

Total No. of Printed Pages:2

**SUBJECT CODE NO:- H-5001**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Sem-II)**  
**A. B. C. M. -II**  
**[Revised]**

[Time: Four Hours]

[Max.Marks:100]

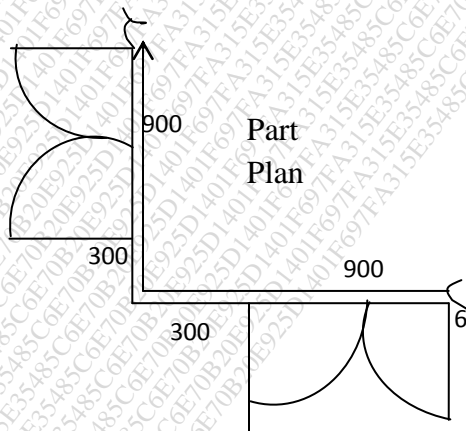
N.B

Please check whether you have got the right question paper.

- i) Solve any Two questions from Sec. 'A' and any THREE from Sec. B.
- ii) Answer to Sec. 'A' must be solved on drawing sheets only and answers to Sec. 'B' may be solved on answer sheets.
- iii) Assume suitable data wherever possible and mention it clearly.
- iv) Figures to the right indicate full marks.

**Section 'A'**

- Q.1** A hall with internal dimensions of 9.00 M X 6.00 M is to be provided with a King Post Roof Truss. The height of the hall below the Tie Beam of the Truss is 4.50 M. upto the top of the floor. (Plinth level). The king Post Trusses are placed at 3.00 Mts. Centre to centre. The walls are 350 mm thick. The height of plinth is 600 mm above ground level. A door 1.5 mtr. wide is fixed on one side along the length of the hall with windows in each bay.
- |                                |  |    |
|--------------------------------|--|----|
| A)                             | Draw plan, elevation and section of the hall. (Key plan) (Scale 1:50)  | 08 |
| B) Draw large scale details of |  |    |
| i)                             | Part plan of the roof truss showing the position of roof truss, common rafters, wall plate, ridge piece etc. with t.w. boarding (scale 1:20) | 09 |
| ii)                            | The detail elevation of King Post Roof Truss with different members including all the dimensions (scale 1:20)                                | 10 |
| iii)                           | Joint between Principal rafter and Tie Beam (Scale 1:4)  | 08 |

**Q.2**

A corner t.w. fully glazed window is to be provided for a living room of a bungalow. The

dimensions of the living Room are 6.00 M  $\times$  4.50 Mts. The sketch of the window is shown in the figure. At the corner, these will be fixed glass of 300 mm on each side. The dimensions of the shutters are 450 mm each. The frame size is 80mm  $\times$  60mm. The height of the window is 1.50 Mts. And is fixed 600 mm above floor level. The r.c.c. chajja is provided as a sun shade for the window ( 600mm wide). The walls 230 mm thk brick walls.

- A) Draw plan, elevation and section of window (scale 1:10) 11
- B) Draw large scale details of
- i) Joint between t.w. corner post and the t.w. sills of the window (Scale 1:2) 08
  - ii) Fixing of glass at the corner on either side (Scale 1:2) 08
  - iii) Fixing of glazing bar and the t.w. style of openable shutter. 08

- Q.3 Draw neat sketches of any four from the following
- a) Joint between the Queen Post, Tie Beam and strut. 09
  - b) Joint between Ridge piece, common rafter, principal Rafter of a King Post Roof Truss. 09
  - c) Sketch of a collar Roof. 08
  - d) A glazed louvred window for a toilet block (Section only) 09
  - e) Sliding door mechanism at the top and bottom. 05

### Section B

- Q.4 Specify the flooring finishes to be used for the following spaces 10
- a) Reception lobby of a five star hotel.
  - b) Flooring for a luxurious bungalow (Living Room)
  - c) Dado of a bath Room
  - d) Floor finish for a Godown
- Q.5 What are the different ingredients of reinforced cement concrete and their qualities. What is the proportion of concrete for R.C.C. work? 10
- Q.6 Write short notes on any THREE
- a) Indian Patent Stone 04
  - b) Light weight concrete 03
  - c) Neeru finished cement plaster 03
  - d) Different Types of cement pointing 03
- Q.7 What is Guniting and describe the method of guniting. 10

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**SUBJECT CODE NO:- H-5002**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-II)**  
**Architectural Building Construction-II**

[Time: Four Hours]

[Max.Marks:80]

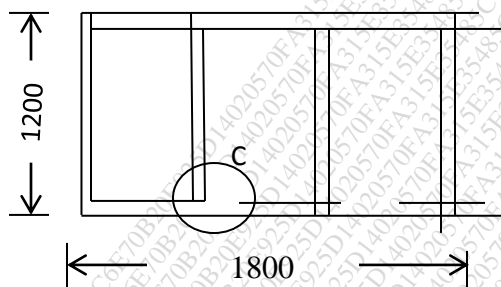
Please check whether you have got the right question paper.

N.B

1. Solve any two questions from each section
2. Assume suitable data wherever necessary & state it clearly
3. Figures to the right indicate full marks.

**Section -A**

- Q.1 A t.w fully glazed vertically pivoted window is to be provided for a living room. There will be 3 shutters of 500mm width. The T.w frame is 75X125. The size of the opening is 1800X 1200 it is fixed at 900mm above Fl. Level The height of the room is 3.30 M upto top of slab



- |   |    |
|---|----|
| A) Draw plan elevation & section of the window (scale 1:10) | 09 |
| B) Draw large scale details.                                |    |
| i) Plan and section of one shutter (scale 15 cms=1M)        | 07 |
| ii) Plan of pivot mechanism & section (scale 1:2)           | 07 |
| iii) Detail joint at 'C' (scale 1:2)                        | 07 |

- Q.2 A timber roof is to be provided for a hall having internal dimensions of 5.00M X 12.00 M. length . The height of the hall below wall plate is 3.80M The walls are 350mm. tk. The height of plinth is 600mm above gr. level. the roofing material will be mangalore tiles on t.w boarding

- |   |    |
|---|----|
| A) Draw part plan of  |    |
| i) The hall showing the position of t.w. spars , t.w wall plate etc. ( scale 1:25 ) | 08 |
| ii) Draw elevation of the timber roof (Scale 1:25)                                  | 08 |
| B) Draw large scale details   |    |
| i) Firing details of t.w boarding, t.w battens & mangalore tiles 1:2                | 07 |
| ii) Fixing of wall plate to the wall 1:2  | 07 |

- Q.3 Draw neat sketches of any four 30
- sliding mechanism for door
  - Section and elevation of top hung ventilator
  - Joint between spar & wall plate
  - Joint between principal rafter and tie beam of king post roof
  - Joint between t.w purlip principal rafter
  - Joint between two glazing bars of a glazed window

## Section – B

- Q.4 What is the necessity of providing collar for a collar roof. Give the nomenclature of the joint 10  
between the collar and the rafter with sketch.
- Q.5 What is the reason for providing wall plate for any roof truss is it possible to root spars directly 10  
on the wall.
- Q.7 What is the function of a stone template or concrete bed block to support the king post roof truss? 10

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**SUBJECT CODE NO:- H-5005**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-II)**  
**Building Materials-II**

**[Time: Two Hours]****[Max.Marks:40]**

Please check whether you have got the right question paper.

**N.B**

1. Q.1 from section A and Q.5 from section B are compulsory.
2. Attempt any two from the remaining from each section.
3. Figures to the right indicates full marks.

**Section -A**

- Q.1** Write correct answer. 02
- 1) Rotary Kiln is used for ----- 02
    - a) Burning of raw material of cement
    - b) Burning of Limestone
    - c) Grinding of raw material of cement
  - 2) Pozzolana Cement made up of ----- 02
    - a) Volcanic powder
    - b) Calcium Bauxite
    - c) Tricalcium Silicate (C3S)
  - 3) A.C .Sheets stands for ----- 02
    - a) Asphalt Cement sheets
    - b) Asbestos Cement sheets
    - c) Aluminum Cement sheets
- Q.2** Explain in detail “cement and its types”. 07
- Q.3** Explain curing of concrete and various methods used of it. 07
- Q.4** Explain various types of Pointing with neat sketches. 07

**Section – B**

- Q.1** Write correct answer 02
- 1) Ball Mill is used for ----- 02
    - a) Grinding of raw materials of cement
    - b) Grinding of Limestone
    - c) Burning of raw material of cement

2) Slump test is used to check -----

- a) Strength of concrete
- b) Workability of concrete
- c) Durability of concrete

02

3) Kenec's cement plaster is made up of -----

- a) Calcination of plaster of Paris with Alum
- b) Calcination of plaster of Paris with pearls ash
- c) Calcination of plaster of Paris with Borax

02

Q.6 Explain method of fixing of A.C sheets on timber king post roof truss. With sketches .

07

Q.7 Explain "plaster" and various mortar used for plastering

07

Q.8 Write short note on "storage of cement "

07

Total No. of Printed Pages:02

**SUBJECT CODE NO:- H-5008**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Rev.) (Sem-II)**  
**T.D.S. I**

[Time: Three Hours]

[Max.Marks: 100]

N.B

Please check whether you have got the right question paper.

- 1) Do not write anything on question paper except seat no.
- 2) Answer any three questions from each Section.
- 3) Student should note no supplements will be provided.
- 4) Assume suitable data if necessary.

## Section A

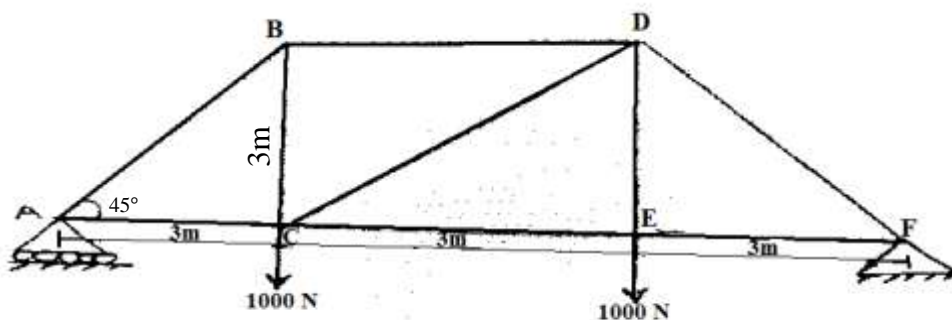
- Q.1 a) A cantilever beam of span 4.5 m carries three point loads of 10 kN, 20 kN and 30 kN at 1m, 1.5m and 3.5 m from the fixed end. Draw SFD and BMD. 08
- b) Find the center of gravity of a channel section 200 mm × 55 mm × 20mm 08
- Q.2 a) Differentiate in between centroid and center of gravity. 05
- b) State the relation between shear force and bending moment. 05
- c) Explain Parallel axis and Perpendicular axis theorem. 06
- Q.3 An I-section has the following dimensions in mm units 16
- Bottom Flange = 300 × 150
- Top Flange = 150 × 50
- Web = 200 × 50
- Determine mathematically the position of center of gravity of the section and its moment of inertia.
- Q.4 A simply supported beam AB of span 7m carries a point load of 45 kN and 60kN at a distance of 1 m and 2 m from support A. If a moment of 10 kN-m is acting at a distance of 4 m from support B, and a u.d.I of 30 kN/m for a distance of 2 m from support B find the reactions at A and B. And also draw SFD and BMD? 16
- Q.5 Write short notes on following: 16
- i) Shear force and bending moment diagram.
  - ii) Types of end support of beam with neat sketches.
  - iii) Moment of inertia
  - iv) Point of contra-flexure

## Section B

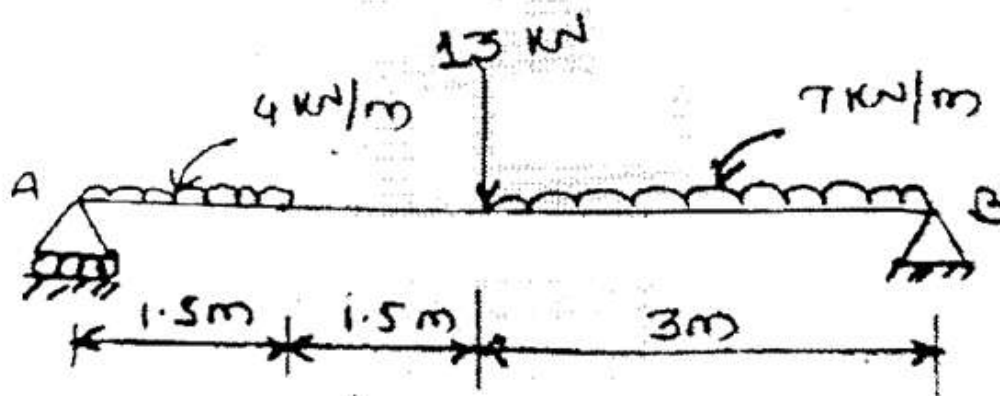
- Q.6 The following data observations were made during a tensile test on a mild steel specimen 30 mm in diameter and 400 mm long Elongation with 40 kN load (within limit of proportionality), change in length = 0.034 mm, yield load = 161 , maximum load = 270 kN, length of specimen at fracture = 249 mm. Determine: 16
1. Young's modulus;
  2. Yield stress;
  3. Ultimate stress;
  4. Percentage elongation.



- Q.7 a) What are the effects of load on a member? 05  
 b) Define elastic, plastic and rigid body. 05  
 c) A bar 750 mm long and 35 mm in diameter is elongated by 1.1 mm under the effect of axial pull of 150 kN. Calculate the intensities of stress, strain and modulus of elasticity of bar. 06
- Q.8 Write short note on (any four): 16  
 A. Method of joints  
 B. Moment of Resistance  
 C. Volumetric stress and volumetric strain  
 D. Poisson's Ratio and Bulk Modulus  
 E. Perpendicular axis Theorem
- Q.9 a) Difference between statically determinant structure and indeterminate structure. 06  
 b) Find the support reaction and forces in all members of truss as shown in fig. Clearly state the nature of forces. 10



- Q.10 A steel rod 5 cm<sup>2</sup> cross sectional area is carrying load as shown in fig.1. Determine total elongation of the bar  $E=210 \text{ G Pa}$ . 16





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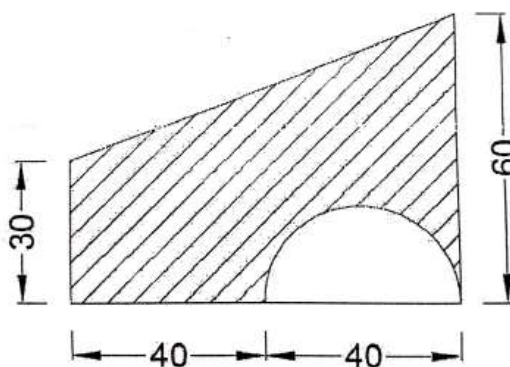
**SUBJECT CODE NO:- H-5009**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-II)**  
**Theory and Design of Structure-I**

[Time: Three Hours]

[Max. Marks: 100]

Please check whether you have got the right question paper.

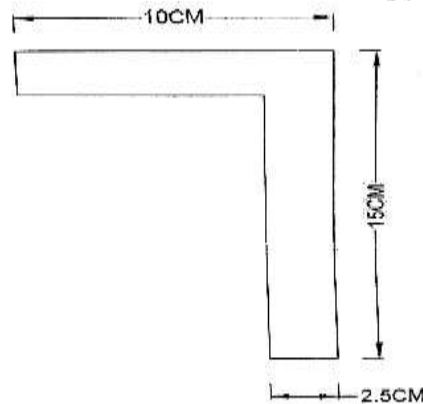
- N.B
- i. Solve any **Five** questions.
  - ii. Assume suitable data, if necessary.
  - iii. Figure to the right indicate full marks.
- |     |   |    |
|-----|---|----|
| Q.1 | a) State & explain Hook's law                   | 06 |
|     | b) Explain types of stresses                    | 06 |
|     | c) What is elasticity explain stress and strain | 08 |
| Q.2 | a) Find the C.G. of the following fig.          | 16 |



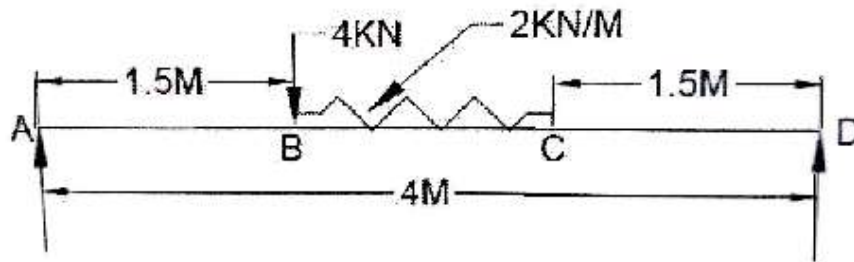
- b) Find the C.G. of trapezium & right angle triangle with figure

04

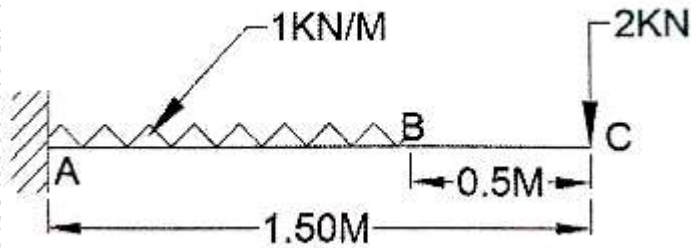
- Q.3 Find the moment of inertia about centroidal X-X & Y-Y axis of an inverted L-section  $15\text{cm} \times 10\text{cm} \times 2.5\text{cm}$  20



- Q.4 Draw S.F.D and B.M.D. for simply supported beam 4 m long carrying UDL & point load as shown in fig. 20



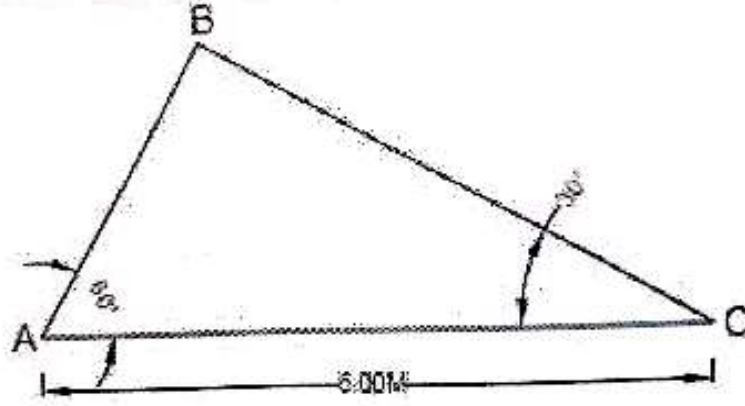
- Q.5 a) Draw S.F.D. and B.M.D. for cantilever beam 1.5 m long loaded as shown in fig. 18



- b) Define shear force & bending moment

02

- Q.6
- Define and explain types of frames.
  - Assumption for Forces in perfect Frames.
  - Explain analytical methods for the forces.
  - The truss ABC as shown in fig. Has a span of 5m. It is carrying a load of 10 kN at its apex.



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**SUBJECT CODE NO:- H-5013**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F.Y.ARCH.(CBCS) (Sem-II)**  
**Design Fundamentals In Architecture - II**

**[Time: Three Hours]****[Max.Marks:80]**

Please check whether you have got the right question paper.

- N.B
- 1) Solve any two questions from section A.
  - 2) Solve any four questions from section B.
  - 3) Draw suitable sketches wherever required.
- Section - A
- |             |   |    |
|-------------|---|----|
| Q.1         | Discuss “Construction techniques responsible for the development of form & aesthetics of building”.   | 20 |
| Q.2         | What do you mean by circulation? Explain its elements and types?  | 20 |
| Q.3         | What is the impact of climate affects building design?  | 20 |
| Section – B |   |    |
| Q.4         | Write short notes :<br><ul style="list-style-type: none"> <li>- Innovative structural systems building aesthetics</li> <li>- Types of entrance</li> </ul> | 10 |
| Q.5         | What is role of an architect in performing activities efficiently?  | 10 |
| Q.6         | Write short notes :<br><ul style="list-style-type: none"> <li>- Mass and form</li> <li>- Thermal comfort</li> </ul>                                       | 10 |
| Q.7         | What are the factors which are involve in designing Building & its site relationship?   | 10 |
| Q.8         | Define form and function. Describe their relationship by quoting examples from nature and manmade objects.  | 10 |



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**SUBJECT CODE NO:- H-5022**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**F. Y. Arch (Rev.) (Sem-II)**  
**H.A. - I**

**[Time: Three Hours]****[Max. Marks:100]**

N.B Please check whether you have got the right question paper.

1. Question number 1 and 2 are compulsory.
  2. Solve any six questions from the remaining.
  3. Draw neat sketches wherever necessary.
- 
- |      |  |    |
|------|--|----|
| Q.1  | Compare the characteristic feature of typical Indo-aryan and Dravidian style of Temple Architecture, with one example of each style. | 20 |
| Q.2  | Explain the significance of a Stupa and describe its form and design with an illustration.   | 20 |
| Q.3  | Discuss briefly the evolution of the Vedic village.  | 10 |
| Q.4  | With sketches explain the architectural treatment of the Kailasanatha temple at Ellora.  | 10 |
| Q.5  | Difference between “Chaityas” and “Viharas” with suitable examples.  | 10 |
| Q.6  | What are the different parts of an Orissan temple.   | 10 |
| Q.7  | Explain the evolution of various forms of Gopuram in Dravidian Architecture.   | 10 |
| Q.8  | Elaborate with neat sketches (any one):<br>Surya Kund, Modher OR Sun Temple, Konark.   | 10 |
| Q.9  | Draw neat sketches (any one):<br>Kandariya Mahadev Temple, Khajurao OR Meenakshi Temple, Madhurai.                                   | 10 |
| Q.10 | Write a note on the town planning concepts and the Architecture of the Indus Valley Civilization.                                    | 10 |

Total No. of Printed Pages:2

**SUBJECT CODE NO:- H-5027**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Rev.) (Sem-I)**  
**A.B.C.M.- I**

**[Time: Four Hours]****[Max.Marks:100]**

N.B

Please check whether you have got the right question paper.

- 1) Question no 1 and question no. 4 are compulsory.
- 2) Answer any one question from section A and any two questions from section B from remaining.
- 3) Use drawing sheet for section A and answer sheet for section B.
- 4) Assume suitable data wherever necessary.
- 5) Draw neat sketches wherever required.

**Section A**

**Q.1** Design a suitable foundation for a hall with dimensions 4m × 6m (clear distance) in load bearing structure with 345 mm thk. Brick wall (1 ½ bk. Thk.) for super structure. There are brick piers at 2 m c/c distance along with longer side. Assume depth of foundation as 1.5m below the ground level, and plinth level as 0.6 m above the ground level. 35

- i) Draw key of the hall showing all the positions of piers. (scale 1:50)
- ii) Draw a plan and detailed section of an external wall up to plinth level showing all foundation details in UCR masonry. (1:10)

**Q.2** Draw plan elevation and isometric view of three consecutive courses of the following. 35

- i) Right angled corner of 1 ½ bk. Thk. Wall in double Flemish bond.
- ii) T- Junction of 1 ½ bk. Thk. Wall with 2 bk. Thk. Wall in English bond.

**Q.3** Draw assuming suitable scale. 35

- a) Draw elevation of semi-circular arch with span of 1.2 m. Label neatly all the components of Arch.
- b) Draw elevation of four centered arch with span of 1.2m.
- c) Draw isometric view with all the dimensions.
  - i) Beveled bat larger.
  - ii) King closer.

**Section- B**

**Q.4** Explain in detail the process of preparation of clay for manufacturing of clay. Give neat diagram wherever necessary. 10

**Q.5** Describe the manufacturing process of cement. 10



- Q.6 Write short notes on the following (any two):
- Hoffman's kiln.
  - Use of bamboo in building construction.
  - Defects in timber.

10

- Q.7 Explain stone masonry and its types.

10

Total No. of Printed Pages:1

**SUBJECT CODE NO:- H-5028**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-I)**  
**A.B.C.- I**

**[Time: Four Hours]****[Max.Marks: 80]**

Please check whether you have got the right question paper.

N.B

- 1) Solve any two questions from each section.
- 2) Draw neat sketches where ever necessary.
- 3) Figures to the right indicate full marks.

**Section A**

- Q.1 Draw entire detail section of the building showing all structural components from foundation to parapet wall in suitable scale. 30
- Q.2
- a) Draw isometric view of the following type of bricks with their respective dimensions. 15
    - 1) Three Quarter Bat.
    - 2) Beveled Closer.
    - 3) Queen Closer.
  - b) Draw Plan and isometric view of right angle junction of 1 ½ thick brick wall in single Flemish 15 bond.
- Q.3 A single shutter double paneled T.W. door is to be provided for a Bed Room of a flat. The clear opening in the wall is 1000 X 2100 mm. The size of door frame is 75 X 100. The thickness of door shutter is 30 mm. 12
- 1) Draw Plan, Elevation and Section of the door.
  - 2) Draw large scale details. Scale 1:2 18
    - a) Joint between Head and Post of door frame.
    - b) Joint between lock rail and stile.
    - c) Joint between lock rail and panel.

**Section B**

- Q.4 Define various structural components of building with reference to Q.No.1. 10
- Q.5 Explain the process of preparation of clay for manufacturing of Bricks. 10
- Q.6 Explain the Load Bearing Capacity of Soil and its methods to find out the bearing capacity of soil. 10

Total No. of Printed Pages:1

**SUBJECT CODE NO:- H-5032**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Rev.) (Sem-I)**  
**D.F.A.- I**

**[Time: Three Hours]****[Max.Marks:100]**

- N.B Please check whether you have got the right question paper.
- 1) Q. No.1 from Sec 'A' and Q.No.5 from Sec. 'B'; are compulsory. Out of the remaining three questions from each section, solve any Two.
  - 2) Answers to two sections must be written in one answer book only.
  - 3) Figures to the right indicate full marks.

**SECTION A**

- |     |   |      |
|-----|---|------|
| Q.1 | a) Describe Architecture as an occupation.                          | 10   |
|     | b) What is the relation between Architecture, Science & technology. | 15   |
| Q.2 | Describe the concept of beauty and relation between art & beauty.   | 12 ½ |
| Q.3 | Describe the basic principles of Visual perception.                 | 12 ½ |
| Q.4 | Describe Form and its visual properties.                            | 12 ½ |

**SECTION B**

- |     |  |      |
|-----|--|------|
| Q.5 | a) What is the relation between mass & space.  | 10   |
|     | b) Explain with sketches how mass defines space as also now space has an impact on the built environment.                | 15   |
| Q.6 | What is a facade and how fenestration affects the character of a facade- Explain with sketches.                          | 12 ½ |
| Q.7 | What is proportion in a built environment and quote some examples from history of iconic buildings and their proportion. | 12 ½ |
| Q.8 | What is scale in architecture and its impact on human activities.  | 12 ½ |

Total No. of Printed Pages:2

**SUBJECT CODE NO:- H-5033**  
**FACULTY OF SCIENCE & TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-I)**  
**Building Material**

**[Time: Two Hours]**

**[Max. Marks:40]**

Please check whether you have got the right question paper.

N.B

- 1) Question No. 1 is compulsory.
- 2) Solve any Three out of remaining questions.
- 3) Draw neat sketches to elaborate your answers.
- 4) All questions carry equal marks.

Q.1 (A) Multiple Choice Questions

(10)

- 1) The internal size of mould used in brick preparation is
  - A. Equal to the size of a fully burnt brick
  - B. Smaller than the size of a fully burnt brick
  - C. Greater than the size of a fully burnt brick
  - D. None of the above
- 2) Good quality stones must
  - A. Be durable
  - B. Be free from clay
  - C. Resist action of acids
  - D. All of the above
- 3) Bulking of sand is caused due to
  - A. Surface moisture
  - B. Air voids
  - C. Viscosity
  - D. Clay contents
- 4) Pug mill is used for
  - A. Preparation of clay
  - B. Moulding of clay
  - C. Drying of bricks
  - D. Burning of bricks
- 5) The frog of the brick in a masonry is generally kept on
  - A. Bottom face
  - B. Top face
  - C. Shortest side
  - D. Longer side

- Q.2 Explain all the methods involve in preparation of clay for manufacturing of brick. 10
- Q.3 Explain with neat sketches different construction methods involve with Mud. 10
- Q.4 A) What do you understand by Bulking of Sand, Explain your answer with the test involve in finding bulking of sand. 05  
B) What are different classifications of sand? 05
- Q.5 Differentiate between: (any two) 10  
i) Rubble Masonry & Ashlar Masonry  
ii) Kiln Burning and Clamp Burning  
iii) Bulls Trench Klin and Hoffman's Klin
- Q.6 Define the following: 10  
i) Calcination,  
ii) Lime,  
iii) Setting,  
iv) Slaked lime.

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**SUBJECT CODE NO:- H-5037**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Sem-I)**  
**E.C.A.C.A.**  
**[Revised]**

**[Time: Three Hours]****[Max. Marks:100]**

Please check whether you have got the right question paper.

- N.B. 1) Question number 1 and 2 are compulsory  
 2) Solve any four questions from the remaining  
 3) Draw neat sketches wherever necessary
- Q.1 Outline the evolution of the pyramid from the mastaba in Ancient Egypt. Illustrate adequately with sketches 20
- Q.2 Write short notes of any four of the following 20
- Greek agora
  - Colosseum , Rome
  - Parthenon , Greece
  - Hanging gardens of Babylon
  - Thermae of Caracalla
  - Stone Henge
- Q.3 Explain the Greek column orders. Write in detail optical corrections adopted by the Greeks in their buildings . 15
- Q.4 How did man in the stone Age respond to his surroundings in the making of his shelter? Illustrate through case studies. 15
- Q.5 Differentiate between Cult and mortuary temples of Egypt with suitable examples and sketches. Write a note Great pyramid of cheops 15
- Q.6 Describe with sketches the development of Ziggurats. Draw neat sketches of ziggurat of Ur-Nammu . 15
- Q.7 'Romans were master builders'. Illustrate this statement with the huge structures built by the Romans. 15



Total No. of Printed Pages:01

**SUBJECT CODE NO:- H-5038**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-I)**  
**D.F.A. -I**

**[Time: Three Hours]****[Max.Marks:80]**

Please check whether you have got the right question paper.

- N.B
1. Q. No. 1 from section A and Q. No. 5 from sec 'B' are compulsory. Out of the remaining three questions form each section, solve any two.
  2. Answers to two sections must be written in one answer book only.
  3. Figures to the right indicate full marks.

**Section A**

- Q.1 Fill in the blanks with a correct option from the words given in brackets. 10
- a) Architecture is a \_\_\_\_\_(business, Profession )
  - b) Architecture is \_\_\_\_\_and science of building. (Art, Aesthetics)
  - c) Falling waters by Frank Lloyd wright is a \_\_\_\_\_form. (planar , plastic)
  - d) In general mass is determined by its (weight, volume)
- Q.2 What are the essential characteristics of the work of a Technologic? 15
- Q.3 Define beauty and Art. Explain how Architecture differs from Art & beauty. 15
- Q.4 What are the basic principles of visual perception? 15

**Section B**

- Q.5 Select the correct option from the words given in brackets. 10
- a) A technologist in his work is only concerned about the aesthetics. (True , False)
  - b) Guggenheim Museum in New York is a plastic form. (True , False)
  - c) Form follows function. (True , False)
  - d) In Lotus Temple in New Delhi, it is the function which follows the form. (True , False)
- Q.6 Define Mass & Space. Explain the type of spaces in a built environment. 15
- Q.7 What is Human Scale and compare it with generic Space. 15
- Q.8 Define Articulation of form and describe how form can be Articulation 15

Total No. of Printed Pages:01

**SUBJECT CODE NO:- H-5042**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (Sem-I)**  
**E.S.**  
**[Revised]**

[Time: Three Hours]

[Max. Marks:100]

Please check whether you have got the right question paper.

- N.B. 1) All question are compulsory  
 2) Draw sketches wherever necessary  
 3) Assume suitable data if necessary
- Q.1 a) Explain in brief how over exploitation of forest is taking place. Describe the concept of 10  
 'Deforestation'  
 b) Write short notes on following ( any two) 10  
 i) Ex-situ conservation  
 ii) Biotic components of ecosystem  
 iii) Water Conservation
- Q.2 Attempt any two of the following  
 i) Describe in detail Water shed Management? 10  
 ii) Give an account of energy flow in an Ecosystem? 10  
 iii) Explain the importance of Natural Resource. What do you understand by renewable 10  
 energy sources?
- Q.3 a) Write an account on equitable use of resources for sustainable life style? 10  
 b) Write short notes on following ( any two ) 10  
 i) Population Explosion  
 ii) Value Education  
 iii) AIDS
- Q.4 Attempt any two of the following  
 i) Justify the term 'Hotspot of Biodiversity.' 10  
 ii) Write an essay on environment and Human Health 10  
 iii) Discuss in detail Family Welfare Programmes. Add a note on family planning 10
- Q.5 Describe in detail, 'The Urban Problem' related to energy. 10
- Q.6 Give a brief account of wildlife Protection Act 10

Total No. of Printed Pages:1

**SUBJECT CODE NO:- H-5043**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-I)**  
**E.C.A.C.A.**

**[Time: Three Hours]****[Max.Marks:100]**

Please check whether you have got the right question paper.

N.B

1. Q.No.1 from section A & Q.5 section B are compulsory.
2. Solve any two questions from each section out of remaining questions.
3. Draw neat sketches where necessary, figures to the right indicates full marks.

**Section A**

- |     |   |    |
|-----|---|----|
| Q.1 | Write short notes on any four:<br>a) Greek city planning<br>b) Culture and civilization<br>c) Palace at sargaon<br>d) Optical Corrections adopted by Greeks<br>e) Agora | 24 |
| Q.2 | Explain the architectural character of Sumerian architecture with suitable examples.  | 13 |
| Q.3 | What are the stages of evolution of pyramids from mastaba? Explain with neat sketch.  | 13 |
| Q.4 | Write in brief about evolution and development of shelters in prehistoric period. Explain with the help of neat sketch.   | 13 |

**Section B**

- |     |  |    |
|-----|--|----|
| Q.5 | Write short notes on any four:<br>a) Basilica of Constantine<br>b) Cult temples<br>c) Pyramid of Giza<br>d) Thermae of Caracalla<br>e) Religious beliefs and Culture in Egypt. | 24 |
| Q.6 | Compare Greek and Roman column orders in respect of their form, decoration, Capitals and materials used. Explain with suitable sketches.                                       | 13 |
| Q.7 | How did the material and techniques of construction affect the public buildings in Roman era?  | 13 |
| Q.8 | Compare and elaborate on importance of entrance gates across Egyptian and Mesopotamian civilization.   | 13 |

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**SUBJECT CODE NO:- H-5047**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**F. Y. Arch (CBCS) (Sem-I)**  
**E.S.**

**[Time: Three Hours]****[Max.Marks:80]**

N.B

Please check whether you have got the right question paper.

- 1) All questions compulsory.
- 2) Illustrate your answer with sketches wherever necessary.

Q.1 Multiple Choice Questions

10

- A) The complex network of interconnected food change is called-----
- i) Trophic level
  - ii) Food web
  - iii) Ecological pyramid
  - iv) Ecology chain
- B) Which of the following is a biodiversity hotspot in India?
- i) Nandadevi
  - ii) Eastern Ghats
  - iii) Aravalli
  - iv) Western Ghats
- C) The natural place where the organisms or communities live is known as:
- i) Niche
  - ii) Habit
  - iii) Habitat
  - iv) Biome
- D) Reduce, reuse and recycle can conserve our
- i) Environment
  - ii) Food
  - iii) Climate
  - iv) Oxygen
- E) Environment can be kept clean and green by using
- i) Less energy
  - ii) Environment friendly technology
  - iii) Protecting wildlife
  - iv) All of them

- Q.2 Define the Following (any five) 10
- Energy Flow
  - Food Chain and Food Web
  - Ex-situ conservation
  - Habitat and Niche
  - Bio-Swales
  - Ecological Planting
- Q.3 Attempt any two of the following:
- Enumerate the role of individual in preservation of environment? 10
  - Explain in brief how overexploitation of forest is taking place Describe the concept of 'Deforestation'. 10
  - What do you mean by Environmental Protection Act? 10
- Q.4 Write short notes on following (any two): 10
- Chipko Movement
  - Name any two environment activist and their contribution
  - Inverted Pyramid
- Q.5 Attempt any two of the following:
- Explain the concepts of Rain Water Harvesting in detail? 10
  - Explain the importance of Natural Resources. What do you understand by renewable energy sources. 10
  - Enlist and describe India's Bio – geographic zones. 10
- Q.6 Write an essay on the theme:- Analyze the impact of environmental degradation on traditional communities. 10