MEASI INSTITUTE OF MANAGEMENT
CHENNAI-14
Approved by All India Council of Technical Education and
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CASE STUDIES

APPLIED OPERATIONS RESEARCH

Case Study Number	1
Level of Teaching	L3
Program Outcomes Covered	PO1, PO2, PO4, PO5. PO6, PO7
Course Outcome Covered	CO 207.3

In a college the students should be allotted with rooms for 6 elective subjects, Finance, Marketing, HR, Systems, Hospital Management, and Logistics Management. Each room had a unique feature which is not available in the other rooms. All the students were interested in one particular room and less interested to move to other rooms. The rooms were numbered as Lecture Hall (LH) – LH1, LH4, LH5, LH6, LH7 and LH8. So the students were asked to rank the rooms based on their preference. And the preference was received by the administration.

Finance – LH4, LH8, LH1,
Marketing –LH7, LH5, LH4, LH8, LH1, LH6
 HR – LH7, LH1, LH6, LH5, LH8
Systems – LH1, LH5, LH8, LH4
Hospital Management – LH4, LH 1, LH5, LH7, LH8, LH6
Logistics Management – LH7, LH5, LH4, LH1, LH8, LH6

What will the administration department decide based on the preferences received from the students?
Develop the suitable model to solve this problem.
Find the best suited allocation of rooms where all the students are satisfied to the maximum.

Case Study Number	2
Level of Teaching	L3
Program Outcomes Covered	PO1, PO2, PO4, PO5. PO6, PO7
Course Outcome Covered	CO 207.3

Hot Oven Bakery started its operation in Chennai, very recently, the bakery was not

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able to find their level of operations and which product should they produce, and most of the products were using the same raw materials and possess uniform demand more or less. The price was fixed based on the competitor's pricing. So they want to find out the product which has to be produced the most amongst the 3 main products, Egg Puffs, Vegetable Puffs and Chicken Puffs. Each puff requires 20 gms of dough, while the quantity of chicken masala required is not more than 25 gms. The quantity of egg masala required is 20 gms (and half an egg) and it is 30 gms for vegetable masala. The price of each puff is Rs. 15/- for vegetable puff, Rs. 20/- for egg puff and Rs. 25/- per chicken puff. The baker takes 3 hours to prepare chicken masala, 1 hour to prepare vegetable masala, and 2 hours to prepare egg masala. Each masala can be prepared to the maximum extent of 6 kg and availability of work station is limited to only one. So they can take not more than 10 hours to prepare the masala. The time taken to bake the puffs 72 vegetable puffs is 1 hour, 72 egg puffs is 1.25 hours and 72 chicken puffs is 1.5 hours and the time available to produce the puffs is only 8 hours per day. And not more than 200 puffs can be sold in a day. What should the baker do in order to maximize the profit?

Case Study Number	3
Level of Teaching	L3
Program Outcomes Covered	PO1, PO2, PO4, PO5. PO6, PO7
Course Outcome Covered	CO 207.3

A marketing manager wishes to allocate his annual advertising budget or Rs. 20,000 in two media vehicles Adyar times and Adyar Talk. The Unit cost of a message in a media A is Rs. 2,500 and that of B is Rs. 2,000. Both are weekly papers and not more than one insertion is desired in one issue. The circulation for Adyar times is 1,50,000 and for Adyar Talk is 1,00,000. Provide a suitable suggestion as to which paper should the manager prefer.