UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Program: BBA AO   **Semester: IV**
Subject/Course: Airport Capacity Management   **Max. Marks: 100**
Course Code: TRAV 2008P   **Duration: 3 Hours**

Instructions: All questions are compulsory   **Total Pages: 03**

SECTION A (30 Marks)

1. Each Question Carries 5 Marks
2. Answer all the Questions in 20 to 25 words.

S. No.	Questions	Marks	CO
Q 1	Define "Instrument Runway".	5	CO 1
Q 2	An airport's runway orientation is 10/28 and its runway length is 3637 m. SWY for the RWY 10 is 90 m and for the RWY 28, it is 60 m. Both the RWYs have 200 m of CWY. Calculate declared distances for both runways.	5	CO 2
Q 3	An aircraft's Aeroplane Reference Field Length is 2500m. Its Wingspan is 60.9m and its Outer Main Gear Wheel Span is 12.8m. Its Aerodrome Reference Code is _____	5	CO 2
Q 4	Differentiate between ICAO Standards and Recommended Practices.	5	CO 1
Q 5	How many ICAO annexes are available? Write a short note about any one of them.	5	CO 1
Q 6	Write a short note about Air Traffic Ranking Curves.	5	CO 1

SECTION B (50 Marks)

1. **Each question carries 10 marks**
2. **Instruction: Write in a legible handwriting.**

Q 7	Explain the various forms of airport ownership and governance. In your opinion, which form of the airport ownership is best suited for the Dehradun airport?	10	CO3
Q 8	You are an airport consultant. Your customer's RWY dimension is 4000 m x 45 m. A320 and Q400 are predominant aircraft types that are using that RWY. Your customer wants to reduce runway occupancy time to improve their RWY throughput capacity. How will you achieve that?	10	CO4
Q 9	Describe the various factors that can affect an RWY's throughput capacity. In your opinion, which is the most critical of all?	10	CO2
Q 10	Jolly Grant Airport's director approached you to prepare the master plan for his airport. Explain the various activities that are involved in that process.	10	CO3
Q 11	Describe the ways to increase an airport's capacity without investment.	10	CO3

SECTION-C (20 marks)

1. **Instruction: Solve systematically showing steps involved and write legibly.**

| Q 12 | Calculate the MTPC for a RWY. Assume the RWY is used only for arrivals. Its traffic mix and their approach speeds are given in the table below. | 20 | CO 4 |

Calculate the MTPC for a RWY. Assume the RWY is used only for arrivals. Its traffic mix and their approach speeds are given in the table below.

Traffic Mix

ACFT Type	No of Movements	Vi (Knots)
A	10 %	90
B	40 %	110
C	40 %	130
D	10 %	150

ATC Separation Standards for arriving aircraft.

ACFT Type	A & B	C
A & B	2.5	5
C	4	2.5
D	6	5

Q 12   **20**   **CO 4**