



22204

12223

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. **Attempt any FIVE of the following :**

**10**

- (a) List broad classification of materials.
- (b) Enlist uses of Asphalt and Tar.
- (c) Enlist any four natural materials used in construction.
- (d) State any four types of cement.
- (e) Enlist any four applications of steel in Civil Engineering.
- (f) State constituents of POP.
- (g) Enlist different industrial waste material.



**2. Attempt any THREE of the following : 12**

- (a) Describe the scope of construction material in Irrigation Engineering.
- (b) Enlist any four properties of eco-friendly material.
- (c) State the situations where lime mortar is used with its proportion.
- (d) Describe the properties of good paint.

**3. Attempt any THREE of the following : 12**

- (a) State the methods of quarrying of stone and explain any one in brief.
- (b) Write two uses of the following :
  - (i) Bagasse
  - (ii) Artificial timber
- (c) Enlist the uses of artificial sand.
- (d) State any four requirements of good sand in construction.

**4. Attempt any THREE of the following : 12**

- (a) Describe in brief types of glass.
- (b) State any four uses of veneers.
- (c) Draw various shapes of pavement block.
- (d) List the field test conducted on the bricks.

**5. Attempt any THREE of the following : 12**

- (a) Draw a neat sketch of structure of timber and label the parts.
- (b) Define fibers and state any two applications of Asbestos fibers.
- (c) State any four properties of Geo-cement.
- (d) List any four special mortars along with their uses.
- (e) State the properties of rice husk.

**6. Attempt any THREE of the following : 12**

- (a) State classification of aggregate according to sizes with applications in construction.
  - (b) State the suitability of soil as a construction material.
  - (c) State the characteristics of good brick.
  - (d) State the suitability of various types of sound insulating materials.
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