

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

B.Voc. SEMESTER-I, SEMESTER END EXAMINATION – WINTER 2025

SUBJECT CODE: 1BCT101

DATE: 17-12-2025

SUBJECT NAME: CONSTRUCTION MATERIALS

TIME: 11:00 AM to 01:00 PM

TOTAL MARKS: 50

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Attempt all questions in the question paper.
3. The figures to the right of each question indicate full marks. Make suitable assumptions with proper justification wherever required.
4. Simple, non-programmable scientific calculators are permitted.
5. BL - Cognitive Level (As per Revised Bloom's Taxonomy) (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

		Marks	BL	CO
Q.1	(a) Explain the classification of rocks based on geological origin and give one example for each type.	05	R	1
	(b) Describe the properties and requirements of good building stones used in construction.	05	U	1
Q.2	(a) State the tests conducted on bricks as per IS standards and explain the efflorescence test procedure.	05	U	2
	(b) Describe the manufacturing process of bricks and list the properties of good bricks.	05	U	2
OR				
Q.2	(a) Compare burnt clay bricks, fly ash bricks, and hollow blocks based on composition, strength, and uses.	05	U	2
	(b) Explain different types and applications of tiles used in construction.	05	U	2
Q.3	(a) Draw a neat flow diagram for the manufacturing of ordinary Portland cement by dry process.	05	R	3
	(b) Discuss the properties and uses of different types of cement used in civil works.	05	U	3
OR				
Q.3	(a) Explain IS classification of lime and give its uses in construction.	05	U	3
	(b) Differentiate between quick lime, fat lime, and hydraulic lime with examples.	05	U	3

- Q.4** (a) Explain the seasoning of timber and discuss any two methods of seasoning. **05** **U** **4**
(b) List and explain defects in timber and describe their effects on strength and durability. **05** **U** **4**

OR

- Q.4** (a) Describe the preservation methods of timber and their importance. **05** **A** **4**
(b) Explain any three wood-based products (such as plywood, fiberboard, or gypsum board) with their uses. **05** **U** **4**

- Q.5** (a) Describe the types, properties, and uses of bitumen in construction. **05** **U** **5**
(b) Write short notes on (i) Types of glass and their uses and (ii) Types of paints and their purposes. **05** **R** **5**

OR

- Q.5** (a) Differentiate between cast iron, wrought iron, and steel based on composition and properties. **05** **U** **5**
(b) Explain properties and uses of plastics as construction materials. **05** **U** **5**
