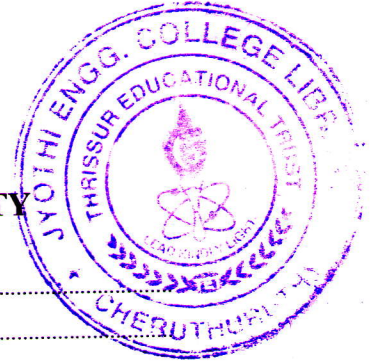


APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY
08 PALAKKAD CLUSTER



Q. P. Code: IAR0820321E-I

(Pages:2)

Name:

Reg. No:

THIRD SEMESTER M.TECH. DEGREE EXAMINATION FEBRUARY 2021

Branch: Mechanical Engineering

Specialization: Industrial Automation & Robotics

08ME7321 (E) MEMS and NEMS

Time: 2 hour 15 minutes

Max. Marks: 60

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q. No.	Module 1	Marks
1.a	Discuss on strain analysis in micro-machined structures.	3
Answer b or c		
b	Discuss in detail about the basic principle behind micro sensors.	6
c	Discuss the application of micro sensors in Nanomedicines.	6

Q. No.	Module 2	Marks
2.a	Explain:	3
	(i) Top down approach	
	(ii) Bottom up approach	
Answer b or c		
b	"Due to the development in the design of MEMS devices, they are widely used in the Biomedical fields." Justify this statement with your views.	6
c	What are the different types of etching used in bulk micro manufacturing?	6

Q. No.	Module 3	Marks
3.a	What do you understand by MEMS and Microsystems?	3
Answer b or c		
b	Explain the process of Physical Vapor Deposition with a neat labelled diagram.	6

