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GIET UNIVERSITY, GUNUPUR - 765022
M. Tech (First Semester) Examinations, January - 2024
MPESE1042 - Advanced Construction Materials
(Structural Engineering)

Time: 3 Hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A**(2 x 10 = 20 Marks)**

Q.1. Answer all questions

	CO#	Blooms Level
a. List any three reasons why concrete is used as a building material.	CO1	K1
b. Define bleeding.	CO1	K1
c. Define segregation.	CO1	K1
d. What is the advantage of fiber reinforced concrete?	CO1	K1
e. State the composition of ordinary Portland cement.	CO1	K2
f. Give an example of lightweight concrete.	CO2	K1
g. Name the methods to measure the workability of concrete.	CO1	K1
h. Define compaction factor.	CO1	K2
i. Write any four properties of clay products.	CO1	K1
j. What are the uses of Clay products?	CO1	K2

PART – B**(10 x 5=50 Marks)**Answer ANY FIVE questions

	Marks	CO#	Blooms Level
2. a. Explain any three tests for fresh concrete in detail.	5	CO3	K3
b. Explain any three tests for hardened concrete in detail.	5	CO1	K4
3.a. Explain any one laboratory test to measure the workability of concrete with sketch.	5	CO2	K3
b. State the applications for various fiber reinforced plastic in sandwich panels.	5	CO1	K4
4. a. Explain about the various fiber reinforced plastic in sandwich panels.	5	CO1	K3
b. State the applications for various fiber reinforced plastic in sandwich panels.	5	CO3	K3
5.a. Explain about the various fiber reinforced plastic in sandwich panels.	5	CO1	K3
b. State the applications for various fiber reinforced plastic in sandwich panels.	5	CO3	K3
6. a. Describe various mechanical and physical properties of fiber reinforced concrete.	5	CO1	K2
b. State the types of fibers and materials used in fiber reinforced concrete.	5	CO1	K4

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| 7.a. | What are the classifications of Glass? | 5 | CO1 | K2 |
| b. | Describe the process of manufacturing of Glass. What are the uses of glass in construction industry? | 5 | CO1 | K2 |
| 8. a. | Explain in detail about Reinforced Plastics. What are the properties and uses? | 5 | CO1 | K1 |
| b. | Explain in detail about Composite materials and its uses. | 5 | CO1 | K3 |

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