

22204

21819

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.

Marks

1. Attempt any FIVE of the following :

10

- (a) State the materials for different civil engineering structures.
- (b) State the materials required for irrigation structures in general.
- (c) Define quarrying.
- (d) What is moulding ?
- (e) What are the various operations involved in manufacturing of burnt clay bricks ?
- (f) What is wall cladding ?
- (g) Enumerate the field tests to which bricks are generally subjected.

2. Attempt any THREE of the following :

12

- (a) Describe the broad classification of materials.
- (b) Describe the field tests for cement.
- (c) What are the requirements of good sand ?
- (d) State the applications of soils as a construction material.

- 3. Attempt any THREE of the following : 12**
- (a) Explain various types of tiles based on their use.
 - (b) Describe the wet process of manufacturing of cement.
 - (c) What are the different types of aggregates ?
 - (d) Write short note on solid concrete blocks.
- 4. Attempt any THREE of the following : 12**
- (a) What are the properties of tar ?
 - (b) What are the properties of precast pavement blocks ?
 - (c) What are the properties of sound insulating materials ?
 - (d) Explain the process of distempering.
- 5. Attempt any THREE of the following : 12**
- (a) Explain various types of clays with their suitability.
 - (b) Explain the manufacturing process of hydraulic lime.
 - (c) Give properties and uses of ceramic materials in construction.
 - (d) Explain why you need agro and industrial waste as a construction materials.
 - (e) State the situations where oil paints and distempers are used.
- 6. Attempt any THREE of the following : 12**
- (a) State the properties of an ideal varnish.
 - (b) Give properties and uses of POP.
 - (c) Write any two uses of rice husk and coir fibre.
 - (d) Give the uses of granite & marble polishing waste.
 - (e) State the uses of (i) Glass Fibres (ii) Asbestos Fibres.
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