PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2019 - 20 Examination

Semester: 1   **Date: 18/12/2019**
Subject Code: 203209131   **Time: 10:30 am to 01:00 pm**
Subject Name: Theory and Applications of Cement Composites   **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 What is Composite material? Why it is required?   **(15)**

Q.2 **Answer the following questions**. (Attempt any three) (Each five mark)   **(15)**

    A) What are the constituents of composite material?

    B) Write advantages and disadvantages of ferrocement.

    C) Explain stress strain relation of orthotropic material.

    D) Write application of ferrocement.

Q.3 A) What are the constituents of a composite material? Write the functions of it.   **(07)**

    B) Write short note on Polymer Concrete   **(08)**

OR

    B) Write a note on Engineering constants for orthotropic lamina.   **(08)**

Q.4 A) Write a note on Biaxial strength of an orthotropic lamina.   **(07)**

OR

    A) Explain bonding techniques of elasticity.   **(07)**

    B) Explain characteristics of composite materials   **(08)**