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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech.(ME) (Sem.-1)
ADVANCE MANUFACTURING PROCESSES
Subject Code : MME-507
M.Code : 38208

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1.
 - a) Discuss the latest trends in manufacturing and also explain the need of advance manufacturing process in detail.
 - b) Discuss the various advantages of Non-Conventional Machining processes over Conventional machining process.
2.
 - a) What is EDM process? Explain its material removal process with the help of a neat sketch.
 - b) Describe the principle and process parameters of Electrochemical machining process.
3.
 - a) Explain the mechanism of underwater welding process, its advantages and limitations.
 - b) What do you mean by the process Adhesive Bonding? Where do we use this process, list any two examples?
4.
 - a) Discuss the concept of explosion forming. Also explain its capabilities and process parameters.
 - b) Explain High Energy rate forming process in detail.
5.
 - a) Describe the principle of super plastic forming process. What are its effects on the output?
 - b) Discuss the principle, process parameters and theoretical considerations for Electro hydraulic forming process.

6.
 - a) Describe Vacuum casting process in detail. Give examples of where it is more suitable than other casting techniques.
 - b) Explain the basics of Shell mould casting. For what type of products this process is suitable?
7.
 - a) What is Investment casting process? List its application areas.
 - b) What do you mean by rapid solidification? Explain it with the help of neat sketch.
8. Write a short note on the following :
 - a) Hybrid Machining Process
 - b) Surface Integrity
 - c) Friction Stir Welding
 - d) Abrasive flow machining.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.