

Total No. of Questions : 8]

SEAT No. :

P2974

[5154]- 526

[Total No. of Pages : 2

B.E. (Civil Engineering)

FERROCEMENT TECHNOLOGY

(2012 Pattern) (Semester - II) (Elective - IV) (Open Elective)

(End Sem.)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) Neat diagrams must be drawn whenever necessary.*
- 3) Figures to the right indicate full marks.*

Q1) a) What is Ferrocement? Discuss applications of ferrocement in construction industry. **[6]**

b) Discuss properties of ferrocement under static loads. **[6]**

c) Discuss strength through shapes for structural elements. **[6]**

OR

Q2) a) Explain - **[6]**

i) Protective Surface Treatments

ii) Damages to Ferrocement structures.

b) Discuss the parameters affecting material properties of Ferrocement. **[6]**

c) Discuss methods of mortar application during construction of Ferrocement. **[6]**

Q3) a) Discuss building components using Ferrocement, explain Ferrocement cavity wall in detail. **[6]**

b) Explain Earthquake resistance properties of Ferrocement. **[6]**

c) Discuss factors governing cost analysis of Ferrocement. **[6]**

OR

P.T.O.

- Q4)** a) Write a note on 'Ferrocement in Foundation'. [6]
- b) Determine quantities of materials required for a ferrocement partition wall 30 mm thick and of size 4m × 3m Details are as follows: [12]
- i) Skeletal steel → 8 mm dia, 500 mmc/c in both directions
- ii) Weld mesh → 150 mm × 150 mm × 12 × 12g
- iii) Chicken mesh → 2 layers (one layer on each face) 13 × 13 mm × 24 × 24g

Mortar - cement mortar 1 : 3 by volume.

- Q5)** a) Compare RCC and Ferrocement counter for Γ Retaining wall. [6]
- b) Discuss various types of storage tanks with Ferrocement. [6]
- c) Write a note on 'Ferrocement water proofing'. [5]

OR

- Q6)** a) Discuss design procedure of soil retaining structures in Ferrocement , with example. [6]
- b) Discuss Ferrocement septic Tank. [5]
- c) Discuss layered system of ferrocement applications. [6]

- Q7)** a) Discuss 'Ferrocement shells'. [5]
- b) Discuss Ferrocement precast walling and flooring panels. [6]
- c) Discuss various types of large size structures. [6]

OR

- Q8)** a) Discuss design of joints in precast elements. [5]
- b) Discuss various precast members cast using ferrocement. [6]
- c) Discuss 'Ferrocement pyramids'. [6]

