

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT
(An Autonomous College U/s UGC Act 1956)

B. TECH SEMESTER-I, SEMESTER END EXAMINATION – SUMMER 2025

Subject Code: 1CV102**Date: 11-06-2025****Subject Name: BUILDING CONSTRUCTION TECHNOLOGY****Time: 11:00 AM to 01:30 PM****Total Marks: 70****Instructions**

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Write answers of **Section A** and **Section B** in **separate answer books**.
3. Attempt all questions from both **Section A** and **Section B**.
4. Each section carries **35 marks**, with a total of **70 marks** for the examination.
5. The figures to the right of each question indicate full marks, make suitable assumptions with justification.
6. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

SECTION A**Marks BL CO****Q.1 Multiple-Choice Questions****[05]****(a)** The vertical distance between two consecutive treads is known as**1 R 3****(i)** Going**(ii)** Rise**(iii)** Tread**(iv)** Nosing**(b)** The function of a baluster is to:**1 U 3****(i)** Support the landing**(ii)** Provide ventilation**(iii)** Act as a vertical support in handrails**(iv)** Carry the load of stairs**(c)** The most commonly used material in modern upper floor construction is**1 U 4****(i)** Brick**(ii)** Wood**(iii)** Stone**(iv)** Reinforced Cement Concrete**(d)** The horizontal member in roof construction that supports the covering is called a**1 U 4****(i)** Purlin**(ii)** Plinth**(iii)** Column**(iv)** Beam

(e) What is the main purpose of temporary works in construction?	1	U	5
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|---|------------------------|
| (i) Decoration | (ii) Permanent support |
| (iii) Temporary support during construction | (iv) Drainage |

Q.2 Attempt Any Two	[10]
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|--|----------|----------|----------|
| (a) Compare the functions and construction of the windows and ventilators. | 5 | R | 3 |
| (b) Draw a neat-labelled sketch of a panelled door and explain its construction details and suitability. | 5 | R | 3 |
| (c) List out different types of staircase with neat sketches and explain any one in detail. | 5 | U | 3 |

Q.3 Attempt Any Two	[10]
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|---|----------|----------|----------|
| (a) Explain the process of constructing a ground floor including base preparation, DPC, and finishing layers. | 5 | U | 4 |
| (b) Classify the different types of roofs. Explain pitched roofs with neat sketch. | 5 | U | 4 |
| (c) What are the essential features of a good roof? | 5 | U | 4 |

Q.4 Attempt Any Two	[10]
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|--|----------|----------|----------|
| (a) Describe types of formwork used for different structural members and explain any one in detail. | 5 | U | 5 |
| (b) What is scaffolding? Give the purpose of scaffolding. | 5 | U | 5 |
| (c) What is underpinning? Explain in detail the situations where underpinning is required and give its applications. | 5 | A | 5 |

SECTION B

Marks BL CO

Q.5 Multiple-Choice Questions

[05]

(a) What is the standard size of brick?

1 U 2

(i) 20cm x 20cm x 10 cm (ii) 19cm x 19cm x 9 cm

(iii) 21cm x 21cm x 10 cm (iv) 22cm x 22cm x 10 cm

(b) What is the main purpose of a pile foundation?

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(i) To transfer load to the surface soil (ii) To transfer load to a deeper, more stable soil or rock layer

(iii) To reduce the weight of the structure (iv) To provide aesthetic value to the structure

(c) Which of the following is NOT a type of pile?

1 R 1

(i) End bearing pile (ii) Friction pile

(iii) Floating pile (iv) Tensile pile

(d) Which of the following is NOT a type of shallow foundation?

1 R 1

(i) Spread footing (ii) Mat foundation

(iii) Pile foundation (iv) Strap footing

(e) Which of the following is NOT a type of caisson?

1 R 1

(i) Open caisson (ii) Pneumatic caisson

(iii) Pile caisson (iv) Box caisson

Q.6 Attempt Any Two

[10]

(a) What are the components of Building? Explain any one in detail.

5 R 1

(b) Give the Shortnote on Shallow foundation.

5 U 1

(c) Explain Pile foundation.

5 U 1

Q.7 Attempt Any Two

[10]

(a) Write down the types of Caissons. Explain any one in detail.

5 R 1

(b) Write down the types of Piles. Explain any one in detail.

5 R 1

(c) Explain floating Caisson.

5 U 1

Q.8 Attempt Any Two

[10]

(a) What is Brick masonry. Write down the types of Bonds.

5 R 2

(b) Write a shortnote on Pointing.

5 R 2

(c) Explain English Bond.

5 U 2
