PGDM/IB, 2014-16 Service Operations Management DM-342/IB-314 Trimester-III, End-Term Examination: April 2015

A

Time allowed: 2 Hrs 30 Min

Max Marks: 50

Roll No	

Instructions: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet Use of calculators is permitted.

Sections	No. of Questions to attempt	Marks	Marks
A	3 out of 5 (Short Questions)	5 Marks each	3*5 = 15
В	2 out of 3 (Long Questions)	10 Marks each	2*10 = 20
C	Compulsory Case Study	15 Marks	15
		Total Marks	50

Section A

- Q1: McDonald, Dominos, Pizza Hut have used franchising as a strategy to facilitate massive multi-site growth in the retail food sector. Discuss how has uniform and consistent food quality been ensured at the franchisee outlets.
- Q2: Schmenner in his classic *service process matrix* positions an educational school under the quadrant of '*Mass Service*'. Discuss the two dimensions in this context and the challenges implied for the service managers?
- Q3: Service operations such as hospitality sector try to create 'delight' in the initial service transactions. Explain the impact in the context of concept of 'zone of tolerance'.
- Q4: Heterogeneity is considered as one of the distinctive characteristics of service operations. Discuss the challenges faced by the service managers because of this issue.
- Q5: A top grade profitable chain of hospitals in the private sector intends to expand and add super specialty hospitals in the country. Discuss three major considerations to select locations.

Section B

Q 1: Maharaja Hotel with a capacity of 300 rooms in Jaipur is offering a three day special holiday plan for Rs 5,000 per person. Normal stay for three days costs Rs 8,000 per person. The management wants to hold some tickets for late decision makers who will be paying the normal rate of Rs 8000. As per the experience of the management the demand for normal rate tourists follows normal distribution with a mean of 60 and a standard deviation of 15. The management desires to know as to many seats it should reserve for the full rate passengers.

(b) V3S Shopping Mall at Poorvi Sanskritic Kendra complex is situated centrally in Preet Vihar with a population of 500,000 Cross River Shopping Mall at Karkardooma

complex is situated centrally in Anand Vihar with a population of 300,000.

Distance between the two shopping malls is 3 Kilometers

Use Reilly's law of gravity to determine point of indifference of V3S from Cross River Mall. [5,5 Marks]

Q2: Mother Dairy is planning to open milk booths in new emerging localities of Greater Noida. It has identified four clusters A,B,C,D, and E. The dairy has decided to open one milk booth, gain experience and then will go for the next till all the clusters are covered. Cluster at D comprises of construction workers. The population at B falls 'below the poverty line'. As a cooperative venture, it allots a social priority ranking of FOUR to B as contrasted to other cluster populations which are equal; that is B attracts a social weight of FOUR times of 'A'. Any person not finding milk in his cluster can travel to other cluster booth for his needs.

The distance between each of the clusters and their population are given in table below. Use **Ardalan Heuristic** and advise the dairy about the locations and their order of priority of opening of booths. Assume uniform cost of travel at Rs1.0 per kilometer either way.

	Population					
Village	Α	\mathbf{B}	C	D	E	'000
Α	0	10	12	15	8	8
В	10	0	20	11	7	20
C	12	20	0	16	6	7
D	15.	11	16	0	9	5
E	8	7	6	9	0	10

Q3; There are two generic strategies for capacity management: Level capacity based on the concept of Managing Demand, and Chase demand based on the concept of Managing Capacity.

a. Cite advantages for choice of strategy of Chase Demand.

b. Explain how forecasting, scheduling, and customer participation can help in achieving the objectives in service sectors hospitality, hospitals, and retail.

[5,5Marks]

Section C

The Icehotel

Jukkas AB is a company offering a wide range of activities, such as white-water rafting, fishing, reindeer and dog-sledding tours, cross country skiing, snowmobile safaris and guided tours. It is based in Jukkasjavri, a small village in Swedish Lapland, which lies 200 kilometers north of the Arctic Circle by the river Torne.

The problem was that visitors were few and far between in the long, dark winter months when the temperature drops to -40degrees centigrade. Manager, Yngve Bergqvist, now president of Icehotel, saw this as an opportunity. In the winter of 1989 he invited a group of Japanese ice artists to come to Jukkasjarvi to carve sculptures from the crystal clear ice that forms from the pure waters of the river Torne. He then built a60-square-metercylinder shaped igloo, made out of clear ice blocks, to protect the sculptures. Visitors flocked to see the exhibits in his 'ice-gallery'. One day when his hotel was full he was pressed by a good friend to find accommodation for ten colleagues. Yngve could only offer them space in his'ice gallery' with sleeping bags on reindeer skins. In the morning the guests enthused about 'the warm and intense experience'. The Icehotel was born.

In winter the Icehotel covers approximately 5,000 sq, meters and is built out of 30,000 tonnes of snow and 4,000 tonnes of ice. The hotel has a reception, around 40 rooms and 25 suites. It has its own Iceart exhibition, Icebar and Icechurch. Since the hotel melts every spring, the number of rooms, as well as the exhibits, varies from year to year.

The temperature of the bedrooms is a relatively warm -5 degrees centigrade. Guests sleep on a bed of warm insulating reindeer hides in an ultra- warm sleeping bag. In the morning they can enjoy an early morning sauna followed by breakfast. Toilets are located in a small heated building adjacent to the Icehotel.. In the evening the guests drink in the Icebar from Iceglasses sculpted from the pure ice of the river Torne. During the day guests eat in the restaurant 100 meters away and take part in the adventure activities such as dog sledding and snowmobile safaris.

Each year a new Icehotel is constructed by around 30 local artists and builders before the arrival of the first guests in mid-December. Snow cannons are used to blast snow on to a frame of arched steel sections, and ice pillars are added for extra support. The walls are made from huge clear blocks of ice, weighing almost two tones, cut from the frozen river with special saws and moved by front-loading tractors. Work on the interiors starts in early December, when sculptors cut and work the ice to create windows, doors, pillars, beds, lamps and ice sculptures. Guest ice artists are invited each year to design the ice décor in some of the rooms.

When April comes the roof of the Icehotel begins to drip. The hotel is closed and it slowly melts back into the river whence it came.

(Source: Robert Johnston & Graham Clark, Service Operations Management)

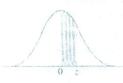
- Q1. What is the Icehotel's service concept?
- Q2. How can this concept be used as a strategic advantage?
- Q3. What are the similarities in Icehotel and an ordinary hotel?

[5,5,5 Marks]

Appendix



Areas of Standard Normal Distribution¹



An entry in the table is the area under the curve that is between z=0 and a positive value of z. The area in the tail is found by subtracting the table entry from 0.5. Areas for negative values of z are obtained by symmetry. For example, the area in the right tail for a positive z of 1.65 is (0.5 - 0.4505) = 0.0495.

Z	 0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2703	0.2734	0.2764	0.2794	0.2823	0.2852
8.0	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990