

## Management of Service Operations (MB3H1OP) : January 2009

### Section A : Basic Concepts (30 Marks)

This section consists of questions with serial number 1 - 30.

Answer all questions.

Each question carries one mark.

Maximum time for answering Section A is 30 Minutes.

1. The results from a service may be an emotion from hearing a song or seeing a tennis match, but frequently no

thing is left behind. Which of the following service characteristic refers to the present context?

- (a) Proximity to customer
- (b) Services cannot be inventoried
- (c) Intangibility of services
- (d) Simultaneous production and consumption
- (e) Uncertainty of demand anticipation.

2. In an attempt to make an operational choice involving inventory and shipping options, firms create extremely separate corporate divisions, with separate warehouse systems for the retail side and the catalog/internet side.

The category of this strategy is referred to as

- (a) Dedicated systems
- (b) Transportation sharing
- (c) Cost minimizer
- (d) Professional shopper
- (e) Service shop.

3. A design tool based on the process flow diagram that creates the map of a new process and is also useful for

analyzing and improving existing processes is referred to as

- (a) Conjoint analysis
- (b) Regression analysis
- (c) Correlation analysis
- (d) Service blueprinting
- (e) Trend analysis.

4. The idea of separating the services which requires high contact elements and low contact elements into different

jobs that can be carried out by different personnel is known as

- (a) Demarking
- (b) Designating
- (c) Deviating
- (d) Decentralizing
- (e) Decoupling.

5. A good simulation project requires various steps to complete. Which of the following is the correct sequence of

steps to be conducted for simulation study?

- (a) Plan the study, Define the service system, Select appropriate software and build model, Validate the model and run experiments and Analyze and report results
- (b) Define the service system, Select appropriate software and build model, Plan the study, Validate the

model and run experiments and Analyze and report results

(c) Select appropriate software and build model, Validate the model and run experiments, Plan the study,

Define the service system and Analyze and report results

(d) Define the service system, Plan the study, Validate the model and run experiments, Select appropriate

software and build model and Analyze and report results

(e) Validate the model and run experiments, Define the service system, Plan the study, Select appropriate

software and build model and Analyze and report results.

6. Which of the following quality dimensions describe the physical presentation of the service, such as plastic

credit card or a bank statement in the service facility?

(a) Empathy

(b) Reliability

(c) Tangibles

(d) Responsiveness

(e) Assurance.

7. Which of the following statements is/are not true regarding the methods to reduce stock-outs, shrinkage and

inventory inaccuracy in services?

I. Charging a lower up-front price to the retailer, but sharing in the retailer's revenue.

II. Marking down the price for the product which is selling well.

III. Phantom stock-out can be reduced by just highlighting the problem and recognizing that it is a factor to be managed.

(a) Only (I) above

(b) Only (II) above

(c) Both (I) and (II) above

(d) Both (I) and (III) above

(e) Both (II) and (III) above.

8. The goal of the site selection in services like postal facilities and emergency medicine is to use multiple

locations to cover a geographic area effectively. With respect to the above context, these services are classified

as

(a) Professional service

(b) Delivered services

(c) Service factory

(d) Demand-sensitive services

(e) Quasi-Manufacturing services.

9. Which of the following Internet service processes involves the capture, organization, access and use of

information?

(a) Distribution and fulfillment systems

(b) Logistics systems

(c) Transaction systems

(d) Information systems

(e) Knowledge systems.

10. Which of the following service processes offers highly customized services with high degree of labor intensity?

- (a) Service factory
- (b) Service shop
- (c) Professional service
- (d) Mass service
- (e) Quasi-manufacturing services.

11. Which of the following is a back-office decoupling strategy that focuses on low decoupling with cost emphasis?

- (a) Cheap convenience
- (b) Focused professionals
- (c) Cost leader
- (d) High service
- (e) Quality leader.

12. In the United States, the word "turnover" means employees leaving an organization, but means "gross revenue" to most other English speaking people around the world. In this context, the negative element shared by off-shoring is referred to as

- (a) Lack of new businesses
- (b) Country risk
- (c) Losses due to distance
- (d) Cultural bias
- (e) Cultural differences.

13. Quality definition reflects the various perspectives of the various stakeholders. The quality definition that relies on measurable quantities and allows an objective assessment reflects \_\_\_\_\_ perspective.

- (a) User-based
- (b) Product-based
- (c) Value-based
- (d) Manufacturing-based
- (e) Transcendent.

14. According to Proctor and Marigold predictions, which of the following trends refers to our desire to build ourselves strong and cozy nests where we can retreat from the world and enjoy ourselves in safety and comfort?

- (a) Clanning
- (b) Fantasy adventure
- (c) Anchoring
- (d) Cocooning
- (e) Egonomics.

15. In an organization, the service manager observed that the service is being deviated 0.78 standard deviations above the mean. The probability of the service deviation is

- (a) 13.28%

- (b) 23.28%
- (c) 28.23%
- (d) 38.23%
- (e) 43.23%.

16. Which of the following are not included in 'social performance', an element of the triple bottom line?

- I. Energy use.
- II. Minority percentage of workforce.
- III. Family-friendly policies.
- IV. Living wage for international labor.
- V. Hazardous chemical emissions.
- (a) Both (I) and (II) above
- (b) Both (I) and (V) above
- (c) Both (II) and (III) above
- (d) Both (II) and (IV) above
- (e) (I), (III) and (V) above.

17. Which of the following translates the strategic positioning decisions into a clear operational plan in the strategic planning process for services?

- I. Strategic positioning.
- II. Tactical execution.
- III. Service strategy.
- (a) Only (I) above
- (b) Only (II) above
- (c) Only (III) above
- (d) Both (I) and (II) above
- (e) Both (II) and (III) above.

18. Which of the following focuses on selling the right capacity to the right customer at the right price?

- (a) Back orders
- (b) Partitioning demand
- (c) Yield management
- (d) Expected Marginal Revenue
- (e) Demand variance.

19. In service process, customer feels it longer when he is kept waiting without involving in the service process. The hands of the clock appear to move more slowly when he /she is not occupied. In such a situation, which of the following is the best operational action to be taken by the service provider to manage the psychology of the customer?

- (a) Communicate frequently
- (b) Distract and entertain with related activity
- (c) Involve customers in pre-processing activity
- (d) Physically segment different markets
- (e) Deploy back-office people for the activity.

20. Even though outsourcing performs tasks more cheaply and at better quality, it involves some

kind of risk.

Outsourcing creates d windling career paths. The risk that occurs because of dwindling career paths is related to

- (a) Firm specific risk
- (b) Contract risk
- (c) Pricing risk
- (d) Information privacy risk
- (e) Competitive advantage risk.

21.Which of the following statements is/ are true for radical service innovation?

- I. Requires a different process and design approach.
  - II. Implies less risk and resource investment.
  - III. Developed thro ugh some form of the new service development cycle.
- (a) Only (I) above
  - (b) Only (II) above
  - (c) Only (III) above
  - (d) Both (I) and (II) above
  - (e) Both (I) and (III) abo ve.

22.Which of the following methods is/are used in the site selection for quasi-manufacturing services?

- I. Deterministic simulation.
  - II. Gravity model of demand.
  - III. Mixed integer programming.
- (a) Only (II) above
  - (b) Both (I) and (II) above
  - (c) Both (I) and (III) abo ve
  - (d) Both (II) and (III) above
  - (e) All (I), (II) and (III) above.

23.Assume that a product has a selling price of Rs. 30 and a gross margin of 30%. In the event that a customer does not find the pro duct on the shelf, they will be disappointed, with an associated cost of Rs. 5. Holding cost for the item, which is delivered weekly, are assumed to be 20% of item cost. What service level should the retailer attempt to achieve, assuming no substitution?

- (a) 34.5%
- (b) 56.5%
- (c) 76.1%
- (d) 89.7%
- (e) 99.2%.

24.Internet strategies remain an important competitive strategy consideration in retail sector.

Which of the following

statements is not true regarding the potential advantages that most directly concerns operations of the Internet

over traditio nal retail business?

- (a) Prices are lower for standard prod ucts
- (b) Ease of comparison of shopping on the Internet
- (c) An Internet presence provides for an unbundling between image and products carried
- (d) Inventory and personnel required to run the operations of the firm is low
- (e) Retail space is limited on the Internet.

25. A company uses its publicly traded stock to buy up dozens of small firms in a fragmented industry for its growth. This is referred to as

- (a) Industry roll-ups
- (b) Franchising
- (c) Decoupling
- (d) Core competency
- (e) Yield management.

26. Job responsibilities, technology requirements, equipment requirements, facility layout, management policies and procedures, service process designs, operating capacity, and quality management systems are the components of

- (a) Strategic positioning
- (b) Operating strategy
- (c) Order winners
- (d) Service delivery system
- (e) Tactical execution.

27. Which of the following would comprise one of the 'costs of poor quality'?

- (a) Purchase order discounts
- (b) Performance related pay
- (c) Appraisal costs
- (d) The Economic Order Quantity
- (e) Relocation costs.

28. Experiences are emergent phenomena. If all activities within the time frame of the experience are carefully

orchestrated, the good experiences stay in the customer's memory, but the customer must also discover ways to

build on his or her experiences with the organization. Which of the following statement(s) is/are describing the

purpose of memorabilia for experience designs?

I. Generates dialogue about the experience, encouraging word-of-mouth.

II. Extends the memory of the experience long after the actual encounter occurred.

III. Provides additional revenue and free advertising.

- (a) Only (I) above
- (b) Only (II) above
- (c) Both (I) and (II) above
- (d) Both (II) and (III) above
- (e) All (I), (II) and (III) above.

29. In a process flow diagram, the rectangle represents

- (a) Activity
- (b) Decision
- (c) Inventory
- (d) Direction of flow
- (e) Connects flow of pages.

30. DuPont is best known as a manufacturer of chemicals and paints. When a company makes and sells paint, their

goals revolve around making and selling more paint. But paint is generally a hazardous product. Most

formulations of paint require solvents, which are volatile organic compounds. If the company sells Ford the service of painting cars, it is now motivated to meet the painting quality requirements set by Ford while using as little as possible. Which of the following strategy can be used by DuPont to improve their environmental performance?

- (a) Product redesign
- (b) Value-added services
- (c) Dematerialize
- (d) Process improvement
- (e) Quality improvement.

END OF SECTION A

Management of Service Operations (MB3H10P) : January 2009

Section B : Problem/Caselets (50 Marks)

This section consists of questions with serial number 1 – 5.

Answer all questions.

Marks are indicated against each question.

Detailed working/explanations should form part of your answer.

Do not spend more than 110 - 120 minutes on Section B.

1. A departmental store has a single cashier. During the rush hours, customers arrive at the rate of 20 customers per hour. The average number of customers that can be processed by the cashier is 24 per hour. Assume that the conditions for the use of single-channel queuing model apply. Determine the following:

- i. Probability that the cashier is idle.
- ii. Average number of customers in the queuing system.
- iii. Average time a customer spends in the system.
- iv. Average number of customers in the queue.
- v. Average time a customer spends in the queue waiting for service. (10 marks)

Caselet 1

Read the caselet carefully and answer the following questions:

2. Analyze the service system designed by KTF, and also explain the need for innovative and creative service design for mobile communication companies like KTF.

(12 marks)

3. Designing and developing services is a complex task because of its characteristics. Discuss the various characteristics of service.

( 8 marks)

Beginning in 1977 with the launch of its PCS (personal communication service) business, KTF has become Korea's leading mobile company in both brand value and revenue. The company set a record by securing more than nine million subscribers within three years of commencing service, and in 2006 it ranked first among the top 100 global IT mobile communication companies. However, even with these business successes, KTF had to consider the changing market paradigm. In 2004, since the company needed attractive and innovative services to entice new customers besides maintaining old ones, KTF turned its focus towards creative service strategy. KTF launched new mobile in 2005, designed to attract public attention in the consumer market. KTF's mobile was designed by a special illustration in a unique and polished style. Interesting illustration and design artwork

add emotional value to the mobile. KTF's design-for-service attitude extends to its commercial areas too. For customers, Members' Plazas were established as refreshing cultural and entertainment spaces. They also function as a marketing tool to achieve customer satisfaction and offer a comprehensive sensory experience. KTF used customer surveys and put in a lot of research in designing the shops that endeavour to appeal to the five senses of the customers through an emotional experience. Customers can be reminded of the KTF brand's signature color in the orange-tinged space (sight), get a cup of coffee in the cafe of the shop (smell and taste), enjoy the music (hearing), and, of course, experience the latest mobile service (touch). The shop design is geared especially toward the young customers who are the main users of KTF services. KTF's corporate identity program is centered around two concepts: vital dot and vital pattern. Both use the company's orange identity color, vital orange. The dots represent the concept of a seismic center (the origin of change) and waves (which imply changes and innovations initiated by the center). Both concepts promote KTF as a warm and friendly company. The vital pattern symbolizes motion, life, evolution, and communication.

It can create infinite patterns on pattern matrices based on time, size, and effect and is a very effective design for all communication platforms, from signage to mobile content and websites. The design idea of a vital pattern comes from digital technology, and the pattern design signifies that it can be an emotional design language to communicate between the company and the customer. KTF needs to convey its service information to consumers as clearly as possible, and design as a visual language can present strong images to consumers through the widest range of media, quickly and simply. A consistent brand image is important, so the orange color and vital pattern always need to be included. KTF's information design is aimed at "understanding and sharing." In other words, it should serve as a means of delightful communication between corporation and customer, offering a good connection with each customer. KTF produced a TV advertising series as a campaign for corporate design management. With such titles as Crazy for Design, Impressed by Design, Filled by Design, and Detected by Design, they promoted the concept of Design by KTF. KTF has developed a website ([www.ktf.co.m](http://www.ktf.co.m)) and designed a digital service based on its service strategy. Of course, the web design features the orange color and vital pattern symbolizing KTF's identity, but the company is also seeking to strengthen its forward-looking convergence services, developing unique and differentiated broadcasting content and additional services in order to deliver various multimedia services at reasonable prices. For instance, Dosirak, which translates to lunch box, is an interesting example of a new kind of music download service. KTF developed the service as a special brand with a focus on the visualization of the sense of hearing. It is proving effective in catching the customer's attention and offering a new experience of downloading digital content onto mobile phones. KTF has also launched a branded music video service, whose launch featured a music video of Moon Kun Young, who is a very famous South Korean actress. The video has since become a hot topic in Korean society. Many people have visited the Dosirak site to see it, even if they are not regular KTF customers. KTF has promoted its design policy and creative service strategy with this project, and has actively delivered the service with mobile sound content (ringtones, for instance), on the Dosirak site, and the design has improved the awareness and power of the KTF brand image by creating new subscribers while retaining existing ones.

END OF

CASELET 1

Caselet 2



Read the caselet carefully and answer the following questions:

4. a. Information services driven economy needs to be focused on 'the human experience'. Discuss elaborately with respect to the caselet. ( 5 marks)  
b. Apart from 'the human experience', discuss the various issues of consideration for an internet based organization, expressed in the caselet.  
( 5 marks)

5. Internet based firms are entirely different from traditional firms. In this regard explain the cost differences between Internet and traditional retail firms. (10 marks)  
This is the age of the internet and for that website development is going on rapidly. The speed at which companies build sites is reminiscent of a gunfight; the Web arrived, someone shouted "draw!" and everyone rushed to build a site more quickly than the other guy. Now building a Web site is a major undertaking, a task demanding the combined efforts of many in an organization. Now an integral element of marketing strategy, Web sites must meet complex interrelated needs, and must do so while providing exceptional human experiences. Yet another major shift is taking place in business, driven by Internet technology. Though somewhat quieter than the initial information revolution, the shift to the executable Internet, where customers can interact directly with an organization, is happening. Increasing expectations of internet customers are forcing service organizations to provide competent and quality services through their web. Increasingly, customers expect to be able to visit a Web site and conduct business,

## CASELET 2

to purchase goods, and to obtain customized information. However, a great deal of what is available online currently does not meet visitor expectations. Many people can recall frustrating experiences registering for an event or making a purchase online. Given the high level of resources required to develop these services, it is no longer feasible just to build a Web site; rather, organizations need to develop comprehensive Internet strategies tightly integrated with overall marketing, branding and organizational strategies. Developing an effective Internet strategy demands much more than just building a Web site. Internet strategy takes time, expert knowledge of an organization's needs, its niche marketplace, its target consumers, and the range of technology available. Having the right expertise is key; without it, an organization risks wasting huge investments in time and money. The first and topmost on any organization's priority list, a Web site must meet visitor goals. Consumers not only expect up-to-date information, increasingly they expect to be able to interact with the organization, to exchange information, and to conduct business transactions online. They expect the Web site to be easy to find, easy to recognize, and above all, easy to use; if not, the competition is just next door (a single click away). If an organization does not strive to provide the best human experience possible, they risk losing visitors and consequently losing business. In a shift to an information services driven economy, there needs to be a renewed focus on "the human experience". A given brand will soon be only as good as the online experience its web site delivers. Second, Internet strategy must be an integral part of an organization's overall marketing plan. It must drive the organization's brand, and must be effectively marketed across all channels, from brochures and radio ads, to search engines and e-mail messages. Media convergence is becoming a necessity: offline communications must mirror those online and vice versa. Inconsistency only undermines a brand. Third, the technology involved must be well chosen, must meet consumer expectations, and must be robust. The rapid progress of server

technology, software development, and the widespread adoption of high-speed Internet access are dramatically changing the Internet and the way it is used. Organizations must make informed choices regarding the technology they employ; it is imperative that they choose the right tool for the right job. Technology, when chosen carefully and applied with business needs in mind, can introduce new efficiencies and increase profitability.

Obviously, developing a plan to achieve all of these goals is a daunting task, and most organizations do not possess the expertise to do so. Professional Internet services firms - firms with a sound knowledge of business needs, and an ability to address those needs with technology - begin with the premise that the web is a tool, and a company's internet strategy must make the best use of that tool to meet the needs of their target audiences. Internet organizations should consider the importance of their business development partners. Standard service partners help the organization in providing excellent services to its customers. A successful Internet strategy must address a wide range of elements. Professional Internet Service firms ensure these issues are addressed by breaking them down into several fundamental segments; the building blocks of business-driven internet strategies.

END OF

END OF SECTION B

Section C : Applied Theory (20 Marks)

This section consists of questions with serial number 6 - 7.

Answer all questions.

Marks are indicated against each question.

Do not spend more than 25 -30 minutes on Section C.

6. Engaging a customer during the service process is an important activity of a

service provider. Discuss the different ways of engagement for creating successful and satisfying experience for the customer.

( 10 marks)

7. Stockouts, shrinkage and inventory inaccuracy are the major problems of inventory management. Explain the various practical methods to reduce them. ( 10 marks)