CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC14**

First Semester B.Arch. Degree Examination, June/July 2025

History of Architecture – I

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 Explain the architectural features of Catal Huyuk. **(20 Marks)**

OR

2 Write short notes on any 2 of the following :
- a. Oval Hut
- b. Stone Henge
- c. Passage Graves and Gallery Graves **(20 Marks)**

Module-2

3 Explain the town planning of the city of Mohenjodaro with respect to street planning and housing. **(20 Marks)**

OR

4 With the help of neatly labelled diagram explain the funerary architecture of Nile Valley civilization. **(20 Marks)**

Module-3

5 Explain the key features of Chinese Architecture. **(20 Marks)**

OR

6 Explain the key features of Japanese Architecture. **(20 Marks)**

Module-4

7 With the help of neatly labelled sketches explain the following :
- a. Lion Gate
- b. Treasury of Atreus **(20 Marks)**

OR

8 Explain the key features of Palace of Persepolis **(20 Marks)**

Module-5

9 Explain the features of spatial design of settlements in desert region. **(20 Marks)**

OR

10 Citing the example of any tribal culture, explain the influence of geography in their built environment. **(20 Marks)**

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CBCS SCHEME

USN

21ARC24

Second Semester B.Arch. Degree Examination, June/July 2025

History of Architecture - II

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Discuss the two phases of Buddhist architecture. Elaborate on the construction and history of rock cut caves during that era with examples. **(20 Marks)**

OR

2 Write short notes on :
i) Sanchi Stupa
ii) Chaitya halls at Karli
iii) Viharas at Elephanta caves.
iv) Stambha “Ashoka Pillar” **(20 Marks)**

Module-2

3 a. Discuss the evolution of temple with sketches. **(10 Marks)**
b. Why is the Gupta period referred to as the ‘Golden Age’ of Indian art and architecture. **(10 Marks)**

OR

4 a. Explain and sketch the rock cut temples of Udayagiri. **(10 Marks)**
b. Illustrate and explain the general architectural character of a typical Hindu temple of an early Hindu Gupta period. **(10 Marks)**

Module-3

5 Explain the space of Brihadeshawara Temple with sketches of plan and elevation, explain the architectural design features. **(20 Marks)**

OR

6 Discuss and sketch the plan and design of Meenakshi Temple. **(20 Marks)**

Module-4

7 What are the characteristics of Lingaraja temple. Explain and sketch the following:
i) Layout
ii) Structure
iii) Decoration **(20 Marks)**

OR

8 Explain the features of Hoysala style temple architecture. Give examples of Keshvai Temple at Somnath. Explain its :
i) Layout
ii)Structure
iii)Decoration **(20 Marks)**

Module-5

9 Explain the architectural style of Vijayanagara Dynasty. Elaborate salient features of Hazara Rama Temple, Hampi with sketches. **(20Marks)**

OR

10 Illustrate with sketches “Surya Temple style at Modhera, Gujarat” Explain its architectural style, which is an example of Rajputana group. **(20 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC34**

Third Semester B.Arch. Degree Examination, June/July 2025

History of Architecture – III

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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Module-1

1 a. What are the general characteristics of early phase of Indian Islamic style of architecture? **(10 Marks)**

b. Sketch the plans and section of Qutb-Minar and explain the design. **(10 Marks)**

OR

2 a. What are the architecture features and design limitations of Khirkhi Masjid, Delhi? Explain with the help of sketches. **(10 Marks)**

b. Write short notes on Firoz Shah Kotla and sketch the layout plan. **(10 Marks)**

Module-2

3 a. Giving the example of Ek-Lakhi-Tomb and list the general characteristics features of Bengal style. **(10 Marks)**

b. How were the early Mosques of Jaunpur and Bengal built? Explain with an example. **(10 Marks)**

OR

4 a. What is the purpose and design features of Vavs of Ahmedabad. Sketch an example and discuss. **(10 Marks)**

b. List the design features of Gol Gumbuz and its dome construction technique. **(10 Marks)**

Module-3

5 a. Jami Masjid, Gulbarga was a daring innovation. Explain with sketches. **(10 Marks)**

b. How was Madrasa of Mond, Gawan in Bidar different from other monuments in the region? Explain its characteristic features. **(10 Marks)**

OR

6 a. List the Persian features that has influenced the design of Humayun's Tomb. **(10 Marks)**

b. Discuss the architectural design features of Buland Darwaza by drawing sketches. **(10 Marks)**

Module-4

7 a. In spite of not being an altogether convencing monument Akbar's Tomb stands at a crucial crossroads of Mughal history and artistic attitudes. Justify. **(10 Marks)**

b. Giving an example sketch and explain a Mughaul garden at Kashmir. **(10 Marks)**

OR

8 a. Red Fort, Delhi has several monuments. Explain the overall design of Red Fort. **(10 Marks)**

b. Write short notes on Diwan-i-am, Red Fort, Delhi. **(10 Marks)**

Module-5

9 a. What are the design features of Governors House, Kolkata? **(10 Marks)**

b. Write a brief note on Chhatrapati Shivaji Terminus, Mumbai. What are its design features? **(10 Marks)**

OR

10 What are the contributions of Edward Lutyens in the design of New Delhi? Explain the layout plan of New Delhi. **(20 Marks)**

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21ARC35

Third Semester B.Arch. Degree Examination, June/July 2025

Building Services – I

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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Module-1

1 a. Explain the importance of sanitation and its history with respect to human civilization in India. **(10 Marks)**

b. Explain the following systems of water supply. Mention their advantages and disadvantage.
i) Gravity flow ii) hydropneumatic. **(10 Marks)**

OR

2 a. Write short notes on the following sanitary systems :
i) Conservancy system ii) Water carriage system. **(10 Marks)**

b. With a diagram, explain the process of water treatment from the source to house. **(10 Marks)**

Module-2

3 a. What is difference between aerobic and anaerobic sewage treatment? Which is better? **(10 Marks)**

b. Explain the 2 types of storm water drains with diagrams. **(10 Marks)**

OR

4 a. With diagram, explain a sewage treatment plant. Name the parts. **(10 Marks)**

b. Write short notes on :
i) Rain water harvesting
ii) Ground water recharge **(10 Marks)**

Module-3

5 a. What are traps and its use? Explain floor trap and bottle trap. **(10 Marks)**

b. Name 5 materials used to make the pipes in plumbing system in a building. **(10 Marks)**

OR

6 a. Explain advantages and disadvantages and difference between following :
i) Single stack system ii) Double stack system. **(10 Marks)**

b. Write short notes on :
i) Gate valve ii) Globe valve. **(10 Marks)**

Module-4

7 a. Distinguish and explain :
i) Steam bath unit
ii) Sauna bath unit **(10 Marks)**

b. Explain the concept "Waste to wealth" with respect to garbage management. **(10 Marks)**

OR

8 a. Distinguish and explain :
   i) Flush valve and Flush tank
   ii) Indian water closet and European water closet **(10 Marks)**

b. Write short notes on :
   i) Biomethanation
   ii) Varmicompost. **(10 Marks)**

Module-5

9 a. Explain the working of :
   i) Smoke Alarm
   ii) Heat Alarm **(10 Marks)**

b. Explain with a diagram how the solar water heater works? What are it benefits? **(10 Marks)**

OR

10 a. Explain the use of following :
   i) Wet Riser
   ii) Sprinkler **(10 Marks)**

b. Explain importance of fire safety system in a building. What are the causes a fire in a building. **(10 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC43**

Fourth Semester B.Arch. Degree Examination, June/July 2025

History of Architecture - IV

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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Module-1

1 a. Briefly explain the geological and climatic influences on Greek architecture. **(10 Marks)**

b. Explain the optical correction of entasis in Greek architecture. Mention its concept and significance. **(10 Marks)**

OR

2 a. Sketch a Corinthians capital and briefly explain its structure. **(10 Marks)**

b. Explain the Greek theatre 'Epidamnus' with illustrations. **(10 Marks)**

Module-2

3 Illustrate and explain the salient architectural characteristics of the "PANTHEON" through a section and an elevation. **(20 Marks)**

OR

4 Explain the following with illustrations :
i) Basilica of Trajan
ii) Thermal of Caracalla **(20 Marks)**

Module-3

5 a. Describe the arch of septimius severus. **(10 Marks)**

b. Briefly explain the techniques adopted by Romans in their city planning. **(10 Marks)**

OR

6 Explain in detail the evolution of early Christian churches with relevant examples and illustrations. **(20 Marks)**

Module-4

7 Discuss the salient features of Byzantine Architecture using Hagia Sophia as example. **(20 Marks)**

OR

8 Explain the characteristics of Romanesque Architecture. Describe the design features of the PISA cathedral and the Campanile and Baptistery. **(20 Marks)**

Module-5

9 'Verticality' and ' Heavenly Light' are the factors of Gothic Architecture. Explain using the Notre Dame cathedral, Paris as an example. **(20 Marks)**

OR

10 a. Explain the architectural features of Chartres cathedral with the help of sketches. **(10 Marks)**

b. Write short notes on :
i) Flying Buttress ii) Rose windows. **(10 Marks)**

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CBCS SCHEME

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21ARC44

Fourth Semester B.Arch. Degree Examination, June/July 2025

Building Services – II

Time: 3 hrs. Max. Marks:100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Explain the following terms :
- i) Electrical current
- ii) Voltage
- iii) Maximum demand
- iv) Connected load
- v) Electrical resistance. **(20 Marks)**

OR

2 a. Enlist the different codes and standards followed for electricity in building construction discuss any four broad features related to electricity in the national building code. **(10 Marks)**

b. Explain the transmission of electric power from generation station to consumer with a neat diagram. **(10 Marks)**

Module-2

3 Explain the following with respect to electric cabling :

a. Voltage levels in buildings

b. Energy metering in buildings. **(20 Marks)**

OR

4 What is a Net Zero energy building? Discuss the opportunities of energy conservation in the building. **(20 Marks)**

Module-3

5 Discuss the need of protective devices in electrical layout. Enlist the protective devices elaborating on any two. **(20 Marks)**

OR

6 a. What is meant by earthing? Why is earthing essential for a building? **(02 Marks)**

b. Explain the different types of earthing. **(05 Marks)**

c. Explain primary function of earthing by elaborating one type in detail. **(13 Marks)**

Module-4

7 a. What is illumination and lux levels in brief state and explain the illumination laws. **(10 Marks)**

b. Explain the following : i) Accent lighting ii) Task lighting. **(10 Marks)**

OR

8 Provide the lighting plan for a design studio of size 10 m × 15 m × 3.5 m. Justify the choice of luminaries, letups voltage levels and positioning with part plan calculations, electrical – lighting layout with sections. **(20 Marks)**

Module-5

9 Draw a single plan of an electrical layout of doctors clinic and estimate the load for the same. **(20 Marks)**

OR

10 What are extra low voltage device systems? Discuss the different components of the elu system. **(20 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC53**

Fifth Semester B.Arch. Degree Examination, June/July 2025
History of Architecture – V

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Analyze the architectural feature of Palazzo Rucelli by Leon Batista Alberti. **(10 Marks)**

b. What are the key architectural features that define villa Rotunda by Andrea Palladio? **(10 Marks)**

OR

2 a. Describe the general characteristics of Baroque architecture. **(10 Marks)**

b. Discuss the significance of St. Peters Piazza by Bernini as an example of Baroque architecture. **(10 Marks)**

Module-2

3 a. How did the industrial revolution impact European society, economy and politics? **(10Marks)**

b. How did the use of metal and glass revolutionize architectural design during the Industrial revolution era? **(10 Marks)**

OR

4 a. Explore the influence of Art and Crafts movement in the post industrial period. **(10 Marks)**

b. Explain the salient features of Art Nouveau movement. **(10 Marks)**

Module-3

5 a. Highlight the contribution of Louis Sullivan to Modern Architecture. **(10 Marks)**

b. Explain the five principles of architecture of Le Corbusier with the help of a prominent example. **(10 Marks)**

OR

6 a. Explore Walter Gropius contribution to modern architecture with the help of Bavhaun building. **(10 Marks)**

b. Evaluate the influence of Franck Lloyd Wright's concepts on Modern Architecture citing example of falling water building. **(10 Marks)**

Module-4

7 a. Analyze the architectural features of Eero Saarinen's TWA Airport, Highlighting their significance in the context of modern transportation hubs. **(10 Marks)**

b. Evaluate Phillip Johnson's Glass House in terms of their architectural innovation and influence on modern design principles. **(10 Marks)**

OR

8 a. Investigate the futuristic architectural idea as proposed by Archigram. **(10 Marks)**

b. Discuss Moshe Safdie's approach to housing design in Israel, highlighting the unique features of his project. **(10 Marks)**

Module-5

9 a. Discuss the characteristics of Brutation in the Modern Movement. **(10 Marks)**

b. Analyze the works of Le Corbusier in the context of Brutalist architecture. **(10 Marks)**

OR

10 a. Analyze the works of Vladimir Tatlin and his contribution to the constructivist movement. **(10 Marks)**

b. Discuss the role of engineers Pierre Luigi Nervi in the development of modern architecture with any one example. **(10 Marks)**

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21ARC55

Fifth Semester B.Arch. Degree Examination, June/July 2025

Building Services-III

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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Module-1

1 a. Describe mechanical ventilation system. **(05 Marks)**
b. Describe the major components of A/c systems. **(15 Marks)**

OR

2 a. Write the importance of mechanical ventilation system in Basements, Kitchen and Toilets. **(20 Marks)**

Module-2

3 a. What are roof top cooling Systems Draw & write its advantages? **(10 Marks)**
b. Explain VRF Systems & its applications. **(10 Marks)**

OR

4 a. Explain ADS (Air Distribution System) and its functions. **(10 Marks)**
b. Explain ADS aspects and different vent systems with sketches. **(10 Marks)**

Module-3

5 What is an Elevator? Explain the parts of conventional elevator. **(20 Marks)**

OR

6 Write short notes on.
a. Elevators
b. Escalators
c. Travellators and write where they are used. **(20 Marks)**

Module-4

7 a. Explain fire triangle. What are the various classes of fire? **(08 Marks)**
b. Explain different types of fire alarm systems. **(12 Marks)**

OR

8 Explain & draw different parts of elevator. **(20 Marks)**

Module-5

9 Explain the factors considered for locating escalators. Draw with neat sketches. **(20 Marks)**

OR

10 Write short notes on.
a. Fire Alarm
b. Smoke Detectors.
c. Fire towers **(20 Marks)**

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CBCS SCHEME

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Sixth Semester B.Arch. Degree Examination, June/July 2025
Landscape Architecture

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Define a role of landscape architecture in current context with changing priorities. Elaborate on its scope and nature of professional approach with environmental centric disciplinary approach. **(20 Marks)**

OR

2 a. Define landscape architecture and explain its scope in urban and rural settings. **(10 Marks)**

b. Discuss the contributions of Fredrick Law Olmsted and Ian Mcharg to the field of landscape design. **(10 Marks)**

Module-2

3 Explain the process of site analysis with regards to topography, vegetation, hydrology and built context. **(20 Marks)**

OR

4 Illustrate the relationship between built and unbuilt spaces in landscape design as a response to architecture with relevant case study. **(20 Marks)**

Module-3

5 Describe the role of landform, water and vegetation in articulating an outdoor spatial design. **(20 Marks)**

OR

6 a. Explain how selection of plant material/species is influenced by climate, soil and function in a landscape design project. **(10 Marks)**

b. Describe various softscape and hardscape elements used in landscape architecture. **(10 Marks)**

Module-4

7 Discuss the landscape philosophies of any two of the following landscape architects.

- i) Late Kishore Pradhan
- ii) Aniket Bhagwat
- iii) Shaheer Associates
- iv) Martha Schwartz
- v) Peter Walker
- vi) Turenscape **(20 Marks)**

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OR

8 a. Illustrate with case study examples of eastern landscape philosophies of Persian gardens and Mughal gardens. **(10 Marks)**

b. Illustrate with suitable examples of western landscape design approach and philosophies of Italian and French gardens. **(10 Marks)**

Module-5

9 a. Outline the steps involved in the landscape design process for an school in an urban setting from conceptualization to execution. **(10 Marks)**

b. Discuss and elaborate the role of landscape architecture in shaping the design of urban public space such as plazas, parks and streets capes. **(10 Marks)**

OR

10 Create a Outdoor functional, recreational and ecological sound landscape design as a extension of kindergarten space, measuring 10 × 8 m. Kindly assume the unbuilt space to design as an extension as 10 × 10 m. Present a conceptual layout, section to suitable scale, any two details and a view to illustrate a design scheme. **(20 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC64**

Sixth Semester B.Arch. Degree Examination, June/July 2025
Contemporary Architecture

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing one full question from each module.
2. Draw sketches wherever necessary.

Module-1

1 a. Explain the city planning of Jaipur with the help of neat sketches. **(10 Marks)**
b. Write a brief about the road networks and public spaces of Jaipur city. **(10 Marks)**

OR

2 With the help of neat sketches explain Le Corbusier design philosophies through secretariat building, Chandigarh. **(20 Marks)**

Module-2

3 Explain the ideas and works of Bimal Patel with the example of Sabarmati Riverfront development at Ahmedabad. **(20 Marks)**

OR

4 Briefly explain the design of the following with neat sketches:
a. Sri-Ram centre, New Delhi **(10 Marks)**
b. Experimental-Pondichery **(10 Marks)**

Module-3

5 Explain briefly
a. Richard Meier – Smith House, Connecticut **(10 Marks)**
b. Charles Moore – Piazzad Italia, New Orleans. **(10 Marks)**

OR

6 Write a brief on high tech architecture and explain the same through the work of Sir Norman Foster. **(20 Marks)**

Module-4

7 Write short notes on:
a. Ideologies of Renzo Piano **(10 Marks)**
b. Menil Museum, Houston. **(10 Marks)**

OR

8 Elaborate on Robert Venturi's contribution to post modern architecture and highlight some of his notable works. **(20 Marks)**

Module-5

9 Highlight the design approach as seen in the designing of World Trade Center, New York by Daniel Libeskind. **(20 Marks)**

OR

10 Explain:
a. Deconstructivism **(10 Marks)**
b. The Peak club, Hong Kong. **(10 Marks)**

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21ARC65

Sixth Semester B.Arch. Degree Examination, June/July 2025
Building Services - IV (Accoustics and Noise Control)

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Explain the behaviour of sound in an enclosed space with the relevant sketches. How does the shape and volume of the room affect acoustical performance? **(10 Marks)**

b. Define reverberation, and Reverberation Time (RT). How is Sabine's equation relevant in this connection? **(10 Marks)**

OR

2 a. Discuss the inverse square law of sound with diagram and labels. Elaborate its applications and limitations. **(10 Marks)**

b. Answer the following definitions with relevant sketches.
i) Decibel scale ii) Sound masking iii) Flutter Echo vi) Peak – to peak amplitude. **(10 Marks)**

Module-2

3 a. Elaborate Speech Intelligibility (SI), and discuss how it is different from Articulation Index (AI). List the types of Space Where (SI) is necessary. **(10 Marks)**

b. Differentiate between sound absorption and sound insulation. List materials and methods for both of the above. **(10 Marks)**

OR

4 a. Write in detail the working of A Sound Level Meter (SLM) with sketch and label its components. Discuss its measurement units, range and specific location of usage. **(10 Marks)**

b. Explain the role of the following with sketches.
i) Functional or space absorbers
ii) Cavity resonators
iii) Isolation Blankets
iv) Noise Reduction Coefficient (NRC). **(10 Marks)**

Module-3

5 a. An educational institution requires design recommendation for acoustics of its proposed 400 capacity auditorium with upper Gallery. Discuss in detail schematic plan, section and thumb rules. **(14 Marks)**

b. Discuss, briefly measures to control excessive (RT) in a lecture hall. **(06 Marks)**

OR

6 a. Distinguish between ancient Greek and roman theatres with the help of schematic plan, section and views. Discuss how the study and learnings contribute to modern acoustic design. **(14 Marks)**

b. Sketch any two design details for sound proofing a music recording studies. **(06 Marks)**

Module-4

7 a. Explain how you control noise and Vibrations Generated from mechanical equipment like AC chiller plant, Ahu's Roof Top Units (RTU) Elevators, Plumbing systems, Server generators Etc., Discuss in detail with relevant sketches. **(14 Marks)**

b. Differentiate between Air Borne and structure borne noise with sketches. **(06 Marks)**

OR

8 a. Discuss environmental noise control and its importance for peaceful living. Briefly explain and categorize any six sources of infiltration into indoor/outdoor noise with sketches. **(14 Marks)**

b. List any four measures to be taken to eliminate "Industrial Noise" in urban or suburban areas with sketches. **(06 Marks)**

Module-5

9 a. Elaborate on any six sites planning and building level strategies for noise control in an education campus along with sketches. **(12 Marks)**

b. Discuss any four measures to control road traffic noise in urban areas, with sketches. **(08 Marks)**

OR

10 a. A multi story large hospital building needs to be located on a site abutting a major road. Suggest site planning and building level noise control strategies, with the help of schematic plan and section. **(12 Marks)**

b. Explain town/city planning strategies to mitigate noise problems from, Rail, Road, Air industries, Commercial and Rapid urbanization. **(08 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC75**

Seventh Semester B.Arch. Degree Examination, June/July 2025

Estimation and Costing

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is estimate? Explain the need for estimation and costing. **(10 Marks)**

b. Write a note on detailed estimate. **(10 Marks)**

OR

2 Explain the following types of estimate:

(i) Preliminary estimate (ii) Plinth area estimate (iii) Cube rate estimate
(iv) Supplementary estimate (v) Annual repair or maintenance estimate. **(20 Marks)**

Module-2

3 a. Estimate the quantities of the following item of two roomed building from Fig.Q3:

(i) Earthwork excavation in foundation
(ii) PCC bed concrete 1:4:8
(iii) First class brick masonary in CM 1:6
(Both long wall and short wall method and centre line method) **(20 Marks)**

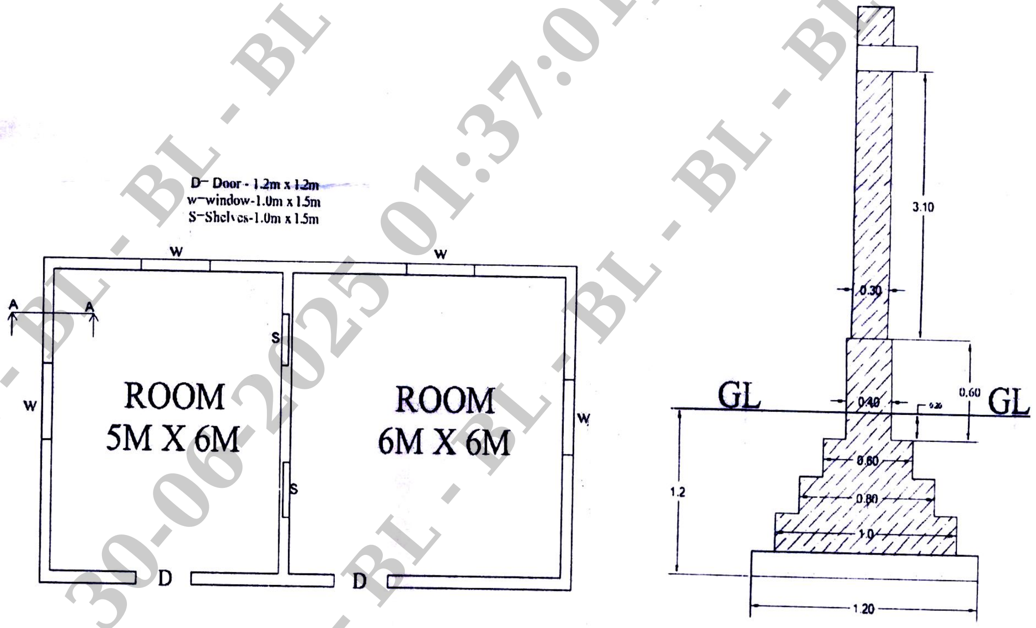

Fig.Q3

OR

4 Estimate the quantities of the following item of a two roomed building from Fig.Q4.

(i) Earth work in excavation in foundation
(ii) Cement concrete in foundation
(iii) Size stone masonary in CM 1:6 for foundation and plinth
(iv) 2.5 cm damp proof course (DPC)
(v) First class brick work in CM 1:4 for super structure. Use long wall and short wall method. **(20 Marks)**

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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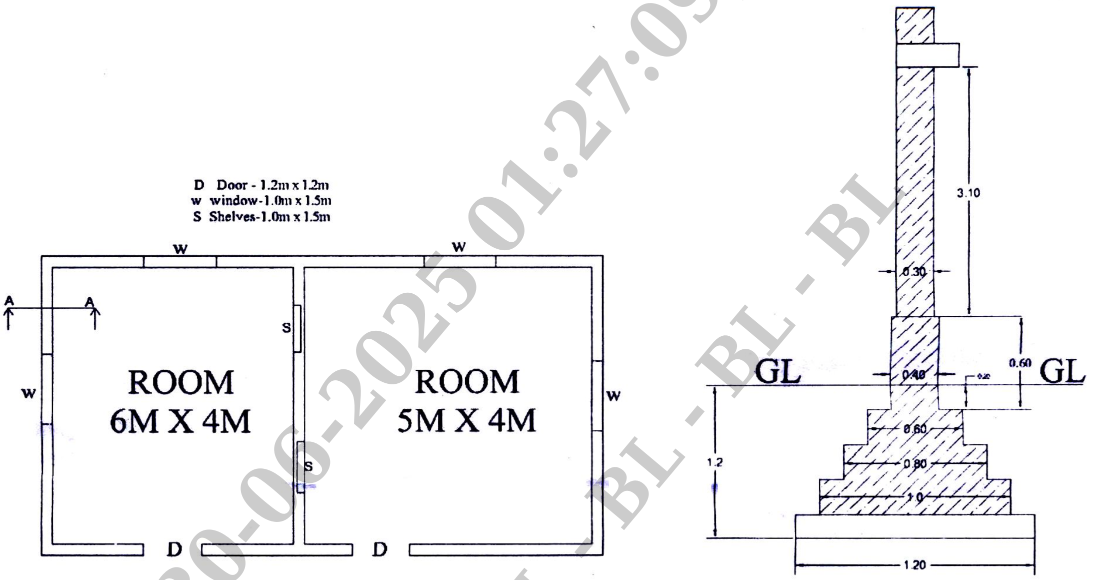

Fig.Q4

Module-3

5 Write a detailed specification for the following:
- a. First class brick work in cement mortar (CM) 1:6
- b. Cement plastering in CM 1:6
- c. 25 cm thick cement concrete flooring (1 : 2 : 4)
- d. Earth work in excavation for foundation. **(20 Marks)**

OR

6 Prepare a detailed estimate of RCC roof slab of span 3m clear span 12 cm thick and 6 m long. Slab bearing on masonary is 150 mm alround. Reinforcement consist of 12 mm diameter main bars at 15 cm c/c alternate bent up and distribution 6 mm diameter at 18 c/c. RCC work in centering and shuttering but excluding reinforcement is Rs. 7500/m^3. Providing and tying reinforcement is Rs.90/- per kg. Do sketching and prepare a schedule of bars. Assume d^2/162 to derive weight of all bars in kg per meter, d is the diameter of bar in mm or 7850 kg/m^3 as density. **(20 Marks)**

Module-4

7 a. Define rate analysis. List and explain the sub head costs taken into account. **(10 Marks)**

b. List and explain the different factors affecting the rate analysis. **(10 Marks)**

OR

8 Carry out the rate analysis for the following :
- (i) Earth work excavation for foundation in ordinary soil.
- (ii) PCC bedding 1 : 4 : 8 for foundation
- (iii) Coursed rubble masonary in CM 1:6
- (iv) Painting plastered surface including preparation of surface. **(20 Marks)**

Module-5

9 Prepare detailed estimate for a septic tank with soak pit shown in Fig.Q9 for the following items work.

a. Earth work in excavation

b. First class brick work in CM 1:4 for side wall

c. R.C.C. (1 : 2 : 4) for cover slab with 1% steel reinforcement for septic tank and soak pit.

(20 Marks)

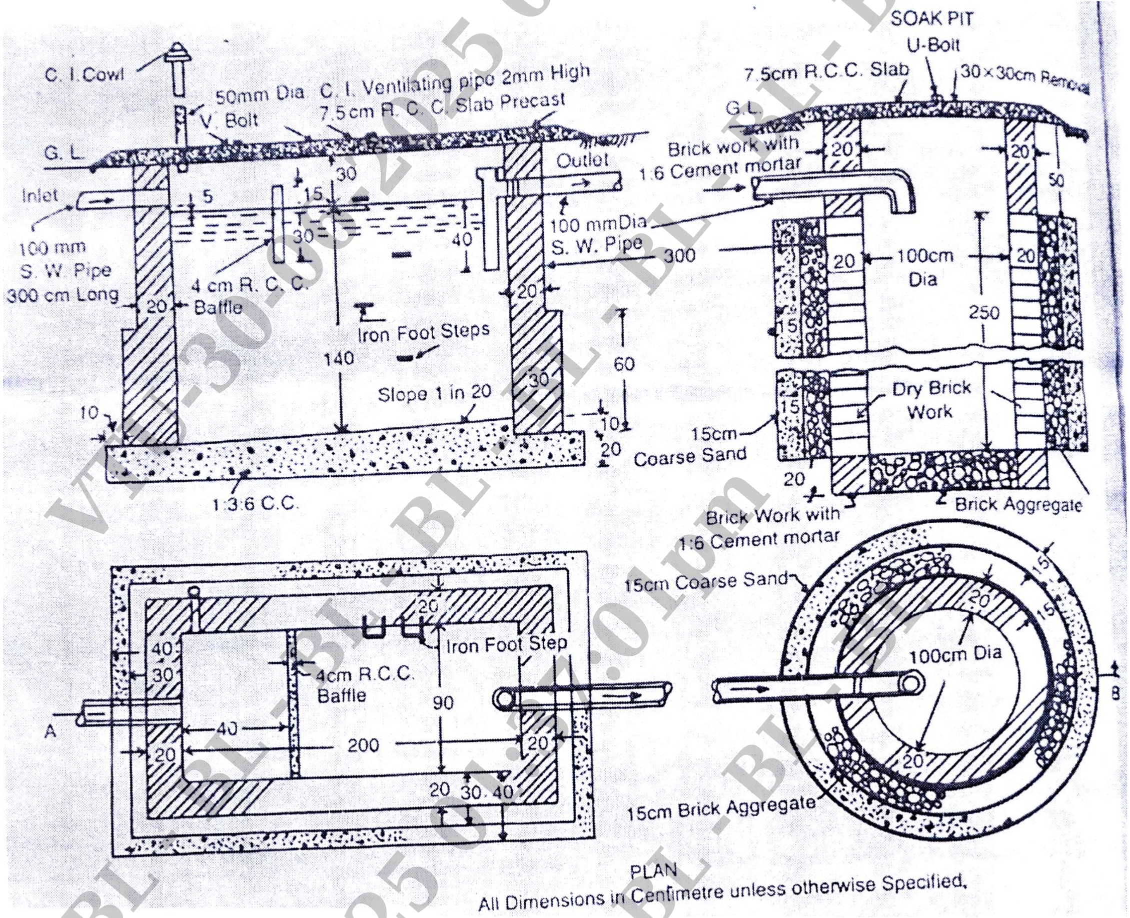

Fig.Q9

OR

10 Write short notes on the following :

a. EMD and Security retention

b. RA bill and final bill

c. Liquidated and unliquidated damages

d. Safety norms to be followed at site

e. Measurement book and its importance

(20 Marks)

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC85**

Eighth Semester B.Arch. Degree Examination, June/July 2025

Construction and Project Management

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Explain in brief about principles and objectives of project management. **(10 Marks)**

b. Elaborate the life cycle stages of a project. **(10 Marks)**

OR

2 a. Explain in brief about types of construction firms. **(10 Marks)**

b. Write a note on :
(i) Qualities of an ideal construction organization
(ii) Ethics in construction industry **(10 Marks)**

Module-2

3 a. Explain in brief about project evaluation and review technique. **(10 Marks)**

b. Explain in brief about
(i) Project Feasibility Study
(ii) Investment criteria **(10 Marks)**

OR

4 a. Explain the following :
(i) Value Engineering (ii) Decision tree **(10 Marks)**

b. Write short notes on :
(i) SWOT Analysis (ii) Cost Benefit Analysis **(10 Marks)**

Module-3

5 a. Explain in brief about critical path method with CPM chart. **(10 Marks)**

b. Write the advantages and disadvantages of PERT in construction management. **(10 Marks)**

OR

6 a. Explain in brief about resource optimization and project crushing. **(10 Marks)**

b. Explain in brief about techniques used in project scheduling and management. **(10 Marks)**

Module-4

7 a. Write a brief note on health and safety management in construction industry. **(10 Marks)**

b. Write a brief note on quality management in construction. **(10 Marks)**

OR

8 a. Explain in brief about role of a project manager in monitoring the specifications. **(10 Marks)**

b. Explain in brief about
(i) Project updating (ii) Progress curves. **(10 Marks)**

Module-5

9 a. Explain in brief about various issues involved in owning operating and maintaining of construction equipment. **(10 Marks)**

b. Write the factors affecting selection of construction machinery. **(10 Marks)**

OR

10 a. Discuss the various types of equipments used in concreting operations. **(10 Marks)**

b. Describe the role of equipment/machinery in construction industry. **(10 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐

21ARC33

Third Semester B.Arch. Degree Examination, June/July 2025

Climatology

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 a. What is psychometric chart? Explain its components with the help of sketches. **(08 Marks)**

b. Discuss the roles and responsibilities of an architect in mitigating climate change through their design practices. **(12 Marks)**

OR

2 a. What is site climate? Explain the factors governing the site climate. **(10 Marks)**

b. What is thermal comfort indices. Explain the usage of bioclimatic chart in climatic analysis. **(10 Marks)**

Module-2

3 a. Explain solar altitude and solar azimuth angle with the help of sketches. **(10 Marks)**

b. Explain the process of thermo regulatory mechanism of human body. **(10 Marks)**

OR

4 Describe the heat exchange process of building with respect to outdoor environment. **(20 Marks)**

Module-3

5 a. Define U-value (thermal transmittance). How U, K-value (thermal conductivity) and R-value (thermal Resistance) are related to each other. **(10 Marks)**

b. Calculate U-value of a 20 cm thick concrete block wall with 1.20 cm thick cement plaster on both the sides. **(10 Marks)**

Given- K (Concrete – block) = 1.396 W/mk
K (Cement plaster) = 0.721 W/mk

OR

6 Write short notes on:

a) Periodic heat flow **(05 Marks)**
b) Time log and decrement factor **(10 Marks)**
c) Thermal insulation **(05 Marks)**

Module-4

7 Explain with sketches various types of air flow movement around building and how it affect ventilation. **(20 Marks)**

OR

8 Explain with sketches:

a) Stock effect
b) Wind scoop
c) Types of shading device
d) Functions of ventilation. **(20 Marks)**

Module-5

9 a. Explain day light factors and its components. **(08 Marks)**

b. Explain the different challenges in providing adequate day lighting in hot and dry climate and way of overcoming them. **(12 Marks)**

OR

10 Explain design consideration for warm and humid climate using a case study as an example. Draw relevant sketches. **(20 Marks)**

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CBCS SCHEME

USN | | | | | | | | | |

21ARC34

Third Semester B.Arch. Degree Examination, Dec.2024/Jan.2025
History of Architecture - III

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

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.

Module-1

1 a. With suitable sketch, explain the architectural character of the "Qutub Complex" New Delhi. **(10 Marks)**

b. Illustrate and explain the tomb of 'Ghia – Suddin Tugluq. **(10 Marks)**

OR

2 a. With the neat sketch, explain architectural features of the Tomb of Firoz Shah Tuglag. **(10 Marks)**

b. Illustrate and explain with the sketches of the 'Khirkhi Masjid' – Delhi. **(10 Marks)**

Module-2

3 a. Explain with the architectural features of 'Jami masjid' Bengal. **(10 Marks)**

b. With the neat sketches, explain the architectural features of the 'Dakhil darwaza at Gaur? **(10 Marks)**

OR

4 a. Explain with the sketch of the façade of the Atala Masjid, Jaunpur. **(10 Marks)**

b. Explain the architectural design features of the 'Golgumbaz. Bijapur. **(10 Marks)**

Module-3

5 a. With suitable sketches, explain the architectural characteristics of the Buland Darwaza' Fatehpursikri. **(10 Marks)**

b. With suitable sketches, explain the architectural features of the Bidar Jami Masjid. **(10 Marks)**

OR

6 a. Write a short notes on any two of the following :
   i) Jami Masjid [Fathepursikri]
   ii) Diwan -i-Aam
   iii) Garden [Humayun's Tomb] **(10 Marks)**

b. With a neat sketches of plan and elevation of Tomb of 'Salim Chisti' Fatehpur sikri. **(10 Marks)**

Module-4

7 a. With a neat sketch, explain the plan of the Taj Mahal. **(10 Marks)**

b. Write the short notes on any two of the following :
   i) Diwan - i - Khas
   ii) Redfort Gateways
   iii) Meena Bazar, Redfort **(10 Marks)**

OR

8 a. Explain the features of the colonial architecture. **(10 Marks)**

b. Explain the architectural characteristics of the Red for with the neat sketch. **(10 Marks)**

Module-5

9 a. Explain the architectural design features of 'Mysore Palace'. **(10 Marks)**

b. With suitable sketches, explain the architectural Design features of the 'Rashtrapati Bhavan' New Delhi. **(10 Marks)**

OR

10 a. Write the short notes on any two of the followings :

i) Mayo Hall
ii) Central College, Banglore
iii) Commissioner office – Dharwad. **(10 Marks)**

b. With neat sketches, explain the design features of the 'North and South' block at the Rastrapati Bhavan. **(10 Marks)**

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USN ☐☐☐☐☐☐☐☐☐☐

21ARC35

Third Semester B.Arch. Degree Examination, Dec.2024/Jan.2025

Building Services – I

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

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.

Module-1

1 a. Explain the history of sanitation. **(10 Marks)**
b. What are the H_2O requirements for different building types as per Indian codes? **(10 Marks)**

OR

2 a. With a neat sketch, explain the parts and working of rapid sand pressure filter. **(10 Marks)**
b. What is hydro pneumatic system? **(10 Marks)**

Module-2

3 Make a comparative study of any two types of piping used for water supply. **(20 Marks)**

OR

4 Write notes on:
a. Rain water harvesting **(10 Marks)**
b. Drainage provision for basement. **(10 Marks)**

Module-3

5 a. With neat sketch, explain 2 pipe system for plumbing. **(10 Marks)**
b. Mention the principles of house drainage. **(10 Marks)**

OR

6 Write notes on:
a. Gate value **(10 Marks)**
b. Floor trap. **(10 Marks)**

Module-4

7 Explain the following with neat sketches:
i) W.C. ii) Urinals. **(20 Marks)**

OR

8 Explain vermicomposting and management of medical waste. **(20 Marks)**

Module-5

9 With neat sketches explain:
i) Wet riser system **(10 Marks)**
ii) Fire hydrant. **(10 Marks)**

OR

10 Explain solar hot water generation with the help of neat sketches. **(20 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ENG/ARC36**

Third Semester B.Arch. Degree Examination, Dec.2024/Jan.2025
Building Structures – II

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

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.

Module-1

1 a. Explain the different types of stresses and strains with neat sketches. **(10 Marks)**

b. A brass bar, having cross-sectional area of 2000 mm^2, is subjected to axial forces as shown in Fig.Q.1(b). Find the total elongation of the bar. Take E = 1.05 × 10^5 MPa.

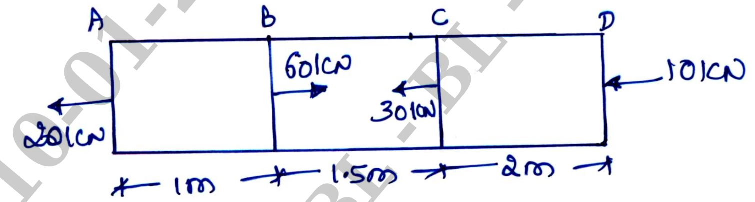

Fig.Q.1(b)

(10 Marks)

OR

2 a. Define:
- i) Ductility and brittleness
- ii) Elasticity
- iii) Hook's law
- iv) Poisson's ratio
- v) Factor of safety. **(10 Marks)**

b. A stepped bar circular cross-section 3 m length is subjected to an axial of 70 kN. Find the stress, strain and deformation in each section. Also find the total deformation. Take E = 200 GPa. **(10 Marks)**

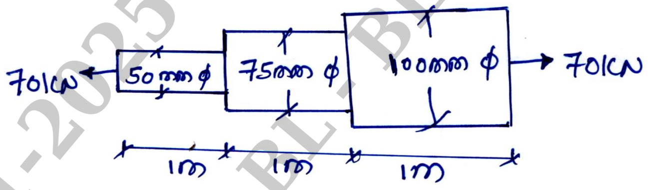

Fig.Q.2(b)

Module-2

3 a. Explain the terms-Young's modulus, shear modulus and bulk modulus. Also write the relation between the 3 elastic constants E, G and K. **(10 Marks)**

b. A bar of 50 mm diameter is subjected to a pull of 80 kN. The measured extension of length of 250 mm bar is 0.15 mm and change in diameter is 0.0025 mm. Determine :
- i) Longitudinal strain and lateral strain
- ii) Young's modulus
- iii) Poisson's ratio
- iv) Bulk modulus. **(10 Marks)**

OR

4 a. Explain temperature effects on structures. **(10 Marks)**

b. State the expression for elongation of a uniformly tapering circular bar subjected to axial tension with usual notations. **(10 Marks)**

Module-3

5 a. State and explain Euler's formula for long columns. **(10 Marks)**

b. A column of timber section 20 cm × 30 cm is 8 m long, both ends being fixed. If the Young's modulus for timber is 17.5 kN/mm^2, determine:

- i) Crippling load
- ii) Safe load for the column if factor of safety is 3. **(10 Marks)**

OR

6 a. What are the assumptions made in Euler's column theory? Also explain the limitations of Euler's theory. **(10 Marks)**

b. A hollow alloy tube 5 m long with external and internal diameters 40 mm and 30 mm respectively was found to extend by 5 mm under a tensile load of 80 kN. Find the buckling load for the tube when used as a column with both ends hinged. Also find the safe load for the tube, taking a factor of safety = 3. **(10 Marks)**

Module-4

7 a. Explain the following with neat sketches:

- i) Shear force and bending moment.
- ii) Shear force diagram and bending moment diagram.
- iii) Pure bending and point of contraflexure. **(10 Marks)**

b. Draw the SFD and BMD for a cantilever beam shown in Fig.Q.7(b). **(10 Marks)**

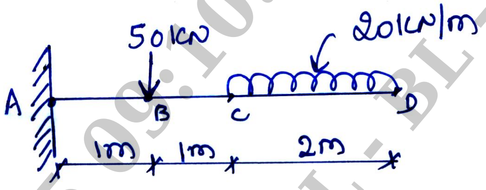

Fig.Q.7(b)

OR

8 a. A cantilever of length 3 m carries a UDL of 10 kN/m run over the whole length and a point load of 5 kN at a distance of 1 m from free end. Draw SFD and BMD. **(08 Marks)**

b. The simply supported beam shown in Fig.Q.8(b) carries 2 concentrated load and a UDL. Draw the SFD and BMD.

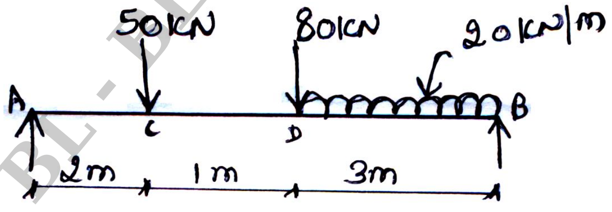

Fig.Q.8(b)

(12 Marks)

Module-5

9 a. Write the bending equation for the beams and expand each of the notations in the equation. Also write the assumptions used in the simple bending equation. **(10 Marks)**

b. A cast iron T-section has a length of 3 m and is subjected to a point load of 50 kN as shown in Fig.Q.9(b). Determine the maximum tensile and maximum compressive stress. **(10 Marks)**

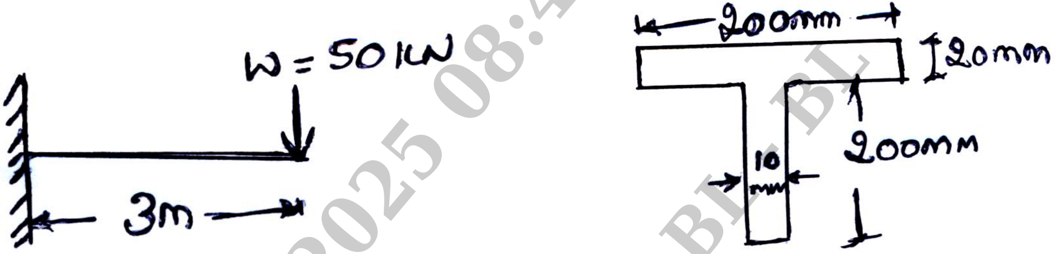

Fig.Q.9(b)

OR

10 a. Define:
- i) Neutral axis
- ii) Section modulus
- iii) Pure bending

(06 Marks)

b. A cantilever of length 2 m fails when a load of 5 kN is applied at the free end. If the beam is 50 mm × 50 mm, find the stress at the failure. **(06 Marks)**

c. A beam of an I-section consists of 200 mm × 20 mm flanges and a web of 300 mm depth and 15 mm thickness is subjected to a shear force of 50 kN. Draw the shear stress variation diagram across the depth. Take $I = 200 \times 10^6$ mm^4. **(08 Marks)**

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USN ☐☐☐☐☐☐☐☐☐☐

21ARC43

Fourth Semester B.Arch. Degree Examination, June/July 2025

History of Architecture - IV

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Briefly explain the geological and climatic influences on Greek architecture. **(10 Marks)**

b. Explain the optical correction of entasis in Greek architecture. Mention its concept and significance. **(10 Marks)**

OR

2 a. Sketch a Corinthians capital and briefly explain its structure. **(10 Marks)**

b. Explain the Greek theatre 'Epidamnus' with illustrations. **(10 Marks)**

Module-2

3 Illustrate and explain the salient architectural characteristics of the "PANTHEON" through a section and an elevation. **(20 Marks)**

OR

4 Explain the following with illustrations :

i) Basilica of Trajan

ii) Thermal of Caracalla **(20 Marks)**

Module-3

5 a. Describe the arch of septimius severus. **(10 Marks)**

b. Briefly explain the techniques adopted by Romans in their city planning. **(10 Marks)**

OR

6 Explain in detail the evolution of early Christian churches with relevant examples and illustrations. **(20 Marks)**

Module-4

7 Discuss the salient features of Byzantine Architecture using Hagia Sophia as example. **(20 Marks)**

OR

8 Explain the characteristics of Romanesque Architecture. Describe the design features of the PISA cathedral and the Campanile and Baptistery. **(20 Marks)**

Module-5

9 'Verticality' and ' Heavenly Light' are the factors of Gothic Architecture. Explain using the Notre Dame cathedral, Paris as an example. **(20 Marks)**

OR

10 a. Explain the architectural features of Chartres cathedral with the help of sketches. **(10 Marks)**

b. Write short notes on :

i) Flying Buttress ii) Rose windows. **(10 Marks)**

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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USN ☐☐☐☐☐☐☐☐☐☐ **21ARC44**

Fourth Semester B.Arch. Degree Examination, Dec.2024/Jan.2025

Building Services - II

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

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.

Module-1

1 a. What are the conventional and Non-conventional sources of energy ; explain its impacts and implications. **(10 Marks)**

b. Explain with neat sketch any one method of generation of electricity. **(10 Marks)**

OR

2 a. Draw a single line diagram/general arrangement drawing of a sub-station and explain its parts and working. **(10 Marks)**

b. With a neat block diagram, explain in detail the distribution of electricity from the generation station to the end user. **(10 Marks)**

Module-2

3 a. Sketch and explain LT and HT cables, explain with a labelled sketch all parts of a armoured cable. **(10 Marks)**

b. What are the various types of wiring installation systems? **(10 Marks)**

OR

4 Write short notes on :
- i) Rising main and Sub mains
- ii) N ZEB
- iii) Thermal Load Reduction
- iv) Energy Conservation Techniques **(20 Marks)**

Module-3

5 What is Earthing? Why is it Done ; explain with sketches any two types of Earthing. **(20 Marks)**

OR

6 Write short notes on :
- i) MCCB and ELCB
- ii) Air Circuit Breakers
- iii) Fuses
- iv) Lighting Protection System. **(20 Marks)**

Module-4

7 a. What is Lighting? What are the factors contributing to Good Lighting? **(10 Marks)**

b. Explain in detail different Lighting Methods/Systems of Luminaries with neat sketches and their application. **(10 Marks)**

OR

8 Write short notes on :

a) Laws of Illumination
b) Glare
c) Façade and Landscape Light
d) Sodium vapour and Mercury vapour Lamps **(20 Marks)**

Module-5

9 What is ELVS? Explain its necessity explain in detail any 3 types of ELVS used in a building. **(20 Marks)**

OR

10 For a 2BHK Residence ; prepare an electrical layout and calculate electrical load showing the following :

i) Light points
ii) Fans
iii) Power points
iv) Low voltages points
v) DB
vi) Meter Board **(20 Marks)**

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CBCS SCHEME

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21ARC53

Fifth Semester B.Arch. Degree Examination, June/July 2025

History of Architecture – V

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Analyze the architectural feature of Palazzo Rucelli by Leon Batista Alberti. **(10 Marks)**

b. What are the key architectural features that define villa Rotunda by Andrea Palladio? **(10 Marks)**

OR

2 a. Describe the general characteristics of Baroque architecture. **(10 Marks)**

b. Discuss the significance of St. Peters Piazza by Bernini as an example of Baroque architecture. **(10 Marks)**

Module-2

3 a. How did the industrial revolution impact European society, economy and politics? **(10Marks)**

b. How did the use of metal and glass revolutionize architectural design during the Industrial revolution era? **(10 Marks)**

OR

4 a. Explore the influence of Art and Crafts movement in the post industrial period. **(10 Marks)**

b. Explain the salient features of Art Nouveau movement. **(10 Marks)**

Module-3

5 a. Highlight the contribution of Louis Sullivan to Modern Architecture. **(10 Marks)**

b. Explain the five principles of architecture of Le Corbusier with the help of a prominent example. **(10 Marks)**

OR

6 a. Explore Walter Gropius contribution to modern architecture with the help of Bavhaun building. **(10 Marks)**

b. Evaluate the influence of Franck Lloyd Wright's concepts on Modern Architecture citing example of falling water building. **(10 Marks)**

Module-4

7 a. Analyze the architectural features of Eero Saarinen's TWA Airport, Highlighting their significance in the context of modern transportation hubs. **(10 Marks)**

b. Evaluate Phillip Johnson's Glass House in terms of their architectural innovation and influence on modern design principles. **(10 Marks)**

OR

8 a. Investigate the futuristic architectural idea as proposed by Archigram. **(10 Marks)**

b. Discuss Moshe Safdie's approach to housing design in Israel, highlighting the unique features of his project. **(10 Marks)**

Module-5

9 a. Discuss the characteristics of Brutation in the Modern Movement. **(10 Marks)**

b. Analyze the works of Le Corbusier in the context of Brutalist architecture. **(10 Marks)**

OR

10 a. Analyze the works of Vladimir Tatlin and his contribution to the constructivist movement. **(10 Marks)**

b. Discuss the role of engineers Pierre Luigi Nervi in the development of modern architecture with any one example. **(10 Marks)**

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC55**

Fifth Semester B.Arch. Degree Examination, June/July 2025
Building Services-III

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 a. Describe mechanical ventilation system. **(05 Marks)**
b. Describe the major components of A/c systems. **(15 Marks)**

OR

2 a. Write the importance of mechanical ventilation system in Basements, Kitchen and Toilets. **(20 Marks)**

Module-2

3 a. What are roof top cooling Systems Draw & write its advantages? **(10 Marks)**
b. Explain VRF Systems & its applications. **(10 Marks)**

OR

4 a. Explain ADS (Air Distribution System) and its functions. **(10 Marks)**
b. Explain ADS aspects and different vent systems with sketches. **(10 Marks)**

Module-3

5 What is an Elevator? Explain the parts of conventional elevator. **(20 Marks)**

OR

6 Write short notes on.
a. Elevators
b. Escalators
c. Travellators and write where they are used. **(20 Marks)**

Module-4

7 a. Explain fire triangle. What are the various classes of fire? **(08 Marks)**
b. Explain different types of fire alarm systems. **(12 Marks)**

OR

8 Explain & draw different parts of elevator. **(20 Marks)**

Module-5

9 Explain the factors considered for locating escalators. Draw with neat sketches. **(20 Marks)**

OR

10 Write short notes on.
a. Fire Alarm
b. Smoke Detectors.
c. Fire towers **(20 Marks)**

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21ARC63

Sixth Semester B.Arch. Degree Examination, June/July 2025
Landscape Architecture

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Define a role of landscape architecture in current context with changing priorities. Elaborate on its scope and nature of professional approach with environmental centric disciplinary approach. **(20 Marks)**

OR

2 a. Define landscape architecture and explain its scope in urban and rural settings. **(10 Marks)**

b. Discuss the contributions of Fredrick Law Olmsted and Ian Mcharg to the field of landscape design. **(10 Marks)**

Module-2

3 Explain the process of site analysis with regards to topography, vegetation, hydrology and built context. **(20 Marks)**

OR

4 Illustrate the relationship between built and unbuilt spaces in landscape design as a response to architecture with relevant case study. **(20 Marks)**

Module-3

5 Describe the role of landform, water and vegetation in articulating an outdoor spatial design. **(20 Marks)**

OR

6 a. Explain how selection of plant material/species is influenced by climate, soil and function in a landscape design project. **(10 Marks)**

b. Describe various softscape and hardscape elements used in landscape architecture. **(10 Marks)**

Module-4

7 Discuss the landscape philosophies of any two of the following landscape architects.
- i) Late Kishore Pradhan
- ii) Aniket Bhagwat
- iii) Shaheer Associates
- iv) Martha Schwartz
- v) Peter Walker
- vi) Turenscape

(20 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.

OR

8 a. Illustrate with case study examples of eastern landscape philosophies of Persian gardens and Mughal gardens. **(10 Marks)**

b. Illustrate with suitable examples of western landscape design approach and philosophies of Italian and French gardens. **(10 Marks)**

Module-5

9 a. Outline the steps involved in the landscape design process for an school in an urban setting from conceptualization to execution. **(10 Marks)**

b. Discuss and elaborate the role of landscape architecture in shaping the design of urban public space such as plazas, parks and streets capes. **(10 Marks)**

OR

10 Create a Outdoor functional, recreational and ecological sound landscape design as a extension of kindergarten space, measuring 10 × 8 m. Kindly assume the unbuilt space to design as an extension as 10 × 10 m. Present a conceptual layout, section to suitable scale, any two details and a view to illustrate a design scheme. **(20 Marks)**

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CBCS SCHEME

USN | | | | | | | | | | |

21ARC64

Sixth Semester B.Arch. Degree Examination, June/July 2025

Contemporary Architecture

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing one full question from each module.
2. Draw sketches wherever necessary.

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.

Module-1

1 a. Explain the city planning of Jaipur with the help of neat sketches. **(10 Marks)**
b. Write a brief about the road networks and public spaces of Jaipur city. **(10 Marks)**

OR

2 With the help of neat sketches explain Le Corbusier design philosophies through secretariat building, Chandigarh. **(20 Marks)**

Module-2

3 Explain the ideas and works of Bimal Patel with the example of Sabarmati Riverfront development at Ahmedabad. **(20 Marks)**

OR

4 Briefly explain the design of the following with neat sketches:
a. Sri-Ram centre, New Delhi **(10 Marks)**
b. Experimental-Pondichery **(10 Marks)**

Module-3

5 Explain briefly
a. Richard Meier – Smith House, Connecticut **(10 Marks)**
b. Charles Moore – Piazzad Italia, New Orleans. **(10 Marks)**

OR

6 Write a brief on high tech architecture and explain the same through the work of Sir Norman Foster. **(20 Marks)**

Module-4

7 Write short notes on:
a. Ideologies of Renzo Piano **(10 Marks)**
b. Menil Museum, Houston. **(10 Marks)**

OR

8 Elaborate on Robert Venturi’s contribution to post modern architecture and highlight some of his notable works. **(20 Marks)**

Module-5

9 Highlight the design approach as seen in the designing of World Trade Center, New York by Daniel Libeskind. **(20 Marks)**

OR

10 Explain:
a. Deconstructivism **(10 Marks)**
b. The Peak club, Hong Kong. **(10 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC65**

Sixth Semester B.Arch. Degree Examination, June/July 2025
Building Services - IV (Accoustics and Noise Control)

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

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.

Module-1

1 a. Explain the behaviour of sound in an enclosed space with the relevant sketches. How does the shape and volume of the room affect acoustical performance? **(10 Marks)**

b. Define reverberation, and Reverberation Time (RT). How is Sabine's equation relevant in this connection? **(10 Marks)**

OR

2 a. Discuss the inverse square law of sound with diagram and labels. Elaborate its applications and limitations. **(10 Marks)**

b. Answer the following definitions with relevant sketches.
i) Decibel scale ii) Sound masking iii) Flutter Echo vi) Peak – to peak amplitude. **(10 Marks)**

Module-2

3 a. Elaborate Speech Intelligibility (SI), and discuss how it is different from Articulation Index (AI). List the types of Space Where (SI) is necessary. **(10 Marks)**

b. Differentiate between sound absorption and sound insulation. List materials and methods for both of the above. **(10 Marks)**

OR

4 a. Write in detail the working of A Sound Level Meter (SLM) with sketch and label its components. Discuss its measurement units, range and specific location of usage. **(10 Marks)**

b. Explain the role of the following with sketches.
i) Functional or space absorbers
ii) Cavity resonators
iii) Isolation Blankets
iv) Noise Reduction Coefficient (NRC). **(10 Marks)**

Module-3

5 a. An educational institution requires design recommendation for acoustics of its proposed 400 capacity auditorium with upper Gallery. Discuss in detail schematic plan, section and thumb rules. **(14 Marks)**

b. Discuss, briefly measures to control excessive (RT) in a lecture hall. **(06 Marks)**

OR

6 a. Distinguish between ancient Greek and roman theatres with the help of schematic plan, section and views. Discuss how the study and learnings contribute to modern acoustic design. **(14 Marks)**

b. Sketch any two design details for sound proofing a music recording studies. **(06 Marks)**

Module-4

7 a. Explain how you control noise and Vibrations Generated from mechanical equipment like AC chiller plant, Ahu's Roof Top Units (RTU) Elevators, Plumbing systems, Server generators Etc., Discuss in detail with relevant sketches. **(14 Marks)**

b. Differentiate between Air Borne and structure borne noise with sketches. **(06 Marks)**

OR

8 a. Discuss environmental noise control and its importance for peaceful living. Briefly explain and categorize any six sources of infiltration into indoor/outdoor noise with sketches. **(14 Marks)**

b. List any four measures to be taken to eliminate "Industrial Noise" in urban or suburban areas with sketches. **(06 Marks)**

Module-5

9 a. Elaborate on any six sites planning and building level strategies for noise control in an education campus along with sketches. **(12 Marks)**

b. Discuss any four measures to control road traffic noise in urban areas, with sketches. **(08 Marks)**

OR

10 a. A multi story large hospital building needs to be located on a site abutting a major road. Suggest site planning and building level noise control strategies, with the help of schematic plan and section. **(12 Marks)**

b. Explain town/city planning strategies to mitigate noise problems from, Rail, Road, Air industries, Commercial and Rapid urbanization. **(08 Marks)**

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC75**

Seventh Semester B.Arch. Degree Examination, June/July 2025

Estimation and Costing

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 a. What is estimate? Explain the need for estimation and costing. **(10 Marks)**

b. Write a note on detailed estimate. **(10 Marks)**

OR

2 Explain the following types of estimate:
(i) Preliminary estimate (ii) Plinth area estimate (iii) Cube rate estimate
(iv) Supplementary estimate (v) Annual repair or maintenance estimate. **(20 Marks)**

Module-2

3 a. Estimate the quantities of the following item of two roomed building from Fig.Q3:
(i) Earthwork excavation in foundation
(ii) PCC bed concrete 1:4:8
(iii) First class brick masonary in CM 1:6
(Both long wall and short wall method and centre line method) **(20 Marks)**

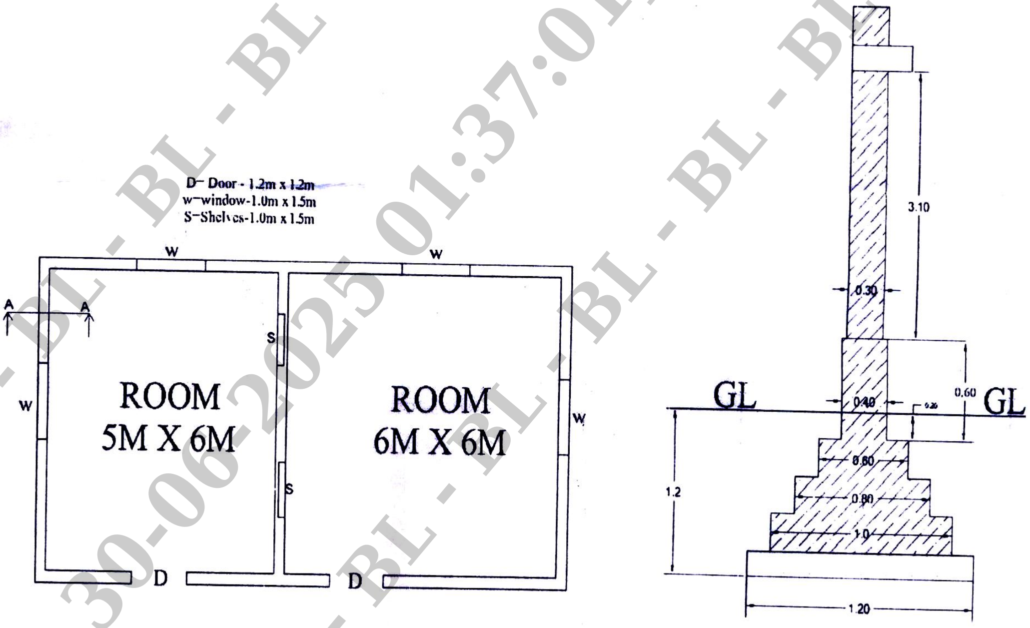

Fig.Q3

OR

4 Estimate the quantities of the following item of a two roomed building from Fig.Q4.
(i) Earth work in excavation in foundation
(ii) Cement concrete in foundation
(iii) Size stone masonary in CM 1:6 for foundation and plinth
(iv) 2.5 cm damp proof course (DPC)
(v) First class brick work in CM 1:4 for super structure. Use long wall and short wall method. **(20 Marks)**

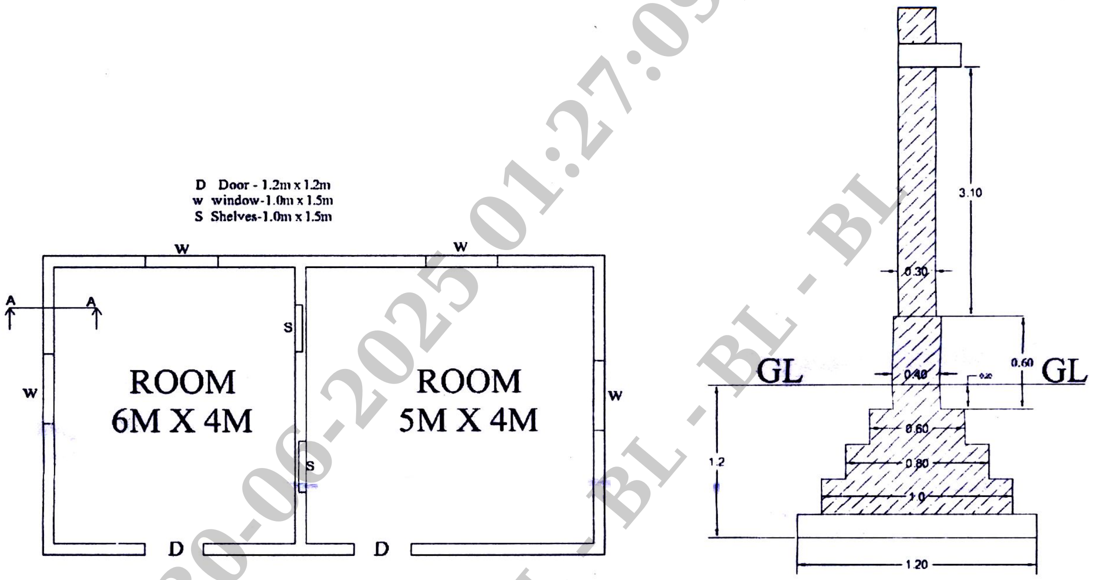

Fig.Q4

Module-3

5 Write a detailed specification for the following:

a. First class brick work in cement mortar (CM) 1:6

b. Cement plastering in CM 1:6

c. 25 cm thick cement concrete flooring (1 : 2 : 4)

d. Earth work in excavation for foundation. **(20 Marks)**

OR

6 Prepare a detailed estimate of RCC roof slab of span 3m clear span 12 cm thick and 6 m long. Slab bearing on masonary is 150 mm alround. Reinforcement consist of 12 mm diameter main bars at 15 cm c/c alternate bent up and distribution 6 mm diameter at 18 c/c. RCC work in centering and shuttering but excluding reinforcement is Rs. 7500/m^3. Providing and tying reinforcement is Rs.90/- per kg. Do sketching and prepare a schedule of bars. Assume $d^2/162$ to derive weight of all bars in kg per meter, d is the diameter of bar in mm or 7850 kg/m^3 as density. **(20 Marks)**

Module-4

7 a. Define rate analysis. List and explain the sub head costs taken into account. **(10 Marks)**

b. List and explain the different factors affecting the rate analysis. **(10 Marks)**

OR

8 Carry out the rate analysis for the following :

(i) Earth work excavation for foundation in ordinary soil.

(ii) PCC bedding 1 : 4 : 8 for foundation

(iii) Coursed rubble masonary in CM 1:6

(iv) Painting plastered surface including preparation of surface. **(20 Marks)**

Module-5

9 Prepare detailed estimate for a septic tank with soak pit shown in Fig.Q9 for the following items work.

a. Earth work in excavation

b. First class brick work in CM 1:4 for side wall

c. R.C.C. (1 : 2 : 4) for cover slab with 1% steel reinforcement for septic tank and soak pit.

(20 Marks)

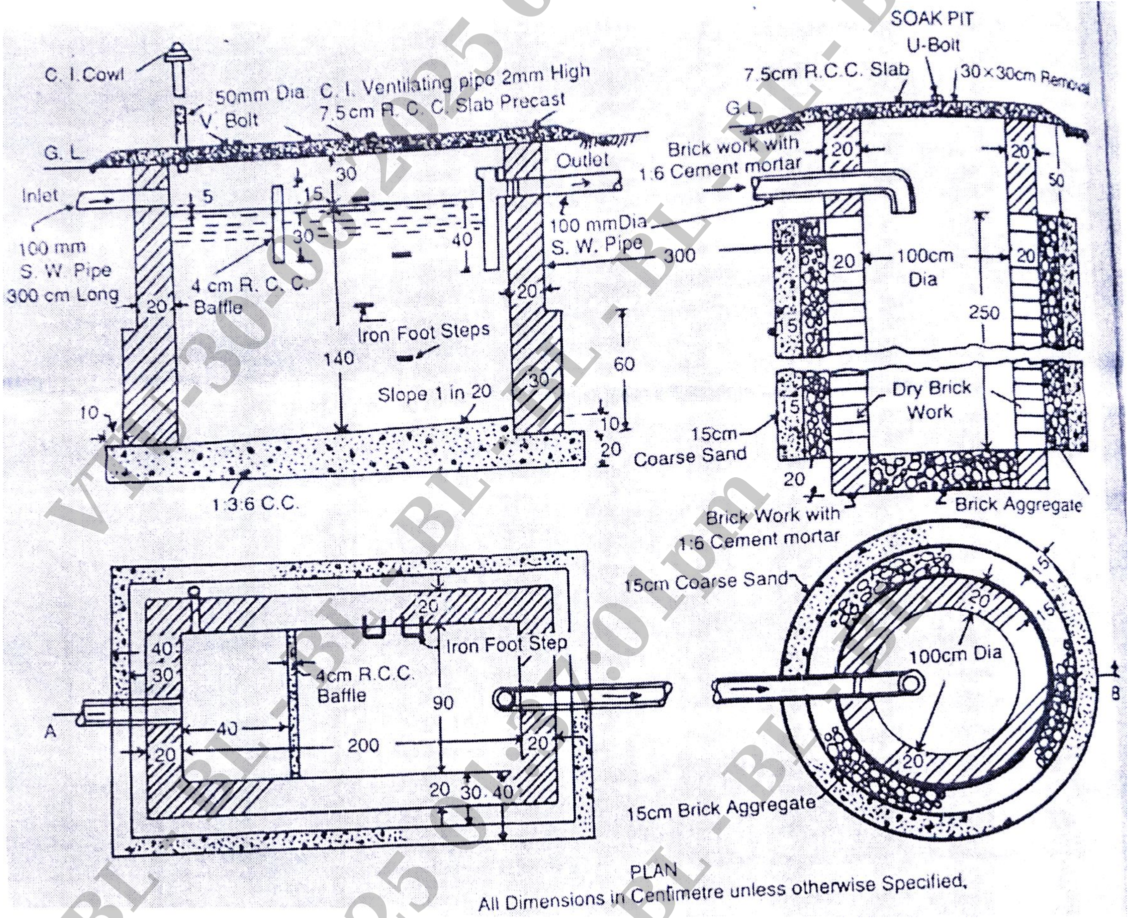

Fig.Q9

OR

10 Write short notes on the following :

a. EMD and Security retention

b. RA bill and final bill

c. Liquidated and unliquidated damages

d. Safety norms to be followed at site

e. Measurement book and its importance

(20 Marks)

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC85**

Eighth Semester B.Arch. Degree Examination, June/July 2025

Construction and Project Management

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 a. Explain in brief about principles and objectives of project management. **(10 Marks)**

b. Elaborate the life cycle stages of a project. **(10 Marks)**

OR

2 a. Explain in brief about types of construction firms. **(10 Marks)**

b. Write a note on :
(i) Qualities of an ideal construction organization
(ii) Ethics in construction industry **(10 Marks)**

Module-2

3 a. Explain in brief about project evaluation and review technique. **(10 Marks)**

b. Explain in brief about
(i) Project Feasibility Study
(ii) Investment criteria **(10 Marks)**

OR

4 a. Explain the following :
(i) Value Engineering (ii) Decision tree **(10 Marks)**

b. Write short notes on :
(i) SWOT Analysis (ii) Cost Benefit Analysis **(10 Marks)**

Module-3

5 a. Explain in brief about critical path method with CPM chart. **(10 Marks)**

b. Write the advantages and disadvantages of PERT in construction management. **(10 Marks)**

OR

6 a. Explain in brief about resource optimization and project crushing. **(10 Marks)**

b. Explain in brief about techniques used in project scheduling and management. **(10 Marks)**

Module-4

7 a. Write a brief note on health and safety management in construction industry. **(10 Marks)**

b. Write a brief note on quality management in construction. **(10 Marks)**

OR

8 a. Explain in brief about role of a project manager in monitoring the specifications. **(10 Marks)**

b. Explain in brief about
(i) Project updating (ii) Progress curves. **(10 Marks)**

Module-5

9 a. Explain in brief about various issues involved in owning operating and maintaining of construction equipment. **(10 Marks)**

b. Write the factors affecting selection of construction machinery. **(10 Marks)**

OR

10 a. Discuss the various types of equipments used in concreting operations. **(10 Marks)**

b. Describe the role of equipment/machinery in construction industry. **(10 Marks)**

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CBCS SCHEME

USN | | | | | | | | | | |

21ARC83

Eighth Semester B.Arch. Degree Examination, June/July 2025

Urban Planning

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Briefly discuss the Evolution of human settlement. **(20 Marks)**

OR

2 a. Explain the characteristic features of a typical Roman Town. **(10 Marks)**

b. Explain the ideas behind the following vedic town planning concepts:
i) Prastara ii) Padmaka **(10 Marks)**

Module-2

3 a. Discuss the responses to impact of urbanization. Explain both the positive and negative impact. **(10 Marks)**

b. Briefly explain the Planning Theories of Ebenezer Howard. **(10 Marks)**

OR

4 Discuss the ideas of Le-Corbusier with the example of Chandigarh City Planning. **(20 Marks)**

Module-3

5 a. Write short notes on causes of slums. **(08 Marks)**

b. Explain various approaches to slum clearance with financial assistances schemes in Indian context. **(12 Marks)**

OR

6 Elaborate on the causes and effects of urbanization. **(20 Marks)**

Module-4

7 Explain on any 2 of the following topics: **(20 Marks)**
a. Concentric zone theory and sector theory
b. Multiple Nuclei theory and its relevance
c. Sub-urban and Peri urban areas

OR

8 What is land use zoning? Briefly explain different zoning type. **(20 Marks)**

Module-5

9 What is urban renewal? Why is urban renewal required? **(20 Marks)**

OR

10 Write short notes on the following : **(20 Marks)**
a. URDPFI Guidelines
b. Urban Redevelopment
c. Regional Plan
d. Master Plan

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CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **21ARC85**

Eighth Semester B.Arch. Degree Examination, June/July 2025

Construction and Project Management

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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