

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, May 2020**

<b>Course: B.Tech (ET) +LLB (IPR)</b>	<b>Semester: XII</b>
<b>Course: Metrology and Manufacturing technology</b>	<b>Time: 03 hrs.</b>
<b>Course code: ADEG 206</b>	<b>Max. Marks: 100</b>
<b>No. of pages: 1</b>	<b>Instructions:</b>

**SECTION A**

S. No.		Marks	
Q1.	Explain the concept of Shrinkage allowance. Name its different types	<b>6</b>	
Q2.	Differentiate between Direct and Indirect extrusion.	<b>6</b>	
Q3.	Differentiate between Blanking and punching operations.	<b>6</b>	
Q4.	Differentiate between DCEP and DCEN in welding with applications.	<b>6</b>	
Q5	Explain in short the different steps involved in Powder metallurgy.	<b>6</b>	

**SECTION B**

Q6.	Discuss in detail about Investment Casting process.	<b>10</b>	
Q7.	Discuss in detail about Resistance welding and its types.	<b>10</b>	
Q8.	Discuss the tool nomenclature of single point turning tool by ASA system. Write about the significance of each parameter.	<b>10</b>	
Q9.	Explain in detail different types of tool wear and tool wear mechanisms,	<b>10</b>	
Q10.	Explain about various types operations on Drilling machine.	<b>10</b>	

**SECTION-C**

Q11.	a) Discuss the working principle and types of Lathe machine.	<b>10</b>	
	b) Explain any five types of casting defects with their causes and remedial steps.	<b>10</b>	