



17209

16172

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--

- 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) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

Marks

1. Attempt any ten :

20

- a) State the role of Civil Engineering in human life.
- b) Define Environmental Engineering.
- c) Distinguish between stone and rock.
- d) State :
 - i) Green timber
 - ii) Converted timber
- e) State suitability of clay as construction material.
- f) Enlist major ingredients of cement.
- g) Enlist any two advantages of precast concrete blocks.
- h) State the standard dimension of
 - i) Conventional brick
 - ii) Standard brick
- i) List four types of fibres.
- j) List any four types of building where sound insulation is necessary.
- k) Define water proofing and damp proofing.
- l) List any two properties of rice husk.

2. Attempt any four :

16

- a) List any four criteria for selection of construction materials.
- b) State any one example of following construction materials.
 - i) Natural
 - ii) Artificial
 - iii) Special
 - iv) Finishing
- c) State the various safety precautions to be taken while performing the operation of blasting.
- d) Draw a C/S of trunk of tree.
- e) Give any four properties of eco-friendly material.
- f) Define bitumen and state different forms of bitumen.

P.T.O.

**3. Attempt any four :****16**

- a) State the various methods of seasoning of timber. Explain any one in brief.
- b) Explain the manufacturing process of fat lime.
- c) Enlist the requirements of good sand.
- d) List any four properties of plywood.
- e) Enlist the various harmful ingredient of a brick earth and state the adverse effects of each constituent on the bricks.
- f) Describe various common field test carried out on cement.

4. Attempt any four :**16**

- a) List various special bricks, also state their uses.
- b) Enumerate the characteristics of good tiles.
- c) Suggest the types of glass to be used for the following :
 - i) Making panel wall or partition wall.
 - ii) Laboratory apparatus.
 - iii) Sky light of roofs.
 - iv) Jewellery store or cashier booth.
- d) Enlist the uses of ceramic material.
- e) Enlist the properties of ferrocrete.
- f) Explain various method of moulding of bricks.

5. Attempt any four :**16**

- a) Explain any four properties of geosynthetic material and its application in construction.
- b) Write the need of termite proofing and sound insulating materials.
- c) List four uses of glass fibres as construction materials.
- d) Enlist the uses of rice husk.
- e) State advantage of artificial sand over natural sand.
- f) Draw flow diagram for manufacturing process of cement.

6. Attempt any four :**16**

- a) Enlist any four properties of good paint.
 - b) Define 'wall cladding'. Describe the process of wall cladding.
 - c) Give stepwise procedure of fixing linoleum to floor.
 - d) State any two artificial timber based product.
 - e) List any four application of construction waste.
 - f) Write the objectives of using fly ash in cement or concrete.
-