

22204

23124

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) State the role of civil engineer in human life.
- (b) List any four natural construction materials.
- (c) Define dressing of stone.
- (d) List the major ingredients of cement.
- (e) Write any two uses of precast concrete blocks.
- (f) Enlist any two uses of "Plaster of Paris".
- (g) Write any two properties of blast furnace slag.

2. Attempt any THREE of the following :

12

- (a) State any four criteria for selection of construction materials for different civil engineering structures.



- (b) State any one example of following construction material :
- (i) Artificial
 - (ii) Special
 - (iii) Finishing
 - (iv) Processed
- (c) Enlist the types & uses of lime.
- (d) Explain any four defects in timber with neat sketch.

3. Attempt any THREE of the following : 12

- (a) State the field tests conducted on bricks.
- (b) State properties and uses of geo-cement.
- (c) Draw the flow diagram of wet process of manufacturing of cement.
- (d) State any four types of glass with its suitability.

4. Attempt any THREE of the following : 12

- (a) Define quarrying of stones & state any two methods of quarrying.
- (b) Write four uses of plywood.
- (c) Enlist the various thermal insulating materials & write any two properties of insulating materials.
- (d) State the application of geo-polymer cement.
- (e) Enlist the types of a mortar & write the properties of a good mortar.

5. Attempt any THREE of the following : 12

- (a) Define bitumen and state the different forms of bitumen.
- (b) Compare asphalt and tar with respect to
 - (i) setting time
 - (ii) use

- (c) Suggest the type of glass used for the following work :
 - (i) making panel of partition wall
 - (ii) Cashier cabin
 - (iii) Sky light of roofs
 - (iv) Door shutter
- (d) Enlist any four types & uses of flooring tiles.
- (e) Enlist properties of Ferrocete

6. Attempt any THREE of the following :

12

- (a) State any two properties and uses of paints.
 - (b) State the situations where following paints are used :
 - (i) Oil paint
 - (ii) Distemper
 - (iii) Varnishes
 - (iv) Cement paint
 - (c) Write any four uses of rice husk.
 - (d) Write the objectives of using fly ash in cement.
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