



E.G.S. PILLAY ENGINEERING COLLEGE

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai
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CYCLE TEST 1

Sem/Section/Year : VI/ III Date & Session : 12.01.2019
Programme : B.E.(Mech. Engg.) Max. Time : 3 Hrs
Course Name : UCM Course Code : ME6004
Faculty Name : Dr. S. RAMABALAN Max. Marks : 100 marks

Answer ALL the Questions

Q.No.	PART-A (10X2=10)	CO#	KL
1.	What is the purpose of dielectric in EDM?	3	K2
2.	What are the types of work materials for USM?	2	K1
3.	What are the desirable properties of carrier gas in AJM?	2	K2
4.	List unique benefits offered by AWJ.	2	K1
5.	What is the effect of abrasive grain size on machining rate in USM?	2	K2
6.	What are salient features of USM?	2	K2
7.	What is the function of servo control system in EDM?	3	K2
8.	What are the differences between EDM and wire cut EDM?	3	K2
9.	What are the process capabilities of EDM process?	3	K2
10.	What are the characteristics of good suspension media of the USM process?	2	K2

Q.No.	PART-B (5X16=80)	CO#	KL
11.	(a) Explain the process of Wire cut EDM and list its advantages.	3	K2
OR			
	(b) Describe EDM process parameters that influence the MRR.		
12.	(a) (i) Explain the types of Transducers for USM. (ii) Describe feed mechanisms in USM.	2	K2
OR			
	(b) Discuss in detail USM. Compare it with traditional abrasive machining.		
13.	(a) Explain the principle of working of the WJM process with its advantages and disadvantages.	2	K2
OR			
	(b) Discuss the process parameters in water jet machining process.		
14.	(a) Explain the principle of working of the AJM process with its advantages and disadvantages.	2	K2

- OR
15. (b) Explain process parameters of the AJM process and AJM applications.
- (a) Explain construction and working principle of EDM 3 K2
- OR
- (b) List the recent developments in EDM process and explain advantages, limitations and applications of EDM process.

Course Outcomes:

After completion of this course, students can able to

1. Explain the basics and needs of unconventional machining processes. (K2)
2. Describe mechanical energy based unconventional machining processes. (K2)
3. Elaborate electrical energy based unconventional machining processes. (K2)
4. Describe chemical and electro-chemical energy based unconventional machining processes. (K2)
5. Explain thermal energy based unconventional machining processes. (K2)
6. Explain the recent trends in unconventional machining processes. (K2)

BT Knowledge Level: K1-Remembering, K2-Understanding, K3-Apply, K4.Analysis
K5-Evaluate, K6-Create