

21415

3 Hours / 100 Marks

Seat No.

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- Instructions :** (1) All Questions are *compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.

Marks

1. Attempt any TEN :

20

- State role of Civil Engineering in human life.
- State any two purposes of valuation.
- What is quarrying of stones ? State any two methods of quarrying.
- State any two defects occur in timber.
- State various types of bituminous materials used in Civil Engg. works.
- State detailed classification of cements.
- State any two timber based products used in Civil Engineering.
- Mention different types of fibres.
- Mention any two water proofing material brands available in market.
- State any two uses of termite proofing materials.
- State constituents of good quality bricks.
- Mention chemical and mechanical properties of blast furnace slag.

2. Attempt any FOUR :

16

- What do you mean by eco-friendly building materials ? State any two properties of it.
- Explain the meaning of retarding and accelerating admixtures with one example each.
- What is seasoning of timber ? Explain natural seasoning method.
- Give physical classification of stone with example.
- State particle size and I.S. classification of soil.
- Draw cross section of trunk of timber. Give any four engineering properties of timber.

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- 3. Attempt any FOUR :** **16**
- (a) State the classification and any two properties of lime.
 - (b) Enlist various tests conducted on bitumen and explain any one of them.
 - (c) Explain plasticity chart of soil.
 - (d) State importance of special types of bricks and its applications.
 - (e) Draw flowchart of stages in manufacturing process of tiles. Mention characteristics of good tiles.
 - (f) State any four characteristics of good brick.
- 4. Attempt any FOUR :** **16**
- (a) What is artificial timber ? State important features of rubber wood.
 - (b) State any two properties and enlist any four types of glass.
 - (c) Explain various stages in wet process of manufacturing of cement.
 - (d) State types any two uses of pre-cast concrete products.
 - (e) State two merits and two demerits of glass cladding.
 - (f) State properties of fine and coarse aggregates.
- 5. Attempt any FOUR :** **16**
- (a) State any two properties and two uses of Jute.
 - (b) State two properties and two uses of Epoxy.
 - (c) What do you mean by geo-synthetic materials ? Mention application of it.
 - (d) State various thermal insulating materials. State any two properties of insulating material.
 - (e) State properties and classification of damp proofing materials.
 - (f) Explain the method by which water proofing of existing old slab can be done.
- 6. Attempt any FOUR :** **16**
- (a) Define Mortar. State any two properties of good mortar.
 - (b) State constituents and any two properties of POP.
 - (c) State types and any two properties of good paint.
 - (d) What is rice husk ? State its importance in construction.
 - (e) State any two properties and any two uses of fly ash.
 - (f) What is construction waste ? How it is applicable in Civil Engineering ?
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