



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

## AERONAUTICAL ENGINEERING

### ASSIGNMENT QUESTIONS

Course Name	:	AIR TRANSPORTATION SYSTEMS
Course Code	:	A52110
Class	:	III B. Tech I Semester
Branch	:	AERO
Year	:	2017 – 2018
Course Coordinator	:	R Suresh Kumar, Assistant Professor
Course Faculty	:	R Suresh Kumar, Assistant Professor, Mary Thraza, Assistant 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.

S.No	Question	Blooms Taxonomy Level	Course Outcome
<b>ASSIGNMENT-I</b>			
<b>UNIT-I</b>			
<b>AVIATION INDUSTRY &amp; ITS REGULATORY AUTHORITIES</b>			
1	What are the main points about history of aviation evolution in the era of 1960?	Understand	1
2	Define the following : industry , transportation systems?	Understand	2
3	Write about the economic growth in a country?	Apply	1
4	Write about economic impact types in air transportation systems?	Understand	1
5	What effects got improved after world war- II?	Analyze	2
6	Explain the economic characteristic?	Apply	1
7	Explain the Significance economic impact?	Understand	1
8	Explain the Airline Industry structure in the 1960-1980's?	Apply	1
9	Explain the economic growth in the air transportation?	Apply	2
10	Explain the economic impact- types and causes in the air transportation?	Apply	1
<b>UNIT-II</b>			
<b>AIRSPACE</b>			
1	Explain the importance of air safety regulations?	Understand	1
2	Explain the formation and responsibilities of regulatory ICAO,IATA?	Understand	1

3	Explain the formation and responsibilities of regulatory DGCA and FAA?	Understand	1
4	The International Civil Aviation Organization (ICAO) is the one of the national authority what is the main functions of the ICAO ,explain with flow chart support your answer it's compulsory required license to fly different nations?	Understand	1
5	Give a brief about ICAO future air navigation systems (FANS) and its advantages and disadvantages when compared to existing systems?	Understand	2
6	The International Air Transport Association(IATA) is an international industry trade group of airlines write about its functions and regulations?	Understand Analyze	2
7	Write about the risk assessment in the airport support your answer with it's compulsory for every airport?	Understand	2
8	Write the security regulation types in the airports and aviation field for traveling of passenger in different countries?	Understand	2
9	Write the functions of ICAO and its certifications?	Understand	2
10	Write the functions of IATA and its certifications?	Apply	2
<b>UNIT-III AIRCRAFT</b>			
1	Explain the process of Secondary surveillance radar (SSR)?	Apply	1
2	Explain Distance measuring equipment (DME)process for the aviation system with neat figure and support your answer it's compulsory in the pilot cabin navigation explain the process of ACARS in detail with figure?	Understand	1
3	Traffic collision avoidance system(TCAS) is important in safe journey explain process with figures?	Understand	1
4	Write a short notes on: a) Passenger Load factor b) Unique economic characteristics of air transportation systems?	Understand	1
5	Instrument landing system (ILS) is for the safety landing system explain the process with neat sketch?	Understand	1
<b>ASSIGNMENT-II</b>			
6	VHF omni- directional radio range (VOR) is the signals explain with diagrams and write applications of any four?	Understand	1
7	Navigation has the process of locating points and positions in the earth this is done by satiates explain the process of navigation?	Understand	1
8	Explain the process of radar in the aviation field SSR ?	Apply	1
9	Explain the process of radar in the aviation field primary radar process?	Analyze	2
10	Explain CNSS?	Analyze	2
<b>UNIT-IV AIRPORTS</b>			
1	Define the runway length according to the length it has been categorized four types what are they explain in detailed?	Apply	2
2	What is the importance of the safe guard in the airport explain in detail with figures?	Apply	2
3	Passengers terminals plays an important role in the airport environment write the terminal entrance role in the airport and security ?	Apply	2
4	How did the computer reservation systems revolutionize the profits out of the industry?	Analyze	2
5	Explain the need for the Maneuvering area airfield lighting, in the airport?	Apply	1
6	Explain the indirect cost in the aviation budgets for the airline growth and it's development?	understand	1
7	Explain the direct cost in the aviation budgets for the airline growth and it's development?	Understand	1

8	What is mean by apron are in the airport explain in detail?	Understand	1
9	What are the different approaches to meet the airport construction successfully by taking issues explain in detail?	Understand	2
10	Explain the ticketing process growth in the last few years?	Understand	2
<b>UNIT-V AIRLINES</b>			
1	The Future Air Navigation System is the modern approach for the navigation Explains in detail for this type of approaches in future and what are they?	Understand	1
2	Describe the characteristics of a modern airport.	Understand	1
3	Describe economically viable?	Understand	2
4	Explain about Separation in air and Role of radar at the airport	Understand	2
5	Is there a scope for starting a new airline company in India now? Extend your arguments	Understand	2
6	How is range payload and fuel efficiency balanced?	Apply	2
7	What are the roles played by the speed and cruise altitude of aircraft in the economics of an airliner? Explain.	Understand	2
8	What is the role of human factors in the safety of aviation? Discuss.	Remember	2
9	Explain in brief about Runway characteristics	Remember	1
10	Define passenger load factor. Explain its role in airline industry	Analyze	2

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