17209

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 <u>TEN</u> of the following:** 20

   a) State the role of building construction in human life.

   b) What is the role of construction management in human life ?

   c) State the physical classification of rocks.

   d) State:

      i) Green timber

      ii) Converted timber

      States for timber.

   e) State suitability of clay as construction material.

   f) What are the constituents of good brick earth ?

   g) State the functions of lime, silica and alumina as ingredients of cement.

   h) State the suitability of artificial sand as construction material.

Marks

i) State the types of glass used as cladding.

j) State the names of thermal insulating materials.

k) What do you mean by artificial timber ?

l) Name any four finishing materials used in building construction.

m) State the constituents of plaster of paris.

n) State the products where following materials are used.

    i)   Fly ash

    ii)   Granite and marble polishing waste.

2.   **Attempt any <u>FOUR</u> of the following:**   **16**

a) State and explain in brief classification of construction materials.

b) What is the criteria for selection of construction material ?

c) Enumerate the characteristics of a good building stone. What are different methods used in stone dressing ?

d) What are the various defects in timber ?

e) What are the characteristics of good timber ?

f) Classify asphalt. State the properties and uses of different types of asphalt.

Marks

3. **Attempt any <u>FOUR</u> of the following:** **16**

a) What are the properties and uses of bitumen ?

b) Explain the terms.

    i) Quick lime

    ii) Slaked lime

    iii) Fat lime

    iv) Hydraulic lime

c) State the situations where you can use soil as construction material.

d) What are the characteristics of good brick earth ?

e) What are the tests usually carried out on bricks required for large construction ?

f) What are the different types of tiles according to their materials ? State use of each type.

4. **Attempt any <u>FOUR</u> of the following:** **16**

a) What is portland cement ? What are its important properties ? How are they tested ?

b) Enumerate the laboratory tests for cement and explain in brief any one.

c) Describe with sketch the process of manufacture of portland cement (any one method).

d) What types of aggregates are used for making good concrete ? State their geological names.

e) What are the different pre-cast concrete products that are used in building construction ? State the advantages of using the same.

f) What is plywood ? State different types with neat sketches.

Marks

5. **Attempt any FOUR of the following:** **16**

a) State the properties of glass.

b) Write in brief about:

    i) Soda-lime glass

    ii) Lead glass

    iii) Borosilicate glass

c) What are the properties of water-proofing materials ? State the brand names of any two materials.

d) What are the requirements of a good heat insulating materials ?

e) Give the classification of sound insulating materials.

f) State the types of fibres that are used in construction.

6. **Attempt any FOUR of the following:** **16**

a) Mention the applications of FRP in building industry.

b) State the applications of adhesives and epoxy in building construction.

c) What are different plastering materials ? State their proportion with situation where it is used.

d) State the difference between paint, distemper and varnish. State application of each.

e) What is polymer ? State the applications of polymer materials in construction.

f) State the uses of following materials in construction.

    i) Rice husk

    ii) Bagasse

    iii) Coir fibres

    iv) Sawdust.

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3 Hours / 100 Marks