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 **Presidency University**

 **Bengaluru**

**SCHOOL OF MANAGEMENT**

**MAKE-UP EXAMINATION – SEP 2023**

**Date**: 04.10.2023

**Time**: 1.00PM - 4:00 PM

**Max Marks**: 100

**Weightage**: 50%

**Course Code**: AVM109

**Course Name**: Air Traffic Control

**Program & Sem**: BBA (Aviation)

 **Instructions:**

1. *Read the question properly and answer accordingly.*

**Part A (Memory Recall Questions)**

**Answer all the questions. (10Qx3M=30M)**

1. The purpose of ATC is to ensure the safe and efficient flow of­­­­­ Air traffic.

a. True b. False

 (C.O.No.1) [Knowledge]

2. Air traffic control (ATC) is a critical factor in the operations of every Airline.

a. True b. False

 (C.O.No.4) [Knowledge]

3. In most of the world, all the phases of a scheduled airline flight from taxi-out and take

 off to landing and taxi-in require the approval of ­­­­­­­­ATC. (C.O.No.1) [Knowledge]

 a. True b. False

4. ATC provides flight information services to\_\_\_\_\_\_\_\_\_, such as weather reports and

 updates on airport conditions. (C.O.No.1) [Knowledge]

 a. Aircraft b. Airline

 c. Airport d. Airport Ops

5. Recognize the expansion of Abbreviation VHF. (C.O.No.3) [Knowledge]

 a. Very high frequency b. Varied High frequency

 c. Varied Hexagonal frequency d. Very high friction

6. State the expansion of Abbreviation VFR (C.O.No.3) [Knowledge]

7. \_\_\_\_\_\_ it defines the underlying structure of airways that controllers use to organize

 traffic and issue commands. (C.O.No.1) [Knowledge]

a. Communication System b. Navigation System

c. Metrology d. Airport operation

8. State the expansion of Abbreviation ACARS. (C.O.No.4)[ Knowledge]

9. The development and fast-growing use of GPS and other satellite-based navigation

 systems has spurred a movement toward the Required Navigation Performance (RNP)

 approach. Recognize if the above statement is true or false

 (C.O.No.1)[Knowledge]

a. True b. False

10. State the expansion of Abbreviation “IFR” (C.O.No.3)[Knowledge]

**Part B (Thought Provoking Questions)**

**Answer all the Questions. (5Qx8M=40M)**

11. The International Civil Aviation Organization (ICAO) mandated that pilots and air traffic

 controllers demonstrate language proficiency sufficient to deal with the linguistic challenges

 presented by quickly changing and dynamic abnormal situations and emergencies that require

 extended use of language outside that of standard radiotelephony (RT). In addition, Explain

 how the controller issues commands (“clearances”) to aircraft through a communications

 system. (C.O.No.4) [Comprehension]

12. Airplanes moved many times faster than ships, so air navigators had to work faster to fix their

 position. Even minor miscalculations could result in much greater errors. Discuss the process

 involved in Navigation Systems at ATC? (C.O.No.1) [Comprehension]

13. Explain how air traffic control facilities coordinate separation?

 (C.O.No.1) [Comprehension]

14. The local controller is primarily responsible for the separation of aircraft operating within the

 airport traffic area and those landing on any of the active runways. Briefly explain about the

 duties of Local Controller. (C.O.No.4) [Comprehension]

15. By integrating the aircraft’s avionics with a high-speed data link, aircraft can request and be

 assigned dynamic flight routes in four dimensions are called negotiated routes. Discuss the

 improvements planned to negotiated routes (C.O.No.3) [Comprehension]

**Part C [Problem Solving Questions]**

**Answer all the Questions. (2Qx15M=30M)**

16. Arriving or transiting aircraft must obtain an ATC clearance prior to entering Class B airspace

 on the appropriate frequency and relation to geographical fixes shown on local Class B charts.

 Departing aircraft require a clearance to depart Class B airspace and should advise clearance

 delivery of their intended altitude and route of flight. Unless otherwise authorized by ATC,

 aircraft must be equipped with an operable two-way radio capable of communicating with ATC

 on appropriate frequencies for that Class B airspace. Also, unless otherwise authorized by

 ATC the aircraft must be equipped with an operable radar beacon transponder with automatic

 altitude reporting equipment. Illustrate the functions of Airspace management at ATC?

 (C.O.No.2)[ Application]

17. Civilian airspace is designated as “controlled” or “uncontrolled.” In controlled airspace, traffic

 is supervised and managed by ATC, so that aircraft may fly in low-visibility Instrument

 Meteorological Conditions (IMC). Aircraft are not directly managed by ATC in uncontrolled

 airspace, which is normally restricted to low altitudes or remote regions where the traffic

 density is low. Interpret the Airspace and ATC Structure (C.O.No.1)[Application]