SoA/ACKN/QUES/ / Date: _____

School: SoA-CBSGS Branch: SoA SEM: V

To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following [✓] *Reg.* [✓] *Reg.* Semester/Periodic question papers from your exam cell:

Sr. No.	Subject Name	Subject Code	Format		No. of Copies
			SC	HC	
1	Architectural Building Construction 5			✓	02
2	Theory & Design of Structures 5			✓	02
3	Architectural Building Services 3			✓	02
4	Humanities			✓	02
5	Architectural Representation & Detailing				
6	Architectural Theory				

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,
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. THIRD YEAR- SEMESTER V (OCTOBER 2018-19 REGULAR)

SUBJECT : ARCHITECTURAL BUILDING CONSTRUCTION AND MATERIAL

DURATION: 3 hours

TOTAL MARKS: 50 MARKS

Date: ²⁶22/10/2018

Notes:

- All questions are compulsory unless and until mentioned
- Numbers on the right hand side indicate marks for each question.
- Support all answers with neat sketches.

Q1. Mention the soil condition on site under which raft foundation is preferred (Support with sketches). What are the different types of raft foundation? (Support with sketches) Draw detailed section of raft foundation with shear wall, reinforcement details and waterproofing details. (Scale 1:20) (20 marks)

Q2. What is soil bearing capacity (SBC) of a soil? How does it play an important role in selection of a foundation system for a building? Explain it with different types of shallow and deep foundations. (10 marks)

Q3. Design an entrance canopy for a commercial building having 6 m wide opening. Draw plan and section of canopy with gutter detail at 1:20 scale (10 marks)

Q4. Explain the concept of buoyant foundation. (05 marks)

OR

Q4. Explain spread foundation with proportionate sketches and appropriate nomenclature. (05 marks)

Q5. Draw section of a combined pad foundation with reinforcement details and nomenclature. Mention the condition under which it is proposed. (05 marks)

OR

Q5. Draw curtain wall detail for a structure in a cold climate. (05 marks)



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B.ARCH. THIRD YEAR- SEMESTER 5 (OCTOBER 2018-19 REGULAR EXAM)

SUBJECT: THEORY AND DESIGN OF STRUCTURES V

Duration: 2 hours

TOTAL MARKS: 50

Date: ²⁷23/10/2018

Notes:

- 1) Question No 1 is compulsory.
- 2) From question no 2, 3, 4 - Attempt any two questions.
- 3) Assume $f_y = 260$ MPa, $E = 2 \times 10^5$ MPa.
- 4) Use of non-programmable calculator, steel table and extracts of IS 800 is allowed.
- 5) Assume additional data wherever necessary, and specify the same.

Q1) Attempt any four

(20M)

- i. Sketch steel grillage foundation with plan and section details.
- ii. Show different types of individual built up steel section and give advantages and disadvantages of steel structure over other material structure.
- iii. Compare between riveted and welded connections
- iv. Explain different types of failures in connections with sketches
- v. Explain different types of trusses and their uses with proper sketches

Q2) Design steel column for centrally loaded 900 kN load for span 3.5 m restrained in position as well as direction at both ends. (15M)

Q3) Calculate safe load for laterally unrestrained steel beam ISHB 350 @ 67 kg/m of span 5 m. (15M)

Q4) Compute safe load for tension member, ISA 75 x 75 x 10 placed side by side doubly riveted of diameter 20 mm. (15M)



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B.ARCH. THIRD YEAR- SEMESTER-5, OCTOBER 2018

SUBJECT: Arch. Building Services

Duration: 2 hours

TOTAL MARKS: 50

Date: 29/10/2018

- Question no.1 is compulsory, attempt any 3 from remaining.
- Numbers on the right hand side indicate marks.
- Draw neat and proportionate sketches wherever required.

Q1. Explain the following in brief:

{20}

a. What would you prefer to use in both the following cases in electrical works for a residential space. Give Reasons.

- RCCB vs ELCB
- Fuse vs MCB

b. A diffuser can act as a reflector, for changing frequency of sound. Explain how?

c. Explain the formula for lighting calculation by Lumen method.

d. Why a delay of $1/10^{\text{th}}$ second or more, of any reflected sound wave causes echo in a space.

Q2. What are the possible behaviors of a sound wave, upon encountering any object or surface? {10}

Q3. Explain Reverberation. What is reverberation time? How is it calculated?

{10}

Q4. Explain with sketches:

{10}

- a. Types of wiring systems
- b. Types of wires
- c. Earthing

Q5. What acoustical treatment do you suggest for a lecture hall? Explain with reasons.

{10}



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THIRD YEAR

REGULAR

SEM V B.ARCH EXAMINATION NOVEMBER 2018-19

Subject: Humanities

Date: 25:10:2018

Max Marks: 50

Duration: 2 Hrs.

Note :

Support your answers with sketches wherever necessary.

1.Q.1.How did colonisation in India affected architecture of the country explain with examples.10

Or

Exemplify three styles of architecture at puddicherry.

Q.2 Write short note on any four :10

- a.Biomimicry
- b. Critical regionalism
- c.Deconstructivism
- d.Postmodernism
- e.Parametricism

Q.3 Elaborate minimum three movements in art and architecture throughout the world since 15th century.

Or

Discuss about the factors responsible to shape modernism .How modernism reflected in architecture ,discuss with example.....10

Q.4 What is industrial revolution and How did industrial revolution change the field of architecture . Explain with examples.....10

Q.5 What is conservation?What are different processes of conservation ,discuss with example.10