



17209

21314

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.
(5) Assume suitable data, **if** necessary.
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MARKS

1. Attempt **any ten** :

20

- a) Define Environmental Engineering.
- b) List any four types of common stones used in building construction.
- c) Define soil.
- d) Give any four uses of lime.
- e) Give two advantages of pre-cast concrete blocks.
- f) Give any two characteristics of good tiles used for wall cladding.
- g) What do you mean by “Hydration of Cement” ?
- h) List any four Thermal insulating materials.
 - i) Give any four units, where sound insulation is necessary.
 - j) List four types of fibres.
- k) What is Enamel paint ?
 - l) Give any four properties of plastic paint.
- m) Define straw and give its one use in building construction.
- n) Give any two uses of Granite and marble polishing waste.

P.T.O.

**MARKS****2. Attempt any four :****16**

- a) Give any four properties of Ecofriendly material.
- b) Describe four steps in operation of stone blasting.
- c) Give any four field Tests for selection of Burnt clay Bricks.
- d) Give the list of any four brands of water proofing materials available in market with use of each.
- e) Give definition, proportion, properties and uses of “Fire – resistant mortar”.
- f) How fly-ash is useful as a construction material ?

3. Attempt any four :**16**

- a) Which are the factors affecting the selection of construction material ?
(List **any four**) :
- b) What is the purpose of seasoning of timber ? (List **any four**) :
- c) Give any four properties of Bitumen.
- d) What is “Wall cladding” ? Describe the process of wall cladding.
- e) Give the classification of cement.
- f) Describe following properties of fine Aggregate :
 - i) Size
 - ii) Shape
 - iii) Specific gravity
 - iv) Bulk density



MARKS

4. Attempt **any four** :

16

- a) i) What is Transportation Engineering ?
ii) What is Rapid Hardening cement ?
- b) Explain in brief about any four defects in timber.
- c) Draw neat sketches of :
 - i) Conventional brick and
 - ii) Standard brick showing all the dimensions.
- d) List any four harmful constituents of bricks and explain how they are harmful ?
- e) List four characteristics of good tiles.
- f) List the requirements of good 'Damp Proofing Material' (**any four**).

5. Attempt **any four** :

16

- a) List any four advantages of 'Dressing of stones'.
- b) Give the four situations where Hollow concrete Block Masonry is used.
- c) What do you mean by :
 - i) Igneous Rocks
 - ii) Sedimentary Rocks
 - iii) Metamorphic Rocks
 - iv) Argillaceous Rocks.
- d) Draw a neat sketch of 'Rotary Kiln' for wet process in cement manufacturing process.
- e) List termite proofing materials with use.
- f) Give two properties and two uses of 'Acoustic Plaster'.



6. Attempt **any four** :

16

- a) Enlist any four requirement of good building stones.
 - b) Write four uses of asbestos fibres as construction material.
 - c) Give two properties and two uses of 'Ferrocete'.
 - d) Give stepwise Procedure of fixing Linoleum to floor.
 - e) Give four uses of Rice Husk.
 - f) Define saw dust and give its three properties.
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