

Hall Ticket No

Question Paper Code: AAE019



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

## MODEL QUESTION PAPER-II

B. Tech VIII Semester End Examinations, April/May – 2020

Regulations: IARE - R16

**AVIATION MANAGEMENT**  
(AERONAUTICAL ENGINEERING)

**Time: 3 hours**

**Max. Marks: 70**

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

### UNIT – I

1. a) Explain about noise pollution what are the effects of noise pollution on humans. [7M]  
b) What is ground level air emissions and explain the effects of ground level air emissions? Write about modernization of Non-Metro Airports. [7M]
2. a) Discuss about green field airports and their airport-terminal configurations in detail. Explain the investments in airport infrastructure. [7M]  
b) Explain Airline Industry-Domestic & International from an Indian perspective. With Emirates Airlines Growth and Incorporation. [7M]

### UNIT – II

3. a) Explain about HRD Training and IT Implementation and Airport administration of aviation management field in detail. [7M]  
b) Discuss about Air Navigation Services Airport organization of international service and write the difference between the two services. [7M]
4. a) What is airline privatization and write a short note on the following.(a) Gradual Privatization of Lufthansa (b) Partial Privatization of Kenya Airways (c) Full privatization. [7M]  
b) Discuss about airport operations and how the operations are controlled and managed by the airport systems with Airport privatization of Mexico. [7M]

### UNIT – III

5. a) Explain Commercial Service Airports with the developments and challenges faced. [7M]  
b) Explain Passenger Terminal Building Highlights, Passengers with special needs and How Airside and Landside works. [7M]
6. a) Write a short note on the following in detail (a) An overview of Airport in Hyderabad(b) An overview of Airport in Delhi (c) An overview of Airport in Mumbai(d) An overview of Airport in Bangalore [7M]  
b) Explain how the design of airports vary from each other and differentiate between the airport designs such as Delhi, Hyderabad, Bangalore, and Mumbai. [7M]

### UNIT – IV

7. a) Elaborate (a)Cost Detail Report and (b)Mobile Experimental Recording Rack(c) Terminal Simulation Support Facility [7M]  
b) Elaborate (a) Quality Assurance (b) Usability Assessment(c) Data System baselines(d) Laboratory Plat forms. [7M]
8. a) Explain the Terminal Simulation Support Facility and the simulation realism and how realism is different from the terminal simulation.. [7M]  
b) Write a short note on (a)Data System baselines and (b)Data Analysis and Reduction Tool(c) Display System Replacement Laboratory(d) Facility Control Office. [7M]

### UNIT – V

9. a) Explain about the radio technologies and the surveillance radar of the airport and the working principles of the both technologies. [7M]  
b) What are the Conventional control techniques and where the techniques are used. Explain provision of air navigation service and Flight service stations with the following steps. [7M]
10. a) Explain air traffic control system improvements proposed by FAA with the following traffic elements. [7M]  
b) Explain Landing Aids Commercialization. Describe airline new distribution capability with the followings. [7M]



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## AVIATION MANAGEMENT

### COURSE OBJECTIVES

The course should enable the students to:

S. No	Description
I	Understand about the history of aviation, major players airline industry, current trends and challenges.
II	Impart the knowledge on airport planning, airport operation and various authorities involved in airport management.
III	Understand and gain the knowledge on the meteorological services, environmental regulation and airport fee, rates and charges.
IV	Gain the in depth knowledge on safety regulation, economic regulation and aviation security.
V	Understand about the air traffic control, air space and navigational aid.

### COURSE OUTCOMES (COs):

CO 1:	Gain knowledge about Airline industry and Analysis of different market potential.
CO 2:	Understand Airport planning different types of privatizations.
CO 3:	Understand the importance and role of private operators.
CO 4:	Identify the methodology followed by ATC & DGCA.
CO 5:	Understand the role of air traffic control and the navigational aids.

### COURSE LEARNING OUTCOMES (CLOs):

Students, who complete the course, will be able to demonstrate the ability to do the following	
AAE019.01	Provide knowledge on history of aviation industry.
AAE019.02	Understand airport system planning, airport master plan, airport lay out plan.
AAE019.03	Demonstrate governmental requirements on non-passenger related airport authority functions.
AAE019.04	Explain Air Traffic Services Describe the history and development of Air Traffic Services(ATS).
AAE019.05	Differentiate between private airports and public use airports, commercial service airports and primary commercial service airports.
AAE019.06	Discuss and identify the economic, political and social role of airports.
AAE019.07	Describe airport layout incorporating its different features navigation Explain air traffic rules and procedures.
AAE019.08	Explain construction of runway and taxiway and aprons as per geometric design for all parameters.
AAE019.09	Define the requirements of terminal area as per drawing, design and describe the visual aids for air traffic control system.

AAE019.10	Explain various elements of Heliports and its planning aspects.
AAE019.11	Understanding the Various Airport services- international air transport services – Indian Scenario
AAE019.12	Understand the role of private operators- Airport development fees, Rates & Tariffs.
AAE019.13	Understanding the role DGCA from the certification
AAE019.14	Knowledge on the role of air traffic control in airspace & navigational aids with live examples
AAE019.15	Understanding different cases in airline industry.

### MAPPING OF SEE – COURSE OUTCOMES

SEE		Course Learning Outcomes		Course Outcomes	Blooms Taxonomy Level
Question No					
1	a	AAE019.04	Explain Air Traffic Services Describe the history and development of Air Traffic Services(ATS).	CO 1	Understand
	b	AAE019.02	Understand airport system planning, airport master plan, airport lay outplan.	CO 1	Understand
2	a	AAE019.04	Explain Air Traffic Services Describe the history and development of Air Traffic Services(ATS).	CO 1	Remember
	b	AAE019.04	Explain Air Traffic Services Describe the history and development of Air Traffic Services(ATS).	CO 1	Remember
3	a	AAE019.05	Differentiate between private airports and public use airports, commercial service airports and primary commercial service airports.	CO 2	Remember
	b	AAE019.08	Explain construction of runway and taxiway and aprons as per geometric design for all parameters.	CO 2	Understand
4	a	AAE019.07	Describe airport layout incorporating its different features navigation Explain air traffic rules and procedures.	CO 2	Remember
	b	AAE019.07	Describe airport layout incorporating its different features navigation Explain air traffic rules and procedures.	CO 2	Understand
5	a	AAE019.09	Define the requirements of terminal area as per drawing, design and describe the visual aids for air traffic control system.	CO 3	Remember
	b	AAE019.11	Understanding the Various Airport services- international air transport services – Indian Scenario	CO 3	Understand
6	a	AAE019.11	Understanding the Various Airport services- international air transport services – Indian Scenario	CO 3	Understand
	b	AAE019.11	Understanding the Various Airport services- international air transport services – Indian Scenario	CO 3	Remember
7	a	AAE019.14	Knowledge on the role of air traffic control in airspace & navigational aids with live examples	CO 4	Remember
	b	AAE019.15	Understanding different cases in airline industry.	CO 4	Understand
8	a	AAE019.09	Define the requirements of terminal area as per drawing, design and describe the visual aids for air traffic control system.	CO 4	Remember
	b	AAE019.11	Understanding the Various Airport services- international air transport services – Indian Scenario	CO 4	Understand

9	a	AAE019.11	Understanding the Various Airport services-international air transport services – Indian Scenario	CO 5	Remember
	b	AAE019.11	Understanding the Various Airport services-international air transport services – Indian Scenario	CO 5	Understand
10	a	AAE019.14	Knowledge on the role of air traffic control in airspace & navigational aids with live examples	CO 5	Remember
	b	AAE019.15	Understanding different cases in airline industry.	CO 5	Understand

**Signature of Course Coordinator**

**HOD,AE**