May-25-0313

CE-304 (Building Materials)

B.Tech. 3rd (CBCS)

Time : 3 Hours   Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all, selecting one question each from section A, B, C and D. Section E is compulsory.

SECTION - A

1. (a) Discuss about the different factors affecting the selection of floor materials. (5)

   (b) What is artificial stone and how is it prepared? State its advantages. (5)

2. (a) What are the different type of industrial waste used for the manufacturing of concrete? Discuss in detail. (6)

   (b) Briefly explain about the effect of harmful ingredients on manufacturing bricks. (4)

SECTION - B

3. (a) Discuss about the different classification of plastics with suitable examples. (6)

   (b) State the advantages and disadvantages of aluminium as a roofing material. (4)

4. Enumerate the different marketable form of steel available. (10)

SECTION - C

5. Explain about the grades of bitumen, their applications and uses. (10)

6. (a) What is meant by cutback and emulsion? Explain about their characteristics. (5)

   (b) Discuss about the different properties of mastic bitumen. (5)

SECTION - D

7. Discuss about the different types and properties of sealant used for joints. (10)

8. Explain about the different types of resin repair mortar? How selection of resin is done for repairing the cracks? (10)

SECTION - E (Compulsory)

9. Answer the following:

   (a) Define: Density index, annealing, hygroscopicity, thermal Capacity.

   (b) How many number of bricks are required for 4 m³ of brick masonry work?

   (c) Differentiate between clamp and kiln.

   (d) What is terrazzo flooring?

   (e) Write the constituents of architectural glass.

   (f) What are the different forms of aluminium.

   (g) Define softening point of bitumen.

   (h) What is polymerization?

   (i) What are the constituents of good brick earth?

   (j) What are the disadvantages of cutback bitumen?
   (10×2=20)