



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

THIRD YEAR B.ARCH- SEM V EXAMINATION APRIL 2016

Subject: Theory and Design of Structures V. Max Marks: 50 Date: 05/04/2016
Duration: 2 Hrs.

Note : 1) **Question no. 1 is compulsory.** Attempt any 2 from remaining Q 2.to Q4.

- 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) Explain the advantages and Disadvantages of Steel Structures.
- b) Draw 5 different types of rolled steel sections and specify their usage.
- c) Differentiate between Riveted and Welded connections.
- d) Explain with sketches Butt joint and Lap joint.
- e) Write a short note on Block Shear failure and Net Section failure.

Q 2] a) Calculate Shearing and Bearing Strength for a 20mm dia Bolt. [5]

b) Calculate the number of Bolts required for a Roof Truss joint, as shown in Fig 1. Connected by 20mm dia bolts to the gusset plate of thickness 12mm. [10]

Q 3] a) Draw different types of composite sections for Steel Columns. [5]

b) Design a Column 3.5m long, subjected to factored load of 1000kN. Both the ends of the Column are effectively restrained in position and direction. [10]

Q 4] a) Draw a neat proportionate sketch of a Grillage Foundation. [5]

b) Design a Slab Base for a Column ISHB250 subjected a factored load of 800kN. Assume grade of steel as Fe410 and Concrte M20. [10]

Q 5] a) Explain with a sketch what is a Plate Girder. [5]

b) Design a Single angle Tension member to carry a factored load of 400 kN, considering steel of grade Fe 410, d= 20mm. Also calculate no. of bolts required. [10]

PTO

PTO

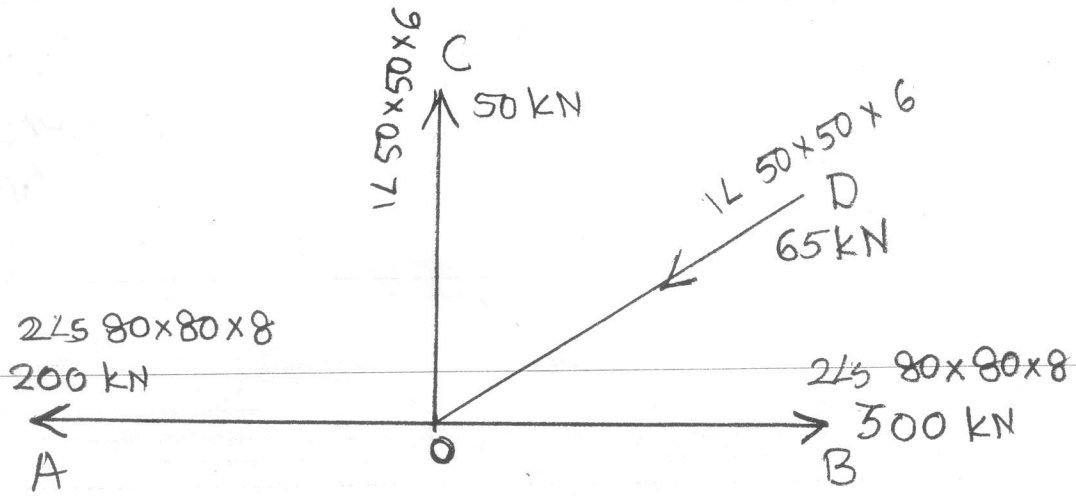


Fig. 1. Q. 2. b.



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THIRD YEAR ATKT B.ARCH EXAMINATION 2015-16

Subject: Building Construction-(SEMESTER-V)

Max Marks: 50

Date: 09/04/2016

Duration: 3 Hrs. (10.00A.M to 1.00P.M)

Note – Question number 1 is compulsory, attempt any 3 out of Q2, Q3, Q4, Q5, Q6 & Q7.

Q1. Short notes (any four) sketches are compulsory (20 marks)

- A. What are advanced slabs, give examples
- B. Strip footing
- C. Combined footing
- D. Spread footing
- E. Types of raft foundations
- F. Foundation Walls
- G. Stages involved in basement construction
- H. Waterproofing of shear wall
- I. Storm water gutter detail for ramp

Q2. Draw detailed section of any one type of raft foundation with shear wall (scale 1:20) (10 marks)

Q3. Draw plan & section of one way ribbed slab explaining its reinforcement details (scale 1:20). Consider appropriate spans for the same. (10 marks)

Q4. What are waffle slab, Explain in detail about its construction process with reinforcement details (scale 1:20) (10 marks)

Q5. What is flat slab, Draw section of flat slab having square or circular column with capital and drop panel (scale 1:20) with reinforcement details. (10 marks)

Q6. What are basements, its types & Stages involved in construction of basement (10 marks)

Q7. What is Diaphragm wall; describe construction procedure of diaphragm wall. (10 marks)

SEM - V
A.B.C.M
2015-16
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SEM V B.ARCH EXAMINATION APRIL 2016

Subject: Humanities

Max Marks: 50

Date: 07-04-16

Duration: 2 Hrs

Note –

All questions are compulsory you can select between options within the questions

There are two sections to be answered; Section A in infographics and Section B in text supported by sketches.

SECTION A..... Infographics (answer on blank side of the sheet)

Q. 1 The modern Movement has over 30 styles. Each style has their specific philosophy, expressions, and modes of representations.

Demonstrate in detail any 15 styles of modernism25mks

OR

Q. 1 Modernism and Post Modernism saw a surge of opinions and philosophies of design. The industrial revolution brought in many new materials and technologies, which were imported by Architects to mark their signature.

Select any architect from any of the two movements and demonstrate their styles using one project study.....25 mks

SECTION B..... Subjective answers supported by sketches (answer on the side with the name and sign)

Q. 2 How did industrial revolution change the field of Architecture..... 10 Mks

Or

Q. 2 Discuss the relation between typologies of buildings and intentions of the Rulers through examples from the colonial period of India..... 10 Mks

SEM-V
HUMANITIES
2015-16
April

Q. 3 What was the Arts and Crafts movement popularly known as? Describe its characteristics and demonstrate it through the work of an architect from the movement.....15 Mks

Or

Q. 3. Explain in detail the principles and Influences of the Bauhaus Movement across Art and Architecture.....15 Mks



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THIRD YEAR B.ARCH- SEM V EXAMINATION APRIL 2016

Subject: Architectural Building Services

Max Marks: 50

Date: 06/04/2016

Duration: 2 Hrs

- Q.3 is compulsory
- Numbers on the right hand side indicate marks.
- Draw neat and proportionate sketches wherever required.

Q.1. Explain the following (Any 2)

A. Sabine's formula

B. Echo

C. Non renewable sources of energy

_____ 10M

Q.2. Explain the following (Any 1)

A. Acoustic detail of door

B. Acoustic detail of partition between recording studio and lobby.

_____ 10M

Q.3. Calculate the reverberation time for the lecture hall attached below.

Assume suitable data wherever required and mention it.

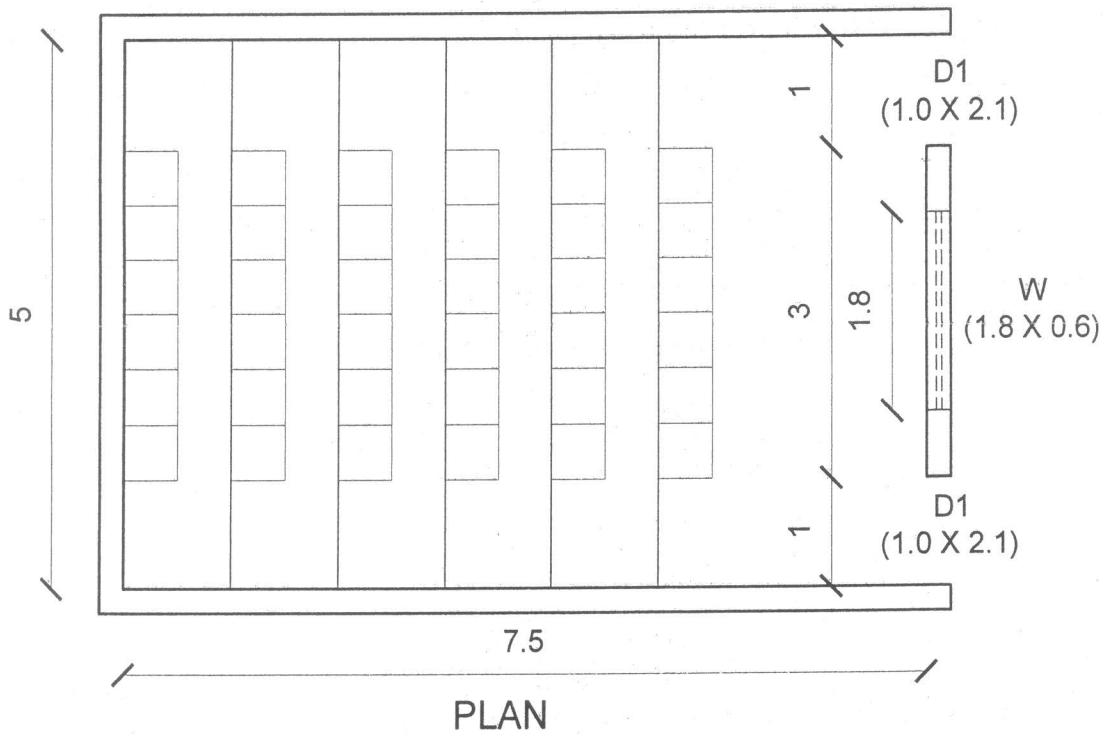
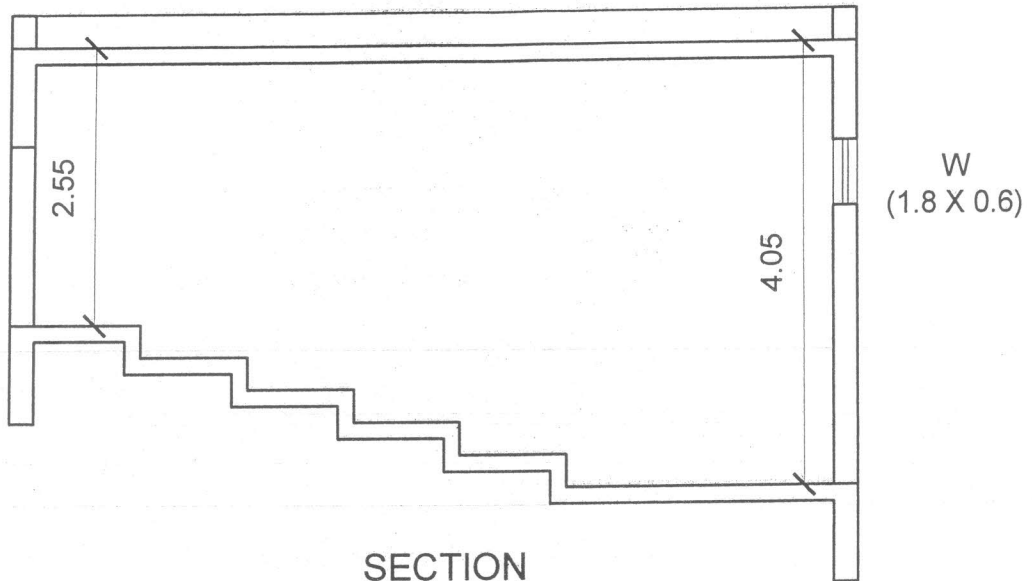
_____ 20M

Q.4. Explain the concept of acoustics

OR

Q.4. Explain how the main areas between electricity generation to supply.

_____ 10M



SR. NO.	ITEM	FINISHES	ABSORPTION COEFFICIENT
1	Brick wall plaster	Ordinary	0.2
2	Window	Ordinary	0.3
1	Seating occupied	Upholstered	0.6
1	Platform floor	Wooden	0.4