



CBCS SCHEME

21AE/AS753

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026 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. Describe any four natural factors that cause temperature variations in the Earth's atmosphere. (10 Marks)
- b. Discuss the working of aneroid barometer for measuring atmospheric pressure. (10 Marks)

OR

- 2 a. Illustrate the fundamental changes in upward and downward moving air in relation to stable and unstable air. (10 Marks)
- b. What is frontal zone in aircraft weather? Elucidate the role of fronts in flight planning. (10 Marks)

Module-2

- 3 a. Explain with a neat diagram, the effect of low level convective currents on final approach to land. (10 Marks)
- b. With a relevant diagram, describe the types of structural icing in aircraft and its associated identifying features. (10 Marks)

OR

- 4 a. List and discuss about the different weather hazards present in Arctic Region. (10 Marks)
- b. Give a brief description about the characteristics of subtropical high pressure belts present in tropical weather (10 Marks)

Module-3

- 5 a. Illustrate the normal communication process used in managing the flow of air traffic in airspace. (10 Marks)
- b. Write short notes on :
 - (i) Miles in Trail (MIT)
 - (ii) Minutes in Trail (MINT)
 - (iii) Sequencing Programs(10 Marks)

OR

- 6 a. What is delay in Air Traffic? State the procedure for measuring and recording delays. (10 Marks)
- b. Elucidate the different information displayed in Operational Information System (OIS) used in National Airspace System (NAS). (10 Marks)

Module-4

- 7 a. Briefly explain different weather products used by Traffic Management Personnel for formulating the weather plan. (10 Marks)
- b. Discuss the responsibilities of Air traffic facilities in implementing Severe Weather Avoidance Plan (SWAP). (10 Marks)

OR

- 8 a. What is an ATS Route? Give a brief about the features of ATS routes in Air Traffic Services. (10 Marks)
- b. Describe how National Playbook is used for mitigating the potential adverse effects of severe weather. (10 Marks)

Module-5

- 9 a. Compare and contrast the Aviation Call Sign Structure used in general aviation versus commercial aviation, highlighting the key differences and their purposes. (10 Marks)
- b. Explain the various tools used for contributing Air Traffic Controller's Situational Awareness. (10 Marks)

OR

- 10 a. Explain why the Canadian Non-profit Organization Model is often considered a successful model in ATC privatization. (10 Marks)
- b. What is METAR? With an example describe the blocks in METAR reports for weather forecasts of an airport. (10 Marks)
