INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

MECHANICAL ENGINEERING

ASSIGNMENTS

Course Name	:	**DESIGN OF MACHINE MEMBERS-I**
Course Code	:	**A50316**
Class	:	III B.Tech I Semester
Branch	:	Mechanical Engineering
Year	:	2017 – 2018
Course Coordinator	:	Mr G.V.R.Seshagiri Rao, Associate Professor
Course Faculty	:	Mr G.V.R.Seshagiri Rao, Associate Professor Mr. V. K.V.S. Krishnam Raju, Associate Professor

OBJECTIVES

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.
In line with this, Faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

ASSIGNMENT-I

S. No	Question	Blooms Taxonomy Level	Course Outcome
1	What is stress concentration? What are the methods used to reduce stress concentration.	Remember	1
2	Draw and explain about Goodman's and Soderberg's line	Remember	1
3	Explain Design procedure of riveted joints.	Understand	2
4	What are the stresses induced in keys and cotter joint.	Remember	3
5	Explain Design procedure of welded joints.	Understand	3
6	Define fits and their significance.	Remember	1
7	State and explain various theories of failure under static loading	Remember	1
8	Explain preferred numbers and their significance.	Understand	3
9	Explain the manufacturing considerations in design	Understand	3
10	Explain the types of fluctuating stresses.	Understand	3

ASSIGNMENT-II

S. No	Question	Blooms Taxonomy Level	Course Outcome
1	What are the stresses induced in shaft design.	Remember	1
2	How do you design of hollow and solid shaft for strength and rigidity?	Remember	1
3	What is coupling? What are the different types of couplings? Explain with sketches.	Understand	2
4	Explain why leaf springs are made in layers instead of single plate?	Remember	3
5	Explain Resilience's property for spring material.	Understand	3
6	Explain the stresses in Helical Springs of circular wire.	Remember	1
7	Explain the stresses in Helical Springs of circular wire.	Remember	1
8	What is nipping in a leaf spring? Discuss its role.	Understand	2
9	What do you understand by tensional rigidity and Lateral Rigidity?	Understand	2
10	Under what circumstances are hallow shafts preferred over solid shafts.	Understand	2

Prepared By: Mr. V K V S Krishnam Raju
Mr. G. V. R. Seshagiri Rao

HOD, MECHANICAL ENGINEERING