B.ARCH. FIRST SEMESTER EXAMINATION 2010-11

Course Code: AR101   **Paper ID: 0121101**

Architectural Design-I

Time: 6 Hours   **Max. Marks: 100**

Note: Attempt five questions in all. Q. No. 1 is compulsory. All Questions carry equal marks.

1. Create 3 geometric compositions using any shape confirming to the principles of architecture of your choice.   (20)

2. Create 2 compositions in 3D with different hues.   (20)

3. Explain liner form and centralized form with the help of sketches. Also quote examples of building by eminent Architect.   (20)

4. Make sketches for generating subtractive forms out of basic rectangular shape.   (20)

5. Design a ceiling pattern for an octagonal space with one ride measuring 6m.   (20)

6. Create a composition using subtractive and additive forms in 2-D using 3 basic shapes.   (20)

7. Discuss in plan / elevation / view, the Taj Mahal with respect to principles of architecture.   (20)

B.ARCH. FIRST SEMESTER EXAMINATION 2010-11

Course Code: AR102   **Paper ID: 0121102**

Building Construction & Materials-I

Time: 3 Hours   **Max. Marks: 50**

Note: Attempt five questions in all. Q. No. 1 is compulsory. All Questions carry equal marks.

1. Discuss any five: (2x5=10)
   a) Stabilized blocks
   b) Ashlar masonny
   c) Rammed wall
   d) Queen header
   e) Purpose made bricks
   f) Toothing

2. Draft a section for 230mm thick wall from concrete foundation to slab level showing all DPC details etc.   (10)

3. Make section and elevation for 400mm thick stone wall in rubble masonry.   (10)

4. Draft plan and elevation for 230mm thick wall in English in English bond at T-junction.   (10)

5. Discuss all the 4 clones of brick with their usage.   (10)

6. Compare between stone masonry and brick masonry with respect to their usage, construction techniques employed etc.   (10)

7. Differentiate between the following: (5x2=10)
   a) Load bearing and Non-load bearing structures.
   b) Plinth band and Lintel band

B.ARCH. FIRST SEMESTER EXAMINATION 2010-11

Course Code: AR103   **Paper ID: 0121103**

Architectural Structures-I

Time: 3 Hours   **Max. Marks: 50**

*Note: Attempt five questions in all. Q. No. 1 is compulsory. All
Questions carry equal marks.*

1. Define any **five** of the following terms: (2x5=10)
   a) Modulus of elasticity.
   b) Shear stress and shear strain.
   c) Triangular law of forces.
   d) Concentrated load and distributed loads.
   e) Shear force diagram and bending moment diagram.
   f) Linear strain.
   g) Parallelogram law
   h) Perpendicular axis theorem

2. A reinforced concrete column450mmx450mm has four steel rods of 25mm diameter embedded in it. Find the stresses in steel and concrete when the total load on the column is 1000kN. Take E_s=205kN/mm^2 and E_c=13.6kN/mm^2.   (10)

3. A steel bar, 300mm long and 30mmx30mm cross section, is subjected to a tensile force of 150kN in the direction of its length. Determine the change in volume, taking E_S=205kN/mm^2 and poisson ratio=0.3.   (10)

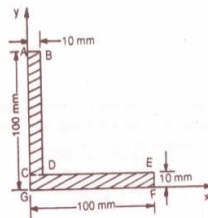4. Determine the centroid of the angle shown in fig. 3   (10)

Fig. (3)

5. Compute the moment of inertia of the composite area shown in fig. (4) about the centroidal axes.   (10)
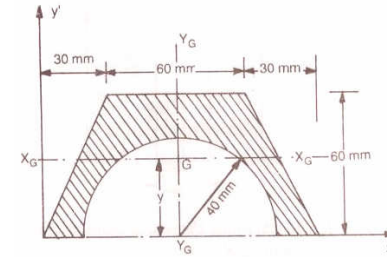

Fig. (4)

6. Draw the shear force diagram and bending moment diagram for the following fig. (5).   (10)
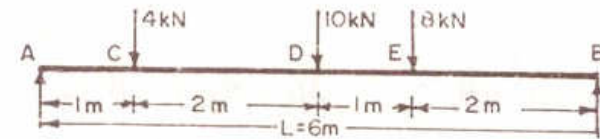

Fig.(5)

7. Two forces acting on a body are 1500N and 1000N as shown in fig. Determine that third force F such that the resultant of all forces is 1000N directed at 45^0 to the x-axis.   (10)
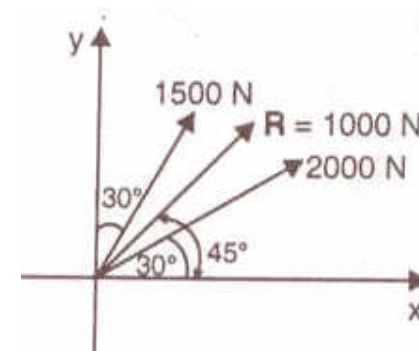

Fig. (6)

B.ARCH. FIRST SEMESTER EXAMINATION 2010-11

Architecture Drawing-I

Time: 3 Hours   **Max. Marks: 50**

Note: Attempt five questions in all. Q. No. 1 is compulsory. All Questions carry equal marks.

1. Answer any five of the following: (2x5=10)
   a) Write an account of the instruments used in architectural drawing.
   b) How many types of lines are used in drawing? Explain their meaning.
   c) With the help of a sketch, describe a prism.
   d) What do you understand by a pyramid?
   e) How can you draw a square with a compass?
   f) What is orthographic projection?
   g) If a cone is cut by an inclined plane, what will be the shape of the section? Explain.
   h) How can you divide a line of a given length into five equal parts?

2. Draw a regular hexagon of side 3.5cm with the help of a compass. Then draw a circle inscribing the hexagon.   (10)

3. Develop the surfaces of a hexagonal prism having each side equals to 2.5cm and height 6.0cm.   (10)

4. A pentagonal prism of height 4.5cm and each side of pentagon equals to 2.0cm, is lying on the ground on one of its triangular faces. Draw the plan, elevation and side elevation.   (10)

5. A square pyramid, having each side of square base of 2.5cm and height of 5.5cm is cut by a plane, inclined at 300 to the horizontal plane. Draw the plan, elevation, side elevation and true shape of the section.   (10)

6. Draw a regular pentagon of side 3.5m in 1:10, 1:50 and 1:100 scale. Explain why these sizes are different.   (10)

7. Draw a complete involute curve formed from a square of side 3.0cm.   (10)

B.ARCH. FIRST SEMESTER EXAMINATION 2010-11

Course Code: AR105 **Paper ID: 0121105**

Arts & Graphics

Time: 3 Hours **Max. Marks: 50**

Note: Attempt five questions in all. Q. No. 1 is compulsory. All Questions carry equal marks.

1. "An architect is an artist too". Comment on this statement highlighting the importance the course arts & graphics in the course curriculum of B.Arch. (10)

2. Explain colour fundamentals (as our of the most important elements of design). How do cool colour effect us (human beings) emotionally. (10)

3. Design and present a logo for department of architecture of Teerthanker Mahaveer University at Moradabad. Render in either of the mediums like ordinary pencil, crayon colours, water colour etc best suited to your required skill(s). (10)

4. Differention of the following: (10)
   a) Shape of Form
   b) Visual Texture and Tactile Texture

5. Sketch & render the view of one corner of the examination hall as you see it from seal that you are sealed on. Use of different grader of percales is premised. (10)

6. Draw an apple, banana, pear, pineapple and grapes in fruit basket. Render them in crayon colours to achieve maximum of still life impact. (10)

7. Sketch any one of the following with suitable rendering: (10)
   a) A bottle palm (free)
   b) A motor cycle

B.ARCH. FIRST I SEMESTER EXAMINATION 2010-11

Course Code: AR106   **Paper ID: 0121106**

Sociology

Time: 3 Hours   **Max. Marks: 50**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words).

   (2x5=10)
   a) "Sociology is the scientific study of human relationship". Explain.
   b) Give the characteristics of "Society".
   c) What does the term function mean?
   d) Define family.
   e) What is the meaning of social stratification?
   f) What are the social impacts of crime?
   g) What is panchayat raj? Explain.
   h) What is juvenile crime?

2. Throw light on the effects of industrialization on rural social structure.

   (8)

3. Differentiate between primary and secondary groups.   (8)

4. What do you understand by socialization? Throw light on its characteristics?   (8)

5. Explain the differences between Association and Institution.   (8)

6. Analyze the causes & effects of migration of people from rural to urban settlements.   (8)

7. Give short notes on: (8)
   a) Intra and Inter Generational Mobility.
   b) Open and Closed Social Mobility.

8. Define social research. Explain the characteristics and scope of social research.   (8)

BACHELOR OF ARCHITECTURE FIRST SEMESTER EXAMINATION 2010-11

Course Code: AR107   **Paper ID: 0111107**

Communication Techniques

Time: 3 Hours   **Max. Marks: 50**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (2x5=10)
   a) What are the functions of adjectives and adverbs?
   b) What is reflexive pronoun? Give two examples.
   c) Insert appropriate preposition in the spaces left blank:
      i) He introduced me ……… the collector.
      ii) Walking is a good exercise ………. those who lead a Sedentary life?
      iii) He was asked to preside ………. the meeting.
   d) Use the following phrases in sentences of your own construction:
      i) To look down upon.
      ii) To break down.
      iii) To look into.
   e) "Vocabulary knowledge is the single most important area of language competence." Discuss.
   f) Give the meaning of the following pairs of homophones & use them in sentences:
      i) Site; Sight
      ii) Accept; Except.
      iii) Waste; Waist.
   g) Join pairs of sentences by using relative pronouns:
      i) Do you remember my boss? You met him at the party.
      ii) The new manager will join in a week. He belongs to Hyderabad.
      iii) The shaft has not been replaced. It broke yesterday.
   h) Arrange the sentence parts according to any pattern to form a simple sentence:
      i) A horse, Mr. Handy, bought.
      ii) The son, the father, forgave, his mistake for.
      iii) After, his pets, he, looks.

2. Write a report on any thing you have designed recently highlighting its efficacy in the field of architecture. (8)

3. Your uncle has sent you a present on your birthday. Write a letter thanking him how the gift is special or unique. (8)

4. What is a sentence? What are the requisites of good sentence writing? (8)

5. Write a story in which you have the following:
   A doctor is going to operate a man who had earlier kidnapped the doctor's son. (Limit written 200 words) (8)

6. Expand the following proverb (any one) into a paragraph: (8)
   a) Blood is thicker than water.
   b) It is never too late to mend.

7. Write an essay on any one of the following topics: (8)
   a) Architects' responsibility to society.
   b) We live in deeds, not in years.

8. Write a note on the uses of suffixes and prefixes in word formation. Give examples in support of your answer. (8)