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VTU QUESTION PAPERS INDEX LIST JULY- AUGUAT 2021

CBCS SCHEME

18ARC14

USN ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

First Semester B.Arch. Degree Examination, July/August 2021
History of Architecture – I

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   "As man progressed from being a hunter-gatherer to a settled farmer, his dwellings developed from naturally occurring to temporary to permanent settlements." Substantiate the above statement using examples of prehistoric dwelling units/settlements from across the globe.   **(20 Marks)**

2   Write short notes with sketches on:
a. Dolmen tombs.
b. Stone henge.
c. Gallery grave.
d. Passage grave.
e. Menhirs.   **(20 Marks)**

3   a. Write a note on the religious structures of Mayan civilization describing their planning, material and methods of construction.   **(10 Marks)**
b. Write a note with sketches on the dwelling units of the people living in the Sahara Desert.   **(10 Marks)**

4   Tribal cultures across the world still have ways of life that are primitive and very close to nature. Substantiate using the example of one Indian tribe and one tribe from outside the country.   **(20 Marks)**

5   Write short notes on:
a. Great Bath of Mohenjodaro.
b. Ziggurat at Tchoga Zanbil.
c. Temple of Khans.
d. Palace of Sargon.
e. Granary of Indus Valley Civilization.   **(20 Marks)**

6   "The Egyptians believed in life after death and hence their tomb structures were glorified." Substantiate the statement by tracing the development of funerary structures built by the Pharoahs of Egypt.   **(20 Marks)**

7   a. Explain with sketches dwellings of Jomon and Yayoi periods of Japanese civilization.   **(10 Marks)**
b. Write a short note about the burial mounds of the Kofun period.   **(10 Marks)**

8   a. Describe with appropriate sketches the architecture and significance of Niuheliang Ritual centre at Banpo village.   **(10 Marks)**
b. Illustrate and describe the architecture of the Shang Dynasty Palace complex.   **(10 Marks)**

9   Write short notes with sketches on:
a. Treasury of Atreus.
b. Lion Gate of Mycenae.
c. Etruscan temple (Juno Sospita)
d. Megaron.   **(20 Marks)**

10   a. Explain the salient features of a vedic village with respect to the layout and roof forms of the houses.   **(10 Marks)**
b. Explain how the Vastupurusha mandala gives fundamentals for designing the houses/dwelling units of a town.   **(10 Marks)**

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18ENG15

USN ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

First Semester B.Arch. Degree Examination, July/August 2021
Building Structures – I

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions.
2. Follow written dimensions, do not scale the drawing.

1 a. Explain the following construction materials with emphasis on structural properties and uses:
   (i) Steel (ii) Wood (iii) Aluminium. **(12 Marks)**
   b. Explain Dead Load and Live Load. Determine the total Dead Load of RCC Beam of cross sectional dimension 200mm × 400mm and length 4 mt. Take the density of RCC material as 25 kN/m³. **(08 Marks)**

2 a. Explain briefly Ductility and Brittleness. **(04 Marks)**
   b. Explain with examples Static Load and Dynamic Load. **(08 Marks)**
   c. What is workability of concrete? What are the factors that affect the workability of concrete? **(08 Marks)**

3 a. Explain (i) Force and classification of Force system
       (ii) Parallelogram Law of forces. **(08 Marks)**
   b. Determine the magnitude and directions of the resultant force, for the coplanar concurrent force system shown in Fig.Q3(b).
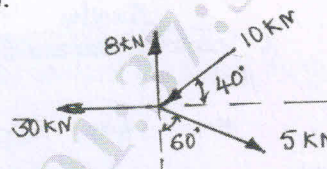

Fig.Q3(b) **(09 Marks)**

   c. Determine the moment of the force shown in below Fig.Q3(c), about point 'O'.
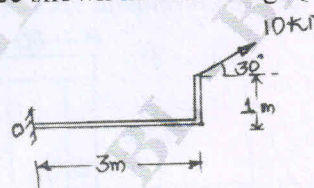

Fig.Q3(c) **(03 Marks)**

4 a. Differentiate between (i) Resolution of force and composition of force. (ii) Rigid body and Deformable body (iii) Resultant and equilibrant. **(09 Marks)**
   b. For the coplanar concurrent force system shown in Fig.Q4(b). The magnitude and direction of the resultant force is 300 kN and 40° with respect to horizontal as shown in figure below. Determine the magnitude of the unknown force 'F'.
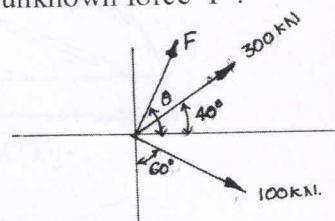

Fig.Q4(b) **(11 Marks)**

1 of 3

5   a. For the coplanar non-concurrent force system shown in Fig.Q5(a) below. Determine the magnitude, direction and position of the resultant force with respect to point 'A'.
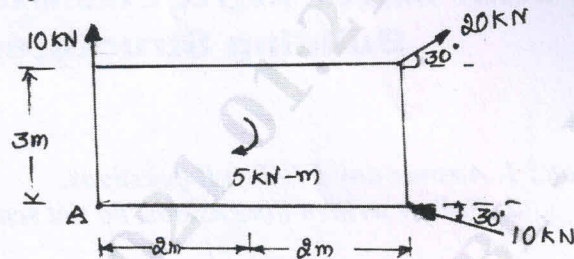

Fig.Q5(a)   (10 Marks)

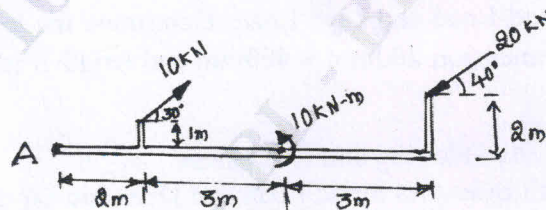   b. For the force system shown in Fig.Q5(b) below, determine the resultant force with respect to point 'A'

Fig.Q5(b)   (10 Marks)

6   a. With neat sketches explain statically determinate and statically indeterminate beams.
                                                                    (08 Marks)

   b. Determine the support reactions for the beam shown in Fig.Q6(b) below.
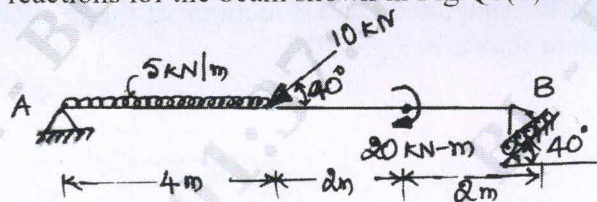

Fig.Q6(b)   (12 Marks)

7   a. Locate the centroid for the composite section shown in Fig.Q7(a) below.

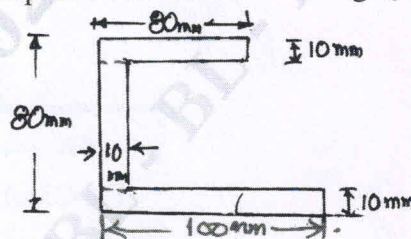Fig.Q7(a)   (08 Marks)

   b. Locate the centroid for the shaded area shown in below Fig.Q7(b).
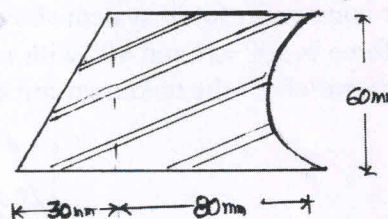
Fig.Q7(b)   (12 Marks)

8 a. State and prove parallel axis theorem. **(06 Marks)**

b. Determine the polar moment of inertia for the T-section shown in below Fig.Q8(b).
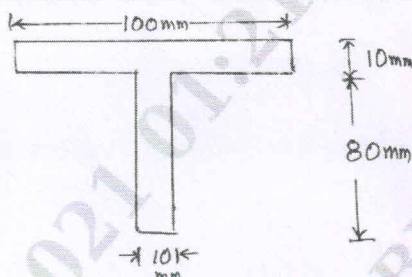
Fig.Q8(b) **(14 Marks)**

9 a. With neat sketch, explain
(i) Perfect frame   (ii) Deficient frame   (iii) Redundant frame. **(09 Marks)**

b. Determine the forces in the truss shown in Fig.Q9(b).

Fig.Q9(b) **(11 Marks)**

10 a. Mention the assumptions made in analysis of frames. **(05 Marks)**

b. For the frame shown in Fig.Q10(b) analyse the forces by the "Method of Joints" and indicate the name of the force.

Fig.Q10(b) **(15 Marks)**

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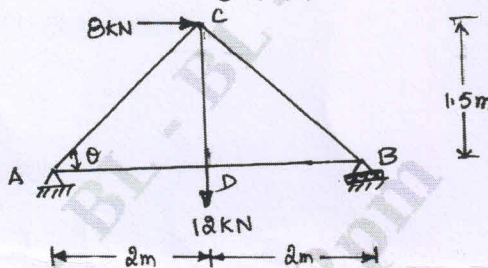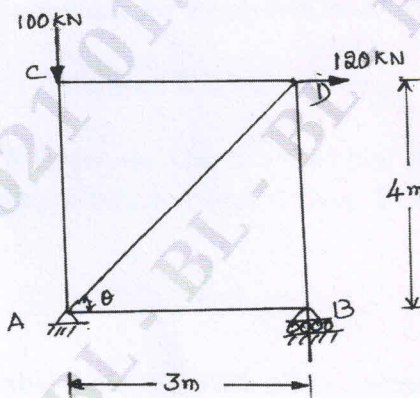
Second Semester B.Arch. Degree Examination, July/August 2021
Materials and Methods in Building Construction - II

Time: 4 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   Explain with neat sketches :
    a. Lean to roof.   (04 Marks)
    b. Collared roof.   (08 Marks)
    c. Queen past roof.   (08 Marks)

2   A hall measuring 8m × 4m has to be provided with steel truss roof , draw to suitable scale
    a. Key Plan.   (05 Marks)
    b. Any three details of the roofing system.   (15 Marks)

3   Write short notes on :
    a. Types of concrete.   (05 Marks)
    b. Ingredients of Concrete (R.C.C).   (05 Marks)
    c. Properties of R.C.C.   (05 Marks)
    d. Role of Admixture.   (05 Marks)

4   a. What is R.C.C? Explain role of reinforcement in R.C.C. Discuss its grades and properties.
                                                      (15 Marks)
    b. Explain briefly what is Cement and its types.   (05 Marks)

5   a. Show with neat sketches Formwork for Beam and Roof.   (10 Marks)
    b. Write short notes on :
       i) Compacting   ii) Testing of R.C.C.   (10 Marks)

6   A column of size 300 × 300mm has to be provided with an R.C.C isolated footing 1200 × 1200mm. Assume necessary diameter and spacing. Draw in suitable scale :
    a. Plan.   (06 Marks)
    b. Section.   (06 Marks)
    c. Isometric View.   (08 Marks)

7   Draw a timber staircase in suitable scale and mark all its components :
    a. Plan.   (05 Marks)
    b. Sectional Elevation.   (05 Marks)
    c. Two details.   (10 Marks)

8   Explain with neat sketches and short notes :
    a. Folded Plate Staircase.   (07 Marks)
    b. Stringer beam in R.C.C Staircase.   (07 Marks)
    c. Precast Staircase.   (06 Marks)

9   Design a Spiral steel staircase for a residence having 900mm width. Assume floor to floor height 3150mm.

     a.   Plan.   **(05 Marks)**

     b.   Longitudinal Section.   **(05 Marks)**

     c.   2 enlarged details.   **(10 Marks)**

10   Design a composite staircase with Brick / Stone / Wood / Bamboo / Steel / Glass etc from your memory for your own residence. Draw typical details :

     a.   Plan.   **(05 Marks)**

     b.   Sectional Elevation.   **(05 Marks)**

     c.   Two details.   **(10 Marks)**

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Second Semester B.Arch. Degree Examination, July/August 2021
Building Structures II

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   a. State and explain 'Poisson's ratio'.   **(04 Marks)**

     b. A bar 2000mm long and 30mm dia is subjected to an axial pull of 30kN. If E of the material is 2.0×10^5 N/mm², calculate:
       i) Stress
       ii) Elongation of the bar
       iii) Strain.   **(06 Marks)**

     c. An axial pull of 40kN is acting on a bar consisting of three sections of length 300mm, 250mm, and 200mm of dia 20mm, 40mm and 50mm respectively. $E = 2 \times 10^5$ N/mm². Calculate:
       i) Stress in each section
       ii) Total elongation of the bar.   **(10 Marks)**

2   a. State the relationship between elastic constants.   **(05 Marks)**

     b. A rod which tapers uniformly from 50mm dia to 30mm dia in a length of 500mm is subjected to an axial pull of 6000N. E = 200kN/mm², calculate the elongation of the bar.   **(05 Marks)**

     c. Calculate the dia 'D' of the bar shown Fig Q2(c) if the total elongation of the ABCD is 1.65mm. $E = 2 \times 10^5$ N/mm², All dimensions in 'mm'
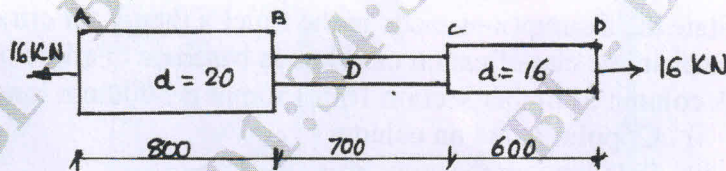

Fig Q2(c)   **(10 Marks)**

3   a. Define 'bending moment' and 'Shear Force' at any section of a beam.   **(03 Marks)**

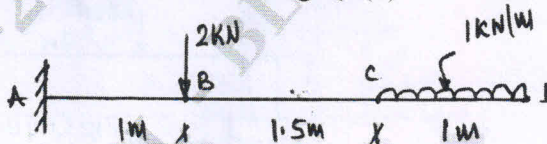   b. Draw SFD and BMD for the beam shown in Fig Q3(b)

Fig Q3(b)   **(07 Marks)**

     c. Draw SFD and BMD for the beam shown in Fig Q3(c). Indicate the salient values.
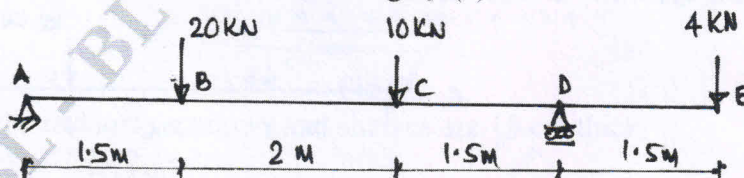

Fig Q3(c)   **(10 Marks)**

4   a.   Define "Bending moment diagram" "Shear Force" and "point of contrflexture".   (06 M.

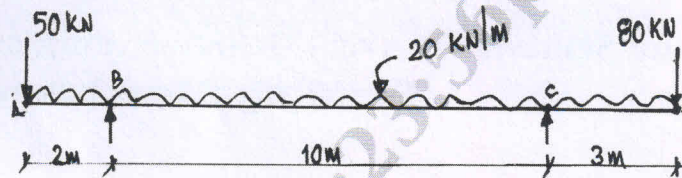   b.   Draw SFD and BMD for the beam shown in Fig Q4(b). Indicate the salient values.

Fig Q4(b)   **(14 Marks)**

5   a.   State and explain simple bending equations.   **(03 Marks)**

      b.   State and explain shear stress equation.   **(03 Marks)**

      c.   A rectangular beam of width 250mm and depth 480mm is used to support a bending moment of 200kNm and a shear force of 150kN. Sketch the variation of bending stress and shear stress across the cross-section of beam.   **(14Marks)**

6   a.   Define "Simple bending" with an example.   **(04 Marks)**

      b.   Explain "Section Modulus" with an example.   **(04 Marks)**

      c.   A T-beam of flange 100×15mm and web 20×120mm is subjected to a bending moment of 20kNm and a shear force of 18kN. Sketch the variation of bending stress and shear stress.

                                                    (12 Marks)

7   a.   State the expressions for "Effective length of columns" for various end conditions, with neat sketches. (Four standard cases).   **(08 Marks)**

      b.   Calculate the safe load on a hollow cast iron column of 100mm external dia and 70mm internal dia and length 8mt, with one end fixed other end hinged. E = 95kN/mm^2. Factor of safety 4.   **(12 Marks)**

8   a.   State the assumptions made in the Euler's theory for critical load on long columns. **(06 Marks)**

      b.   Explain the classification of columns based on "Failure of columns".   **(04 Marks)**

      c.   A column of timber section 100×150mm is 5000mm long with both ends fixed. Calculate :
         i)   Crippling load on column
        ii)   Safe load on the column
        E = 17.5kN/mm^2, Factor of safety 3.

                                                    (10 Marks)

9   a.   Define "Slope" and "Deflection" of a beam with a sketch.   **(08 Marks)**

      b.   Calculate the deflection at the free end of the over – hanging beam shown in Fig Q9(b).
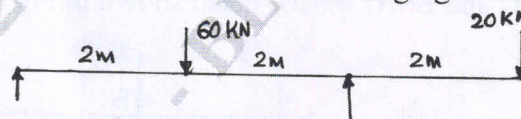

Fig Q9(b)   **(12 Marks)**

10   Calculate the slope at the supports and deflection under the loads for the beam shown Fig Q10. E = 2 × 10^8 kN/m^2, I = 0.0003m^4.

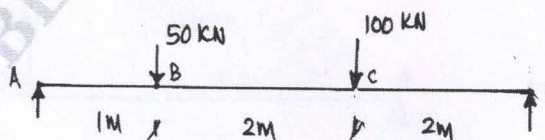Fig Q10   **(20 Marks)**

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USN ☐☐☐☐☐☐☐☐☐☐   **15ARC46/15ENG46**

Fourth Semester B.Arch. Degree Examination, July/August 2021
Specification, Quantity and Costing of Buildings

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   a.   Explain the need of Estimation.   **(07 Marks)**
        b.   Explain the factors affecting estimation of a building.   **(13 Marks)**

2   a.   Write detailed specification for Earth work in excavation in foundation.   **(10 Marks)**
        b.   Write detailed specification for cement concrete 1 : 2 : 4.   **(10 Marks)**

3   Estimate the quantities of the following items of a two roomed building from Fig. Q (3).
        (i)   Earthwork in excavation in foundation.
        (ii)   Cement concrete in foundation.
        (iii)   Size stone masonry in CM 1 : 6 for foundation and plinth.
        (iv)   2.5 cm D.P.C
        (v)   First class brick work in CM 1 : 4 for super structure.
        Use long wall-short wall method.   **(20 Marks)**
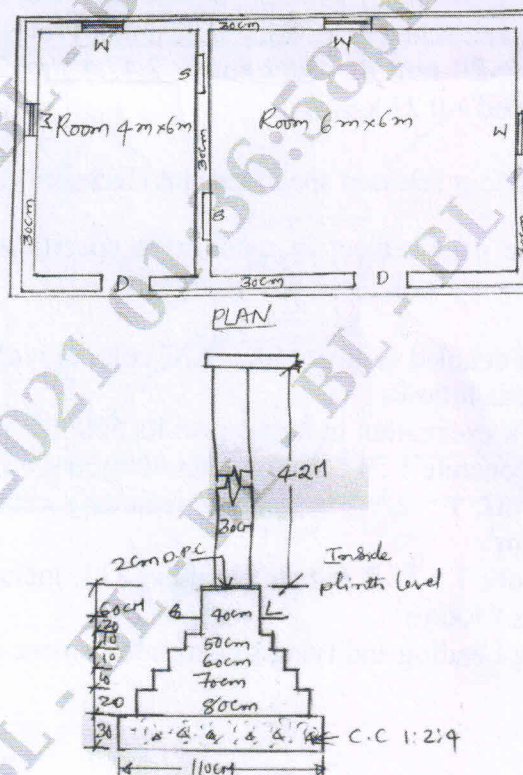

Fig.Q3

Note : (i) Lintels over doors, windows and shelves are 15 cm thick.
       (ii) Doors D – 1.2 × 2.1 m
            Windows W – 1.00 × 1.5 m
            Shelves - 1.00 × 1.5 m.

4 a. Why and how do you build flexibility, resilence and redundancy in BOQ? (10 M...)
b. What are mandatory tests and safety measures in specification? (10 Ma...)

5 a. Why do rates vary? Write a note on PWD schedule of rates and market rates. (06 Marks)
b. Explain concept of inflation and its effect on costing. Write about escalation clause, extra items and variations. (14 Marks)

6 Do detailed analysis of rates for the following:
a. R.C.C works in beams, slabs etc 1 : 2 : 4. (10 Marks)
b. First class brickwork in foundation and plinth in CM 1 : 6. (10 Marks)

7 Prepare a detailed estimate of a R.C.C. roof slab of 3 m clear span 12 cm thickness and 6 m clear long. Slab bearing on masonry is 150 mm alround. Reinforcement consists of 12 mm diameter main bars 12 cm C/C alternate bent up and distribution 6 mm diameter at 18 cm C/C. R.C.C work in centring and shuttering but excluding reinforcement is Rs.8000/m^3. Providing and tying reinforcement is Rs.90 per kg. Do sketching and prepare schedule of bars. (12 mm rod – 0.89 kg/m, 6 mm rod – 0.22 kg/m) (20 Marks)

8 Prepare a detailed estimate of a R.C.C beam of 8 m clear span (and 30 cm end bearing on masonry) and 75 cm × 40 cm in section. Beam top reinforcement is 2 Nos – 12 mm diameter bars. Beam bottom reinforcement is in 2 layers. First layer is 4 nos. 22 mm diameter bars, 2 nos. bent up at ends. II layer is 4 nos. 20 mm diameter bars, 2 nos. bent up at ends. Beam end stirrups consists of 10 mm diameter @ 12 cm C/C (5 nos.) and 10 mm diameter at 20 cm C/C (4 nos.) Provide 6 mm diameter stirrups in central remaining length. Do sketching and schedule of bars. Schedule of rates is same as Q.No.7 (12 mm diameter rod – 0.89 kg/m, 20 mm diameter rod – 2.47 kg/m, 22 mm diameter rod – 2.98 kg/m, 6 mm diameter rod – 0.22 kg/m) (20 Marks)

9 a. Write any four relevant specifications (Detailed) for water supply and sanitary works. (12 Marks)
b. Write role of Architect in monitoring specifications for quality control. Write a note on Measurement Book (MB) and RA bills. (08 Marks)

10 Prepare a detailed estimate of a RCC column with footing from the given drawing Fig. Q10. Rates are as follows :
a. Earthwork excavation in foundation Rs.500/m^3.
b. Cement concrete 1 : 4 : 8 in base Rs.4000/m^3.
c. R.C.C work 1 : 2 : 4 in footing including centring and shuttering, but excluding steel - Rs.8000/m^3
d. R.C.C work 1 : 2 : 4 in column above G.L including centring and shuttering but excluding steel – Rs.8400/m^3
e. Providing bending and tying steel reinforcement – Rs.90/kg. (20 Marks)

Vertical bars
6 Nos - 16 mm dia
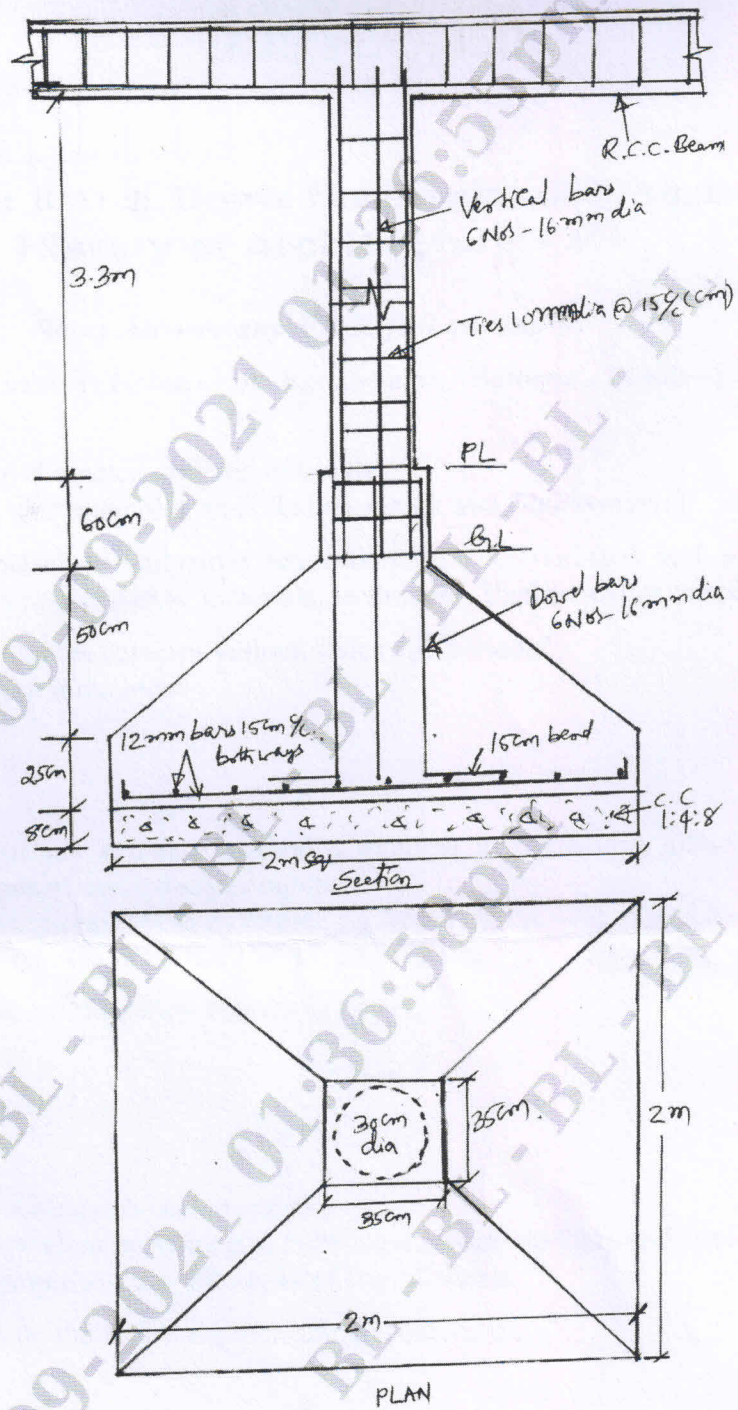
Ties 10 mm dia @ 15% (cm)

R.C.C. Beam

PL

GL

Dowel bars
6 Nos - 16 mm dia

12 mm bars 15 cm %
both ways

15 cm bead

C.C
1:4:8

3.3m

60 cm

50 cm

25 cm

8 cm

2 m sq.

Section

3 cm
dia

35 cm

35 cm

2 m

2 m

2 m

PLAN

Fig. Q10

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15ARC54

USN ☐☐☐☐☐☐☐☐☐☐

Fifth Semester B.Arch. Degree Examination, July/August 2021
History of Architecture – V

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   Enumerate the salient features of Renaissance, Baroque, neoclassical and modern architecture.   **(20 Marks)**

2   a. Explain the salient characters of Palladian style.   **(10 Marks)**
     b. Write short notes with examples on Palladian, Greek and Gothic revival.   **(10 Marks)**

3   Highlight the impact of industrial revolution on socio-cultural and political changer, emergence of new requirements, materials, techniques. Explain with examples.   **(20 Marks)**

4   What are the similarities between various styles and periods?
     a. Modern art and craft movement
     b. Art–Noveau
     c. Italian futurism
     d. Chicago School.   **(20 Marks)**

5   a. The emergence of sky scrapers marked a moment in the history of world architecture. Explain the features of earliest sky-scrapers.   **(10 Marks)**
     b. What is Brutalism? Explain with example.   **(05 Marks)**
     c. Write short notes on : i) Destijl movement ii) Bauhaus.   **(05 Marks)**

6   Highlight the works if the following architects.
     a. Louis Sullivan
     b. Le-Corbusier
     c. F.L. Wright
     d. Alvar Aalto   **(20 Marks)**

7   a. What is minimalism explain with example.   **(05 Marks)**
     b. What were the new ideas pertaining to public and private building and spaces. **(05 Marks)**
     c. With suitable example discuss the works of Eero Sarinan.   **(10 Marks)**

8   Write short notes on the following with suitable example :
     a. Floating city
     b. Walking city
     c. US Pavilion in EXPO-67
     d. Dymaxion car.   **(20 Marks)**

9   Write short notes stating the salient features :
     a. Udse of raw concrete
     b. Tinted glass cladding
     c. Works of James Sterling
     d. Works of Peter and Allison Smith.   **(20 Marks)**

10   Explain various movement and its relevance to architectural development
     a. Constructivist movement
     b. Work of Luigi Nervi
     c. Gaustav Eiffel
     d. Parallel movement – Soviet Union 1920.   **(20 Marks)**

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15ARC63

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Sixth Semester B.Arch. Degree Examination, July/August 2021
Building Services III

Time: 3 hrs. Max. Marks:100

Note: *Answer any FIVE full questions.*

1 a. What do you mean by Mechanical Ventilation System? **(03 Marks)**
   b. What is the need for Mechanical Ventilation System for a 2nd basement in the building? **(07 Marks)**
   c. Explain, with proper sketches, the various types of ventilation systems in buildings. **(10 Marks)**

2 a. What are the various External and Internal air conditioning loads for a building and how are they calculated? **(10 Marks)**
   b. What are the various ways of achieving energy efficiency in Mechanical Ventilation System? **(10 Marks)**

3 a. With sketches, explain the working principles of 'SPLIT AIR CONDITIONING' systems. **(08 Marks)**
   b. What are AIR HANDLING UNITS? Explain its various components and their functions with proper sketches. **(12 Marks)**

4 a. What are HEPA filters? Explain its working processes and usability. **(10 Marks)**
   b. What are the various air flow patterns used for air conditioning of clean rooms? Explain with sketches. **(10 Marks)**

5 With the help of neat sketches explain the parts of a typical traction lift. **(20 Marks)**

6 What are the factors influencing choice of elevator in a multi storied building? **(20 Marks)**

7 a. What is Fire? What is meant by fire triangle fire tetrahedron? How is this understanding of fire helpful in preventing loss of life? **(10 Marks)**
   b. How do you plan for evacuation and exits from the building while designing? Explain with sketches. **(10 Marks)**

8 Write short notes on:
   a. Fire doors
   b. Fire sealants
   c. Smoke curtains
   d. Photo luminescent safety signage. **(20 Marks)**

9 What are the recommendations for fire protection for multi-storied buildings as per Indian codes? **(20 Marks)**

10 a. Explain the working of automatic sprinkler system. **(10 Marks)**
   b. With neat sketches, explain components in a fire shaft. **(10 Marks)**

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CBCS SCHEME

Sixth Semester B.Arch. Degree Examination, July/August 2021
Contemporary Architecture

Time: 3 hrs.   Max. Marks: 100

Note: 1. *Answer any FIVE full questions.*
     2. *Draw sketches wherever required.*

1   Describe the design philosophy of architect Louis Kahn. How is this demonstrated in the design of IIM, Ahmedabad.   **(20 Marks)**

2   Explain the ideology of noted architect B.V.Doshi and Elaborate the design of IIM, Bangalore.   **(20 Marks)**

3   Briefly explain the design of the following, with the help of sketches.
      a) IIT Kanpur by Achyut Kanvinde
      b) IIFM Bhopal by Anant Raje   **(20 Marks)**

4   Explain the ideas of the following architects with one example of each
      a) Laurie Baker
      b) Uttam Jain   **(20 Marks)**

5   "Charles Moore interpreted classicism in his own way in piazza D' Italia" – Elaborate.   **(20 Marks)**

6   "Guggenheim Bilbao is a product of the context and architects own interpretation". Discuss.   **(20 Marks)**

7   Elaborate the developments of post modernism and explain the ideas and works of Robert venturi.   **(20 Marks)**

8   What is hightech architecture? Explain the contribution of the following architects towards hightech architecture with an example.
      a) Renzo Piano
      b) Santiago Calatrava.   **(20 Marks)**

9   Explain the ideas of deconstructivism with two examples of Zaha Hadid.   **(20 Marks)**

10   Write short notes on
      a) Bernard Tschumi
      b) Rem Koolhaas   **(20 Marks)**

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15ARC74

Seventh Semester B.Arch. Degree Examination, July/August 2021
Professional Practice - I

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   a. Enumerate the Architects (Professional Conduct) Regulation 1989.   **(10 Marks)**
    b. Explain the various stages of payment that an architech receives as set forth by COA?
                                                                                (10 Marks)

2   a. What are the salient features of Architects 'Act 1972?   **(10 Marks)**
    b. Explain the role of IIA in the profession of architecture.   **(10 Marks)**

3   a. Explain various types of architectural practice.   **(10 Marks)**
    b. How does an Architech build up clientele?   **(10 Marks)**

4   a. Enumerate various types of Architectural competitions.   **(10 Marks)**
    b. Explain the role of Assessor.   **(10 Marks)**

5   a. Give the format for a newspaper publication of a Tender Notice for a building in Banglore, assuming suitable data for the notice.   **(10 Marks)**
    b. What does Tender Document comprise of?   **(10 Marks)**

6   Explain the following :
    a. Ernest money deposit   **(05 Marks)**
    b. Security Deposit   **(05 Marks)**
    c. Mobilization Advance   **(05 Marks)**
    d. Retention Amount.   **(05 Marks)**

7   a. Enumerate various types of Building contracts.   **(10 Marks)**
    b. What is performance Bond?   **(10 Marks)**

8   a. What are an Architects duties and liabilities under the contract?   **(10 Marks)**
    b. Explain the following :
        i)   Liquidated Damages   **(05 Marks)**
        ii) Clerk of work   **(05 Marks)**

9   a. What are the setback regulations for a residential building in a plot of size 12m × 18m in Banglore?   **(10 Marks)**
    b. Explain FAR with illustration.   **(10 Marks)**

10 a. Explain the zoning classification of Banglore city.   **(10 Marks)**
    b. What are the general Regulations applicable to all zones enumerated above? **(10 Marks)**

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CBCS SCHEME

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Seventh Semester B.Arch. Degree Examination, July/August 2021
Urban Design

Time: 3 hrs.

Max. Marks: 100

Note: *Answer any FIVE full questions.*

1 Explain with examples and sketches the five elements of a city according to Kevin Lynch. **(20 Marks)**

2 a. Describe and draw sketches from your memory of any urban area for any two of the following terms used by Gordon Cullen in townscape: Focal point, Projection and Recession, Punctuation. **(10 Marks)**
   b. Write short notes with sketches on serial vision and sense of place emphasized by Gordon Cullen in Townscape. **(10 Marks)**

3 a. Explain the uses of sidewalks and the term "eyes on the street" termed by Jane Jacobs in the book "Death and life of great American cities". **(10 Marks)**
   b. Write short notes on the following conditions for diversity prescribed by Jane Jacobs:
   Need for small blocks
   Need for aged buildings. **(10 Marks)**

4 a. Describe the importance of primary mixed land use in cities. **(05 Marks)**
   b. Discuss advantages and disadvantages of high density of people in cities with examples. **(10 Marks)**
   c. What is the argument proposed by Jane Jacobs on slum rehabilitation projects? **(05 Marks)**

5 a. Explain the concept of collage city proposed by Colin Rowe. **(10 Marks)**
   b. Explain with diagram how the morphology of public space of traditional city is different from the continuous void of the modern city as enumerated in collage city. **(10 Marks)**

6 a. Explain the quote by Aldo Rossi "City is the locus of collective memory". **(05 Marks)**
   b. Discuss with examples how streets and squares are important public spaces in India. **(15 Marks)**

7 Describe in detail the fine performance dimensions for a good city form proposed by Kevin Lynch. **(20 Marks)**

8 Discuss the character of the following public spaces:
   a. Bhadra plaza, Ahmedabad **(05 Marks)**
   b. Chandni Chowk, New Delhi **(05 Marks)**
   c. Cubbon Park, Bangalore **(05 Marks)**
   d. Commercial street, Bangalore. **(05 Marks)**

9 a. Explain the quote by Charles Correa "You can save space by building high, but you lose the connection to the ground". **(05 Marks)**
   b. What are the seven cardinal principles for Housing according to Charles Correa in the third world? Explain with some of Correa's urban scale projects. **(15 Marks)**

10 Describe in detail the ideas of sustainable urbanism through any two of B.V. Doshi's urban scale projects. **(20 Marks)**

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15ARC84

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Eighth Semester B.Arch. Degree Examination, July/August 2021
Professional Practice – II

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1 a. What is Arbitration? What are the duties and the procedure of arbitration? **(10 Marks)**
   b. Explain the different modes of settlement of disputes. **(10 Marks)**

2 Write short notes with examples on the following :
   i)   Conciliation
   ii) Differences between Arbitration and conciliation
   iii) Advantages of Arbitration
   iv) Common disputer. **(20 Marks)**

3 a. What do you mean by valuation? Explain in detail the purpose of valuation. **(10 Marks)**
   b. Describe any two methods of valuation. **(10 Marks)**

4 a. Explain in detail what you understand dilapidation and elaborate on the causes of dilapidation. **(10 Marks)**
   b. Prepare in detail the schedule of dilapidation for a building. **(10 Marks)**

5 Write short notes in detail on the following :
   i)   Final certificate
   ii) Clerk of works
   iii) Site meeting
   iv) Ketention Amount **(20 Marks)**

6 a. Explain in detail Architect's role in building industry. **(10 Marks)**
   b. Name all the main participant in a building construction project. Explain the role and duty of any two of them. **(10 Marks)**

7 a. What is an Easement? Explain the characteristics of an easement in detail. **(10 Marks)**
   b. Explain with examples any two easement rights. **(10 Marks)**

8 a. Write in detail "Positive and Negative easement" Giving supporting examples. **(10 Marks)**
   b. Highlight the role of Architect in protecting the interest of clients towards "Easement rights" **(10 Marks)**

9 Write short notes on the following :
   i)   Common Law
   ii) Statute Law
   iii) Criminal Law
   iv) Civil Law **(20 Marks)**

10 a. What is RERA Act? Explain briefly the salient features of RERA. **(10 Marks)**
    b. How RERA will impact builders and real estate agents. **(10 Marks)**

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Eighth Semester B.Arch. Degree Examination, July/August 2021
Project and Construction Management

Time: 3 hrs.

Max. Marks: 100

Note: 1. *Answer any FIVE full questions.*
2. *Use of Normal Distribution function table is permitted.*

1   a.   Explain the principles and objectives of project management.   (10 Marks)
    b.   Briefly explain different types of Construction Projects.   (10 Marks)

2   a.   Draw the organization chart for a construction company.   (10 Marks)
    b.   Explain the concept of ethics in construction industry.   (10 Marks)

3   Write short notes on :
        i)   SWOT Analysis
        ii) Project planning
        iii) Project Scheduling
        iv) Project Controlling.   (20 Marks)

4   Explain the role of computer applications in Project Management.   (20 Marks)

5   A path of a certain network diagram is shown below Fig Q5. Determine the expected time
    for each path. Which is critical?
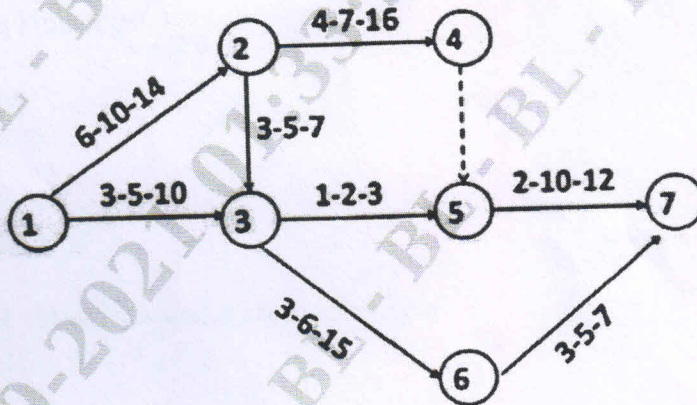
Fig Q5   (20 Marks)

6   a.   Draw the network diagram for the following :
        i)   A is the first job to be performed
        ii)   B and C can be done concurrently, and must follow A
        iii) B must precede D
        iv)   E must succeed C, but connot start until B is complete
        v)   The last operation is F dependent on the completion of both.   (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

b. Draw the network diagram for the following table:

Job	Identification	Job	Identification
A	1, 2	F	4, 5
B	2, 3	G	4, 7
C	2, 4	H	5, 8
D	3, 6	I	6, 8
E	3, 5	J	7, 8

(10 Marks)

7   a. Explain the role of the Project Management in the Construction Industry.   (10 Marks)
    b. Write short notes on Running bills and Site measurement book.   (10 Marks)

8   Explain the factors affecting the Quality of Construction in detail.   (20 Marks)

9   a. What are the benefits of mechanical equipment's in the Construction Industry.   (10 Marks)
    b. Explain the different types of equipment employed in concreting operations.   (10 Marks)

10 What are the standard equipment's used for a high rise construction, Elaborate any three with neat sketches.   (20 Marks)

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Eighth Semester B.Arch. Degree Examination, July/August 2021
Urban Planning

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1   a.   What are the determinants of Urban form? Explain them.   (12 Marks)
    b.   Explain the characteristics of Urban and Rural settlements.   (08 Marks)

2   a.   Explain in brief the features of Indus Valley civilization and their contributions to the town
         planning.   (10 Marks)
    b.   Explain the Urban planning features of Greek cities.   (10 Marks)

3   a.   Explain the city planning principles of Le-Corbusier.   (10 Marks)
    b.   Describe neighborhood unit design according to Clarence Stein.   (10 Marks)

4   a.   Discuss the utopian design objectives.   (10 Marks)
    b.   Explain the impact of Industrial revolution on cities.   (10 Marks)

5   a.   Describe urbanization trends in post Independent India.   (10 Marks)
    b.   Define slum. Describe the policies to overcome problems from slums.   (10 Marks)

6   a.   Explain Urban Housing typologies.   (10 Marks)
    b.   Describe Affordable Housing.   (10 Marks)

7   Explain the following:
    a.   Concentric zone theory
    b.   Sectory theory
    c.   Multi nuclei theory
    d.   Characteristics of CBD.   (20 Marks)

8   a.   Write about land use categories and its representation.   (08 Marks)
    b.   Explain the following:
         i)   Euclidean zoning
         ii)   Form based codes
         iii)   Incentive zoning
         iv)   Open space zoning.   (12 Marks)

9   a.   Write the various types of plans in town planning.   (04 Marks)
    b.   What is master plan? Explain the steps involved in planning process.   (16 Marks)

10   Explain the following:
    a.   Urban redevelopment
    b.   Urban conservation
    c.   Regional plan
    d.   URDPFI Guidelines.   (20 Marks)

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