Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: Airport Capacity Management **Semester: IV**
Program: BBA AVM **Time : 03 hrs.**
Course Code: TRAV 2008P **Max. Marks: 100**

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q 1	Differentiate between Declared and Practical Capacity.	**2**	**CO1**
Q 2	Define “Rapid Exit Taxiway”.	**2**	**CO1**
Q 3	What does the letter "C" displayed vertically in black against a yellow background indicate? a) It marks the location of the control tower at an airport. b) It identifies the location of the Air Traffic Services Reporting Office (ATSRO) within an airspace sector. c) It indicates the boundary between controlled and uncontrolled airspace. d) It represents the area where flight information services are available in a particular region.	**2**	**CO1**
Q 4	What is AGHT?	**2**	**CO1**
Q 5	Define the term “Business Continuity”.	**2**	**CO1**
Q 6	Explain the term “Near-parallel Runway”.	**2**	**CO1**
Q 7	What are two key factors that influence seasonal capacity at airports?	**2**	**CO1**
Q 8	How does the IATA Level of Service (LoS) influence terminal planning?	**2**	**CO1**
Q 9	Which of the following statements about Runway Visual Range (RVR) is most accurate? a) RVR is a measure of the horizontal distance at which a pilot can see the runway environment clearly, and it directly impacts the Minimum Descent Altitude (MDA) for precision approaches.	**2**	**CO1**

	b) RVR is primarily determined using visibility sensors placed at intervals along the runway and is unaffected by aircraft speed or flight conditions during the approach phase. c) RVR is a critical parameter for the categorization of Instrument Landing Systems (ILS), with different RVR thresholds required for CAT I, CAT II, and CAT III approaches to determine approach minimums and decision heights. d) RVR measurements are only used for CAT III approaches and are irrelevant for CAT I and CAT II approaches, as the visibility requirements for these categories are solely based on weather observations.		
Q 10	What is an Intermediate Holding Position?	**2**	**CO1**
SECTION B **4Qx5M= 20 Marks**			
Q 11	Identify the assumptions when calculating basic runway length.	**5**	**CO2**
Q 12	Discuss at least three key surfaces within the OLS framework, highlighting their geometric characteristics and safety implications.	**5**	**CO2**
Q 13	Evaluate the role of slot allocation in airport capacity management, highlighting its advantages and challenges for both airlines and airport operators.	**5**	**CO2**
Q 14	Examine the role of the Aerodrome Reference Code (ARC) in determining the runway, taxiway, and apron dimensions, and explain how it impacts the capacity and safety of an aerodrome.	**5**	**CO2**
SECTION-C **3Qx10M=30 Marks**			
Q 15	Analyze how increased passenger volumes affect the utilization and efficiency of critical airport resources, including runways, gates, terminals, and support infrastructure.	**10**	**CO3**
Q 16	Analyze the operational differences between CAT IIIB and CAT IIIC Instrument Landing Systems (ILS). How do these categories influence airport infrastructure and aircraft capability requirements during low-visibility operations?	**10**	**CO3**
Q 17	Analyze the application of the Milestone Approach within the Airport Operations Control Center (AOCC) and discuss its role in optimizing real-time decision-making across airport operations. **OR**	**10**	**CO3**

	Analyze how seasonality impacts demand forecasting at airports. Support your answer with relevant examples of seasonal variations and their implications for airport planning and operations.		
SECTION-D 2Qx15M= 30 Marks			
Q 18	Evaluate the effectiveness of IT-driven tools in managing airport capacity during peak operational periods. Provide specific examples of airports that have successfully implemented these technologies.	**15**	**CO4**
Q 19	Interpret the benefits and challenges associated with implementing sustainable practices in airport operations, supported by relevant examples and industry best practices. **OR** Analyze the Aerotropolis concept and its role in shaping regional economic development and airport-centric urban planning. Support your analysis with suitable examples.	**15**	**CO4**