

**University of Mumbai**  
Program: Mechanical Engineering  
Curriculum Scheme: Rev2016  
Examination: SE Semester III

Course Code: 51604    Course Name: Production Processes -I

Time: 2 hour 30 min

Max. Marks: 80

Note to the students:- All Questions are compulsory and carry equal marks .

<b>Q1.</b>	<b>Choose the correct option for following questions. All the Questions are compulsory and carry one mark each</b>
1	Following is the casting defect in which there are thin projections of metal not intended as a part of casting
Option A:	Hot tears
Option B:	Swells
Option C:	Pin holes
Option D:	Fin
2	The sand used to employ on the faces of the pattern before moulding, is called
Option A:	parting sand
Option B:	core sand
Option C:	coarse sand
Option D:	dry sand
3	Thermit welding is a form of.....
Option A:	Resistance welding
Option B:	Gas welding
Option C:	Fusion welding
Option D:	Forge welding
4	Quick return mechanism is provided on shaper to reduce the time required for
Option A:	Forward stroke
Option B:	Return stroke
Option C:	Forward and Return stroke
Option D:	Cutting stroke
5	Which of the following changes do not occur on during recrystallization?
Option A:	Phase changes
Option B:	Grain shrinkage
Option C:	Precipitation
Option D:	Pore shrinkage
6	Broaching cannot be used for -----
Option A:	Spline cutting
Option B:	Hole finishing
Option C:	Key way cutting
Option D:	Thread cutting

7	TIG welding is best suited for welding.....
Option A:	Stainless steel
Option B:	Carbon steel
Option C:	Silver
Option D:	Aluminum
8	Which is the advantage of forging?
Option A:	Improved physical property
Option B:	Closer tolerances
Option C:	Good surface finish
Option D:	Low tooling cost
9	The distance which the cutting edge of a tool passes over the material in a minute while machining is called
Option A:	RPM
Option B:	Machine speed
Option C:	Pitch
Option D:	Feed
10	Which process is used for extruding tooth paste tube?
Option A:	Hydrostatic extrusion
Option B:	Indirect extrusion
Option C:	Direct extrusion
Option D:	Continuous extrusion

<b>Q2 A</b>	<b>Solve any Two</b>	<b>5 marks each</b>
	Explain the process of Thread rolling.	
ii	State the different types of patterns and explain any one.	
iii	With a neat sketch, explain the process of Gear Shaping.	
<b>Q2 B</b>	<b>Solve any One</b>	<b>10 marks each</b>
i	Explain various motion control systems in CNC machines.	
ii	Discuss the process of Sand casting in detail	

<b>Q3 A</b>	<b>Solve any Two</b>	<b>5 marks each</b>
i	How the grinding wheels are designated?	
ii	State the advantages and disadvantages of CNC machines.	
iii	Explain any five casting defects with sketch.	
<b>Q3 B</b>	<b>Solve any One</b>	<b>10 marks each</b>
i	Explain the process of SAW in detail.	
ii	Draw a neat-labeled diagram of Lathe and explain its working.	

<b>Q4 A</b>	<b>Solve any Two</b>	<b>5 marks each</b>
i	Write a short note on Honing.	
ii	Describe Open and Close die forging.	
iii	Write important specifications of Lathe, Milling and Drilling machine.	
<b>Q4 B</b>	<b>Solve any One</b>	<b>10 marks each</b>
i	In context to Rolling, explain Draught, spread, elongation, roll pressure, torque, work and power.	
ii	How Injection moulding is carried out? Explain in detail	