School of Aeronautics (Neemrana)

Question Paper For Back / Re-back Internal Assessment Examination (Theory) - Old Scheme i.e 2012 Syllabus

Instructions For Students / Faculty

Back / Re-back Internal Examination (Total 60 Marks, 2 Hrs, Syllabus From Beginning of The Session)

Total number of questions to be given are 10, each carrying 10 marks and it is compulsory to attend 2 questions from Part A and 4 questions from Part B. There is a choice of two questions out of four in part A and 4 questions out of 6 in Part B. Part A will be theoretical or derivation type **(Not More Than 70 Words For Question).** Part B will be fully numerically oriented questions **(Not More Than 70 Words For Question)**, except for the list of subjects given below. No objective type or fill in the blanks shall be given, but subpart of question can be given for both Part A & B.

* **LIST OF ELABORATIVE THEORY QUESTION SUBJECTS**: Aircraft Materials, Aircraft System, Aircraft Rules & Regulation-I, Mechanics of Composite Materials, Aircraft Design, Aircraft Rules & Regulation-II, Avionics-I, Helicopter Theory, Maintenance of Airframe and System Design, Avionics-II, Airlines and Airport Management, Maintenance of Power Plant & Systems

FACULTY MEMBERS, PLEASE ENSURE EXCEPT ABOVE LISTED SUBJECTS, NO THEORITICAL ELABORATIVE QUESTION SHOULD BE GIVEN IN PART 'B' OF QUESTION PAPER

STUDENT IS ALLOWED TO ENTER LATE NOT MORE THAN 15 MIN AFTER STARTING OF EXAM, AND MAY LEAVE THE EXAM HALL ON EXPIRY OF ATLEAST OF 1 Hr FROM THE STARTING TIME OF EXAMINATION

Question Paper & Student Details

Name of Faculty*	Ms Arima Patel	**Date of Submission of QP**	15/03/2021
Subject*	7MH1 - Micro-Electro-Mechanical System (Old)	**Date of Examination***	16/03/2021
Email Id of Faculty:*	arima.patel01@gmail.com	**Course***	B.Tech (Mechatronics Engineering)
Phone Number of Faculty*	638 784 0187	**Semester***	Semester : 7

Student Name		**Student Reg No.**	

Part A

Question : 1* Explain Micro fabrication in detail.

Lesson Plan*	UNIT-1	**Topic***	Micro fabrication	**Source***	TAI RAN HSU " Mems ar

Question : 2*

Derive numerically Torsional deflection equation.

Lesson Plan* UNIT-1 **Topic*** Torsional deflection equation **Source*** TAI RAN HSU " Mems ar

Question : 3*

Explain Thermal Sensing and Actuation also discuss Thermal expansion.

Lesson Plan* UNIT-2 **Topic*** Thermal Sensing **Source*** TAI RAN HSU " Mems ar

Question : 4*

Discuss Micro Grippers & Micro Motors in detail.

Lesson Plan* UNIT-2 **Topic*** Micro Grippers & Micro Motors **Source*** TAI RAN HSU " Mems ar

Part B

Question : 1*

Explain Piezoresistive sensors & Piezoresistive sensor materials.

Lesson Plan* UNIT-3 **Topic*** Piezoresistive sensors & Piezor **Source*** TAI RAN HSU " Mems ar

Question : 2*

Describe Flow sensors in detail.

Lesson Plan*	UNIT-3	**Topic***	Flow sensors	**Source***	TAI RAN HSU " Mems ar

Question : 3* Discuss anisotropic Wet Etching & Isotropic Wet Etching.

Lesson Plan*	UNIT 4	**Topic***	Anisotropic Wet Etching & Isotr	**Source***	Tai-Ran-Hsu " Mems ar

Question : 4* Explain Liquid Crystal Polymer (LCP),Polimide & SU-8 in detail.

Lesson Plan*	UNIT 5	**Topic***	Liquid Crystal Polymer (LCP),Po	**Source***	Tai-Ran-Hsu " Mems an

Question : 5 Describe basic surface micromachining processes.

Lesson Plan	UNIT 4	**Topic**	Surface micromachining	**Source**	Tai-Ran-Hsu " Mems an

Question : 6
Write a short note on any two
1.PDMS
2.PMMA
3.Parylene

Lesson Plan	UNIT 5	**Topic**	1.PDMS 2.PMMA 3.Parylene	**Source**	Tai-Ran-Hsu " Mems an

Upload Scanned Document In Case of Numerical or Diagram for any of the above question
Mention question number with relevant fig / numerical / equations. Max 150 KB

Choose files or drag here

I have scrutinized the question paper. There is no spelling mistake or any type of irrelevant question.