

**II B. Tech I Semester Regular Examinations, Feb/March - 2022**  
**PRODUCTION TECHNOLOGY**  
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions each Question from each unit  
All Questions carry **Equal** Marks  
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- 1 a) Give an account of relative advantages and disadvantages of different pattern materials. [7M]  
b) What is the function of sprue well in gating system? [7M]
- Or
- 2 a) Why is match plate pattern is much easier to use than a standard pattern? Explain. [7M]  
b) What are different types of sands? Enumerate their properties. [7M]
- 3 a) What are crucible furnaces? Where are they preferred and why? [7M]  
b) List differences and similarities between sand casting, die-casting and permanent mould casting process. [7M]
- Or
- 4 a) Make a list of safety considerations and precautions that should be taken concerning all aspects of melting and casting of metals, including equipment involved? [7M]  
b) Sketch and explain the construction and operation of hot chamber die casting process. [7M]
- 5 a) With the help of a neat sketch of welding torch explain the oxy acetylene process of welding. [7M]  
b) Discuss the merits of AC and DC and explain the VI characteristics of arc and power sources. [7M]
- Or
- 6 a) Explain various resistance welding processes? [7M]  
b) Write about gas welding equipment. [7M]
- 7 a) Explain recrystallization and grain growth processes and their effect on properties of a metal worked component. [7M]  
b) Explain the selection of optimum hot working temperature. [7M]
- Or
- 8 a) What are different press working operations? Classify them. [7M]  
b) Discuss the forces and power requirement in rolling operation. [7M]
- 9 a) Explain the principle of Electro hydraulic forming and Rubber pad forming. [7M]  
b) Explain about deep drawing process with a neat sketch. [7M]
- Or
- 10 a) Discuss about Blanking and Piercing operation? [7M]  
b) Explain the principle of explosive forming. Discuss its applications. [7M]

