Register No : _____

# THE KAVERY ENGINEERING COLLEGE

*(An Autonomous Institution)*

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026

*Third Semester*

*Mechanical Engineering*

UMETL24302 – MANUFACTURING PROCESSES

*Regulations - 2024*

*Duration : 3 Hrs* *Maximum : 100 Marks*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

| *Q.No* | *Questions* | *BTL* | *CO* | *Marks* |
|---|---|---|---|---|
| 1. | List out any four types of pattern materials. | L1 | 1 | 2 |
| 2. | Mention the specific advantages of $CO_2$ process. | L1 | 1 | 2 |
| 3. | Compare soldering and brazing. | L2 | 2 | 2 |
| 4. | List down the major defects in welding joints. | L1 | 2 | 2 |
| 5. | Compare Press forging and drop forging. | L2 | 3 | 2 |
| 6. | Define hot rolling process. | L1 | 3 | 2 |
| 7. | List the various major shearing operations in sheet metal. | L1 | 4 | 2 |
| 8. | What are the limitations of explosive forming? | L1 | 4 | 2 |
| 9. | Mention two important properties of ceramics. | L1 | 5 | 2 |
| 10. | Define reinforcement and give examples. | L1 | 5 | 2 |

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)*

| *Q.No* | | *Questions* | *BLT* | *CO* | *Marks* |
|---|---|---|---|---|---|
| 11. | a | Explain the step by step procedure involved in making green sand mould with a suitable diagram. Also state its advantages and disadvantages. | L2 | 1 | 16 |
| | | Or | | | |
| | b | Describe the procedure of making castings by the investment casting process. | L2 | 1 | 16 |
| 12. | a | Discuss the TIG welding process and its applications. | L2 | 2 | 16 |
| | | Or | | | |
| | b | Discuss the principle and application of Friction stir welding process with neat sketch. | L2 | 2 | 16 |
| 13. | a | Explain the open die and closed die forging processes with neat sketch. | L2 | 3 | 16 |
| | | Or | | | |
| | b | Explain the forward and backward extrusion process. | L2 | 3 | 16 |

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|---|---|---|---|---|---|
| 14. | a | Compare and discuss about the stretch forming deep forming processes with neat sketch. | L3 | 4 | 16 |
| | | Or | | | |
| | b | Compare and discuss any two special forming processes with neat sketch. | L3 | 4 | 16 |
| 15. | a | Discuss the processing of ceramics and Choose a ceramic processing method for manufacturing spark plug insulators. | L3 | 5 | 16 |
| | | Or | | | |
| | b | Discuss how fiber-reinforced composites can be used in aerospace structures to reduce weight and improve performance. | L3 | 5 | 16 |