

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, April/May 2018

Course: Manufacturing Technology
Program: B.Tech Material Science with Nano Tech
Time: 03 hrs.

Semester: VI
Max. Marks: 100

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Explain in brief the difference between machining and forming process with examples.	4	CO1
Q 2	Discuss the process of casting in brief with casting defects.	4	CO4
Q 3	Define welding and classify welding processes on the basis of heat source.	4	CO3
Q 4	Define plastic deformation, and different yield criterion.	4	CO2
Q 5	List all the processes used for making metal powders in powder metallurgy.	4	CO5

SECTION B

Q 6	Explain all the defects in various forming techniques in tabular form.	10	CO2
Q 7	Discuss electrical resistance welding in detail with its applications in different mass production sectors.	10	CO3
Q 8	Discuss in detail the importance of lathe in machine shop with its different operations.	10	CO1
Q 9	Derive the mechanics of metal forging with neat diagram. <p style="text-align: center;">OR</p> Explain in detail the mechanics of metal rolling with neat diagram.	10	CO2

SECTION-C

Q 10	Explain in detail the following casting processes : i. Investment mould casting ii. Shell mould casting iii. Centrifugal casting iv. Ceramic mould casting	20	CO4
Q11	Classify different non-consumable electrode electric arc welding process and explain the process of Gas Tungsten Arc Welding with its neat schematic diagram <p style="text-align: center;">OR</p> Explain gas welding process, different flames used in gas welding with neat schematic diagram, advantage and disadvantages	20	CO3