

[2]

- viii. Carburising flame is also called: **1**
(a) Neutral flame (b) Oxidising flame
(c) Reducing flame (d) None of these
- ix. A part produced by Powder metallurgy is termed as **1**
(a) Welding part (b) Casting part
(c) Forging part (d) Sintered part
- x. Which of the following method is used to make powder for brittle metals: **1**
(a) Mechanical pulverisation (b) Electrolytic process
(c) Chemical reduction (d) Atomization
- Q.2 i. What is pattern? Name the types of pattern. **2**
ii. Discuss the properties of moulding material. **3**
iii. Discuss various types of core boxes with neat sketches. **5**
- OR iv. Why pattern allowances are provided? Explain different type of pattern allowances. **5**
- Q.3 i. What is the function of riser in casting process? **2**
ii. Sketch a common gating system label it and explain the function of its various elements. **8**
- OR iii. Explain the construction and working of any two melting furnaces with diagram. **8**
- Q.4 i. What is forging process? Give its classification. **3**
ii. What are the advantages and limitations of press forging over drop forging? **7**
- OR iii. What is rolling process? Discuss the different types of rolling mills with neat diagrams. **7**
- Q.5 i. What are the different types of flames generated in gas welding? **3**
ii. Discuss MIG welding with the help of neat diagram. **7**
- OR iii. What are different welding defects? How are they caused? **7**
Suggest remedies for removal.

[3]

- Q.6 Write short note on any two: **5**
- i. Sintering. **5**
ii. Compaction. **5**
iii. Advantage and limitations of powder metallurgy. **5**

Marking Scheme
AU3CO01 / FT3CO01 / ME3CO01
Production Processes

Q.1	i.	In green sand moulding process, uniform ramming leads to (c) Greater dimensional stability of the casting	1
	ii.	Pattern allowances are : (c) 5	1
	iii.	The hot tearing in a metal casting is due to (c) Wide range of solidification temperature	1
	iv.	The channel through which the molten metal is carried from the sprue to the gate is called (c) Runner	1
	v.	Manufacturing process involving the shaping of metal using localized compressive force is : (a) Forging	1
	vi.	Which of the sheet metal working involves metal loss (a) Blanking	1
	vii.	The oxy-acetylene welding system consist of ----- cylinders (b) 2	1
	viii.	Carburising flame is also called: (c) Reducing flame	1
	ix.	A part produced by Powder metallurgy is termed as (d) Sintered part	1
	x.	Which of the following method is used to make powder for brittle metals: (a) Mechanical pulverisation	1

Q.2	i.	What is pattern	1 mark	2
		Types of pattern.	1 mark	
	ii.	Any six properties of moulding material.		3
		0.5 mark for each properties	(0.5 mark *6)	
	iii.	Any five types of core boxes with diagram		5
		1 mark for each	(1 mark *5)	
OR	iv.	Why pattern allowances are provided	2 marks	5
		Five types of pattern allowances.	3 marks	

Q.3	i.	Two reason function of riser in casting process		2
		1 mark for each	(1 mark *2)	
	ii.	Diagram with label	2 marks	8
		All elements explanation	6 marks	
OR	iii.	Diagram with label and symbol of rotation	3 marks	8
		Principle, working and application	5 marks	
Q.4	i.	Forging process	1 mark	3
		Its classification	2 marks	
	ii.	Any 4 advantages of press forging over drop forging		7
		Any 3 limitations of press forging over drop forging	4 marks	
			3 marks	
OR	iii.	What is rolling process	2 marks	7
		Types of rolling mills with diagrams	5 marks	
Q.5	i.	Any three flames generated in gas welding		3
	ii.	MIG welding	2 marks	7
		Diagram and working	5 marks	
OR	iii.	Any five welding defects	4 marks	7
		Remedies for removal.		
Q.6		Write short note on any two:		
	i.	Sintering.		5
	ii.	Compaction.		5
	iii.	Advantage and limitations of powder metallurgy.		5
