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**GIET UNIVERSITY, GUNUPUR – 765022**

M. Tech (Second Semester Examinations) – October' 2021

MPEMT2042 – MANUFACTURING OF PRODUCTS FROM NON METALLIC MATERIALS
(Manufacturing Technology)

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks)**PART – A**Q.1. Answer **ALL** questions

(2 x 10 = 20)

- What is thermosetting plastic?
- State the classification of non-metals.
- What are the factors to be considered during machining of plastics?
- What are the main properties of plastic materials?
- What are the raw materials used for glass manufacturing?
- What is zirconia? State its use.
- State the properties of advanced ceramics?
- Classify the composites based on matrix material and give application of each.
- Why the thin diameter of fibre is used in reinforcement?
- differentiate between alloy and composite?

PART – B**(6 x 5 = 30 Marks)**Answer **ANY FIVE** questions

Marks

- Describe Injection molding with a neat sketch. (6)
- Discuss in detail about any one machining method for thermoplastics. (6)
- Describe fabrication and processing of ceramic materials. (6)
- Discuss in detail the processing and manufacturing techniques of glass vessels. (6)
- What is the relation between fibre volume fraction and diameter of the fibre and prove the same? Which relation of fibre affects the ductility and toughness behavior of the composite and how? (6)
- What are the various fabrication methods of metal matrix composites? Discuss any one manufacturing process and also state the applications of metal matrix composites. (6)
- Describe the characteristic features of natural fibers. How can you utilize these in composites for various applications? (6)

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