



INSTITUTE OF AERONAUTICAL ENGINEERING

Dundigal- 500 043, Hyderabad.

AERONAUTICAL ENGINEERING

ASSIGNMENT

Course Name	Aircraft Production Technology
Course Code	A42104
Class	II B.Tech II semester
Branch	Aeronautical engineering
Year	2014-2015
Course Faculty	Dr.D.Govardhan , C.Satya Sandeep, R.Suresh Kumar, P.Ravi Kumar

OBJECTIVE

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

S.NO	QUESTION	BLOOMS TAXANOMY LEVEL	COURSE OUTCOME
ASSIGNMENT-I			
UNIT I			
Casting Process			
1	What are the advantages of casting process over other machining processes?	Describe	2
2	Explain the centrifugal casting process with its practical applications.	Explain	3
3	List out the steps involved in investment casting process.	List	2,3
4	Define casting allowance and briefly describe about different casting allowances.	Define	2
Welding processes			
5	Differentiate between pressure and non – pressure welding.	Differentiate	3
6	Explain MIG, TIG and Plasma arc welding process.	Explain	3
7	List out the steps involved in electron beam welding process.	Discuss	3
8	Write about the principle and working of laser beam welding with its advantages over other welding process.	Apply	2

UNIT-II			
Conventional Machining processes			
9	Describe the quick return mechanism of the shaping machine with neat sketch.	Discuss	1
10	Neatly draw lathe machine and explain its parts.	Apply	1
11	List out and explain different sheet metal operations.	List	1,2
12	Differentiate between milling and surface grinding operations.	Differentiate	4
ASSIGNMENT-II			
UNIT –III			
Unconventional machining processes			
13	State the principle of abrasive jet machining process.	Explain	7
14	Explain the steps involved in ultrasonic machining process.	Explain	7
15	What is unconventional machining? List out its advantages over traditional machining processes.	Discuss	5
16	Draw neat sketches of Laser beam and electron beam machines and list out its parts.	Apply	6
UNIT IV			
Heat treatment process			
17	What is the requirement of the heat treatment of metals?	Discuss	8
18	Differentiate between annealing, Quenching and tempering process?	Differentiate	10
19	With neat sketch describe induction hardening process.	Apply	10
20	Explain Cathode protection of the metals.	Explain	8
21	List out different corrosion prevention techniques.	List	8
22	What is an inhibitor .Explain Volatile corrosion inhibition technique?	Discuss	8
UNIT-V			
NDT Processes			
23	What do you mean by NDT? List outs its applications and advantages.	Discuss	9
24	Describe the steps involved in die penetration testing,	Describe	7
25	Sketch the process of radiography or X-Ray testing process and list out its advantages.	Apply	7
26	Write short note including the principle and advantages of Magnetic particle testing and ultrasonic testing process.	Apply	9
27	Explain the parts of the jigs and fixtures with neat sketch.	Explain	9

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