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GIET UNIVERSITY, GUNUPUR – 765022

Ph.D. (Second Semester) Examinations, April – 2024

PPECV2013 – Recent Advances in Construction Materials (Civil)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right-hand margin indicate marks.

Answer ANY FIVE Questions

(14 x 5 = 70 Marks)

	Marks
1.a. How does the strength of lightweight foamed concrete generally compare with the strength of conventional concrete?	7
b. Give your views on the Light Weight Foamed Concrete as a substitute for bricks in framed structures.	7
2.a. Write short note on Concrete at high temperature.	7
b. Write short note on High Strength Concrete.	7
3.a. Discuss in details about the various chemical admixtures used in concrete with their application in concrete.	7
b. Discuss the need for workability agents and the admixtures used for improving workability?	7
4.a. What are the effects of corrosion in concrete? Give Examples.	7
b. Explain various methods for controlling corrosion in steel reinforcement.	7
5.a. Explain about the durability of concrete in sea water.	7
b. Explain underwater concrete and sprayed concrete.	7
6.a. Write short note on Moisture Barriers.	7
b. Write short notes on Polymer foams and polymers in building physics.	7
7.a. What are common characteristics of adhesive and sealants? Illustrate with examples.	7
b. Explain the Polymer Cement Concrete Properties and Uses.	7
8.a. Explain the influence of silica fume on fresh and hardened concrete.	7
b. Explain the advantages of using mineral admixtures in concrete.	7

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