Name:

Enrolment No:

UPES

End Semester Examination, December 2023

Course: Airline Economics **Semester:** III

Program: MBA -AVM **Time** : 03 hrs.

Course Code: TRAV-8017 **Max. Marks:** 100

Instructions: This questions paper has four sections A, B, C & D. You are required to attempt all the sections. Please read the instructions given with the respective sections carefully.

SECTION A (Total Marks -20)
5Qx 1M=05 Marks
15Qx 1M=15 Marks

S. No.	Attempt all the questions. Each question carries equal marks.	Marks	CO
Q.1	Assume: a 150-seat aircraft flies a 1000-mile leg with 100 passengers onboard (but no cargo); operating revenue is $17,000 and operating cost is $15,000. Calculate the following : 1. Traffic 2. Yield 3. Output 4. Operating Profit 5. Load Factor	01	CO1
Q.2	Match the following terms and their explanations:		

No	Terms	Code	Explanations	Marks	CO
1	Rotables	A.	1-(delays+cancellations)/total departures.	01	CO1
2	RPK	B.	It is a Nonstop flight.		
3	Fleets and sub fleets	C.	The distance from the point where the back and pan of a seat join, to the same point on the seat in front.		
4	Flight – leg	D.	A measure of sold output		
5	Seat Pitch	E.	These words are synonymous in case of a single type operator.		
6	Continuous nesting or bid price control	F.	It is an ability to set price above marginal costs.		
7	Misconnection	G.	Aircraft-mile cost/seats sold		
8	Distribution Cost includes	H.	These words describe groups of aircraft/flights that are scheduled to arrive at a hub and then depart again		

				within a given window of time, so allowing passengers to make any of a large number of connections.
9	Despatch Reliability	I.	These are high value components that are either returned to service- not necessarily on the same aircraft or held in inventory after repair or overhaul, rather than being consumed in use or discarded after use.
10	Franchised code sharing	J.	The operator is a franchisee of another carrier, operating under that airline's brand identity and not using its own designator code.
11	Fifth freedom hubs	K.	These exist where an airline registered in country 1 and operating one or more routes to country 2 and beyond to several other countries have traffic rights to carry local traffic between country 2 and those other countries.
12	Bank, Waves and complexes	L.	Commission, overrides and other incentives paid to travel agencies, ODS fees, the costs of maintaining sales, reservations and ticketing infrastructure and credit card charges.
13	Station costs	M.	It comprises labor cost, ownership charges or rental in respect of facilities and equipments.
14	Revenue-mile cost	N.	It deals with a passenger who fails to board a flight because of the cancellation or late arrival of an incoming flight.
15	Monopoly Power	O.	It is an alternative to traditional allocation-driven leg based, segment-based, and virtual nesting controls.

<table>
<tr><td colspan="4">SECTION B
4Qx5M= 20 Marks</td></tr>
<tr><td>Q</td><td>Attempt Any 4 Questions. Each question carries equal marks.</td><td></td><td>CO2</td></tr>
<tr><td>Q.3</td><td>Average stage-length and the average distance flown by passengers are different. Explain with the help of an example.</td><td>05</td><td>CO2</td></tr>
<tr><td>Q.4</td><td>Differentiate between High Yield Passengers and Low Yield Passengers.</td><td>05</td><td>CO2</td></tr>
<tr><td>Q.5</td><td>If your network is based on point to point or hub and spoke, how will it affect the cost structure?</td><td>05</td><td>CO2</td></tr>
<tr><td>Q.6</td><td>What will be the nature of Average Fixed Cost and Average Variable Cost curves when output is increasing?</td><td>05</td><td>CO2</td></tr>
<tr><td>Q.7</td><td>Discuss the pitfalls of averaging in airline business with the help of examples.</td><td>05</td><td>CO2</td></tr>
<tr><td colspan="4">SECTION-C
3Qx10M=30 Marks</td></tr>
<tr><td>Q</td><td>Attempt all the questions. Each question carries equal marks.</td><td></td><td>CO3</td></tr>
<tr><td>Q.8</td><td>How is seat allocation managed to maximize revenue while accounting for no-shows and cancellations?</td><td>10</td><td>CO3</td></tr>
<tr><td>Q.9</td><td>What are the major airlines with the highest market share in the industry, and how do their market shares contribute to the overall HHI Score?</td><td>10</td><td>CO3</td></tr>
<tr><td>Q.10</td><td>Answer the following questions based on Porter's Five Forces model as applied to the airline industry:
Are there any government regulations or policies that impact the ease of entry for new airlines?
How have fluctuations in fuel prices affected the bargaining power of fuel suppliers for airlines?
Are there any emerging technologies or trends that could serve as substitutes for traditional air travel?
What role does pricing, capacity management, and route networks play in the competitive dynamics of the airline industry?</td><td>10</td><td>CO3</td></tr>
<tr><td colspan="4">SECTION-D
2Qx15M= 30 Marks</td></tr>
<tr><td>Q</td><td>Attempt all the questions. Each question carries equal marks.</td><td></td><td>CO4</td></tr>
<tr><td></td><td>Continental Airlines
When considering adding a new flight (or dropping an existing one that appears to be doing poorly). Continental engages in a very thorough incremental analysis along the lines given in the table.
Incremental Analysis as Employed by Continental Airlines<table><tr><td>Problem</td><td colspan="2">Shall Continental run an extra daily flight from City X to City Y?</td></tr><tr><td>The Facts</td><td>Fully allocated costs of this flight
Out-of-pocket costs of this flight
Flight should gross</td><td>$ 4,500
$ 2,000
$ 3,100</td></tr></table></td><td></td><td></td></tr>
</table>

Decision	Run the flight. It will add $ 1,100 to net profit by adding $3,100 to revenues and only $ 2,000 to costs. Overheads and other costs totaling $2,500 ($ 4,500 minus $ 2,000) would be incurred whether the flight is running or not. Therefore, fully allocated or "average" costs of $ 4,500 are not relevant to this business decision. It is the out-of-pocket or incremental costs that count.

The corporate philosophy is clear: "If revenues exceed out-of-pocket costs, put the flight on." In other words, Continental compares the out-of-pocket", or incremental, costs associated with each proposed flight to the total revenues generated by that flight. An excess of revenues over incremental costs leads to a decision to add the flight to Continental's Schedule.

The "out-of-pocket costs" figures that Continental uses is obtained by circulating a proposed schedule for the new flight to every operating department concerned and finding out what added expenses will be incurred by each of them. Here an alternative cost concept is used. If a ground crew is on duty and between work on other flights, the proposed flight is not charges a penny of their salary. Some costs may even be reduced by the additional flight. For example, on a late night round trip flight between Colorado Springs and Denver, Continental often flies without any passengers and with only a small amount of freight. Even without passenger revenues, these flights are profitable because their net costs are less than the rent for overnight space at Colorado Springs.

On the revenue side, Continental considers not only the projected revenues for the flights but also the effect on revenues of competing and connecting flights on the Continental Schedule. Several Continental flights which fail to cover even their out-of-pocket costs directly bring in passengers for connecting long-haul service. When the excess of additional revenue over cost on the long-haul flight is considered, Continental earns a positive net profit on the feeder service.

Continental's use of incremental analysis extends to its scheduling of airport, arrival and departure times. A proposed schedule for the Kansas City at that time was not sufficient to service two plans simultaneously. Continental would have been forced to lease an extra fuel truck and to hire three new employees at an additional monthly cost of $ 1,800. However, when Continental began shifting around proposed departure times in other cities to avoid the congestion at Kansas City, it appeared that the company might lose as much as $ 10,000 in monthly revenues if passengers switched

	to competing flights leaving at more convenient hours. Needless to say, the two flights were scheduled to be on the ground at the same time in Kansas City.		
Q.11	Discuss how Continental Airlines used incremental analysis in its flight service decisions.	**15**	**CO4**
Q.12	Also demonstrate the usefulness of the technique.	**15**	**CO4**