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## GIET UNIVERSITY, GUNUPUR – 765022

M. Tech (First Semester – Regular) Examinations, June – 2021

### MPESE 1042 – ADVANCED CONSTRUCTION MATERIALS

(STRUCTURAL ENGINEERING)

Time: 2 hrs

Maximum: 50 Marks

**The figures in the right hand margin indicate marks.**

#### **PART – A**

**(2 x 10 = 20 Marks)**

Q1. Answer **ALL** questions

- a. Differentiate between nominal mix and design mix.
- b. Define creep of concrete.
- c. What is polymer foam? What is its use?
- d. State the role of accelerator and retarder in Concrete Preparation?
- e. What is the advantage of Geopolymer concrete?
- f. What are the uses of FGRP?
- g. State any four properties of Refractories?
- h. What are the various types of composite materials?
- i. What is Vee Bee consistometer?
- j. How corrosion in reinforcing steel can be restricted?

#### **PART – B**

**(6 x 5 = 30 Marks)**

Answer ANY FIVE questions

**Marks**

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| 2. Explain the batching process of concrete.   | (6) |
| 3. Describe various mechanical and physical properties of fiber reinforced concrete. | (6) |
| 4. What is ready mix concrete? Discuss its various classifications.                  | (6) |
| 5. Describe the compaction factor test.  | (6) |
| 6. Explain in detail about Reinforced Plastics? What are the properties and uses?    | (6) |
| 7. Write about the manufacture of TMT bars.  | (6) |
| 8. Write short notes on Light weight concrete  | (6) |

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