

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026***Third Semester**Mechanical Engineering***ME3393 – Manufacturing Processes***Regulations - 2021**Duration : 3 Hrs**Maximum : 100 Marks***PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	List out the factors are to be considered in calculating the shrinkage allowance.	L2	1	2
2.	List any four casting defects.	L1	1	2
3.	Mention the purpose of flux and filler materials in welding.	L2	2	2
4.	Differentiate soldering and brazing.	L2	2	2
5.	Give any four forging operations.	L2	3	2
6.	Write any four advantages of cold extrusion over hot extrusion.	L2	3	2
7.	Enlist the methods for testing formability of material.	L1	4	2
8.	What is super plastic forming?	L1	4	2
9.	Compare thermoplastics and thermosetting plastics.	L2	5	2
10.	Define film blowing.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a List and discuss on different types of pattern used for mould making in sand casting process.	L2	1	16
	Or			
	b Describe the construction and working principle of Cupola furnace with a neat sketch.	L2	1	16
12.	a Explain the working principle, types, equipments, advantages, limitations and Engineering applications of Plasma arc welding with neat sketches.	L3	2	16
	Or			
	b Discuss the principle and applications of friction welding and friction stir welding processes for joining different configurations of aluminum alloys used in automotive sector.	L3	2	16
13.	a Sketch and explain the sequence of steps in manufacturing a connecting rod using the forging process.	L3	3	16
	Or			
	b With neat diagram explain the process of forward extrusion and also explain how hollow sections can be produced in this process.	L3	3	16

14.	a	i	Describe any two types of stretch forming operation with neat sketches.	L2	4	8
		ii	With a neat sketch explain metal spinning operation in detail.	L2	4	8
Or						
	b		Describe the working principle of hydro forming process with a help of neat sketch and also list out its advantages.	L2	4	16
15.	a	i	Describe briefly the plunger type injection moulding process for producing plastic components.	L2	5	8
		ii	Explain the process of transfer moulding and its applications.	L2	5	8
	Or					
	b		With neat sketches, explain the working principle and applications of the following moulding processes for plastics:	L2	5	16
		(i)	Compression moulding			
		(ii)	Duff moulding			