CBCS SCHEME

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21AE753

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025
Air Traffic and Weather

Time: 3 hrs. Max. Marks: 100

Note: *Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

1 a. Discuss the role of altimetry in air traffic control and weather forecasting. **(10 Marks)**

b. Explain the concept of air masses and their role in shaping weather patterns. **(10 Marks)**

OR

2 a. Describe the relationship between the earth's atmosphere and weather patterns. **(10 Marks)**

b. Elucidate the process of cloud formation and list the types of clouds. **(10 Marks)**

Module-2

3 a. Explain the characteristics of tropical weather phenomena. **(10 Marks)**

b. Explain the concept of jet stream and its impact on high altitude weather. **(10 Marks)**

OR

4 Write short note on :
i) Icing ii) Turbulence iii) Artic weather iv) Thunderstorms. **(20 Marks)**

Module-3

5 Explain the following :
i) Airspace flow program ii) Time based flow management. **(20 Marks)**

OR

6 a. How do air traffic controller use weather information to manage air traffic. Explain. **(10 Marks)**

b. What are different types of weather forecast used in aviation? Explain each type. **(10 Marks)**

Module-4

7 a. Describe the role of technology in global air traffic management. **(10 Marks)**

b. Explain briefly about severe weather avoidance plane. **(10 Marks)**

OR

8 a. Describe briefly about national playbook flow evaluation area and its purpose. **(08 Marks)**

b. Write short note on anti-icing and de-icing. **(12 Marks)**

Module-5

9 a. Discuss the role of air traffic service provider in supporting safe and efficient air traffic operation. **(10 Marks)**

b. Explain the process of decoding a METAR report. **(10 Marks)**

OR

10 a. Explain the different types of call signs used in aviations, including their format and uses. **(10 Marks)**

b. List the different types of air navigation service providers and their roles in supporting air traffic operation. **(10 Marks)**

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