Birla Institute of Technology & Science, Pilani
Work Integrated Learning Programmes Division
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Comprehensive Examination
(EC-3 Regular)

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Nature of Exam	: Open Book
Weightage	: 40%
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No. of Pages = 2
No. of Questions = 11

Note to Students:
1. Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively. Each answer should start from a fresh page.
3. Assumptions made if any, should be stated clearly at the beginning of your answer.

1. Classify the features of Microsoft Excel using Kano model. Justify the classification [3]

Answer:
The Kano model classifies product features into five categories: Basic, Performance, Excitement, Indifferent, and Reverse.

1. **Basic Features (Must-haves):**
   - **Data entry, cell formatting, and basic calculations**
     Justification: These are expected by default in a spreadsheet tool. Their absence causes dissatisfaction, but their presence doesn't lead to high satisfaction.
2. **Performance Features:**
   - **Formulas, data visualization (charts), and pivot tables**
     Justification: These features provide proportional satisfaction. The better they perform, the more satisfied the user is.
3. **Excitement Features:**
   - **AI-powered data insights, macros automation, and collaboration in real-time**
     Justification: These features delight users when introduced but are not expected initially.
4. **Indifferent Features:**
   - **Outdated templates or color schemes**
     Justification: These neither increase nor decrease user satisfaction.
5. **Reverse Features:**
   - **Over-complicated advanced functions for casual users**
     Justification: These might overwhelm some users, leading to dissatisfaction.

2. Explain the difference between optimize and pivot. Give an example of each, for a hotel reservation software. [4]

Answer:

1. **Optimize:**
    - **Definition:** Refining the product to maximize its value within the existing strategy.
    - **Example:** Improving the speed of the reservation process in the software by optimizing the database queries.
2. **Pivot:**
    - **Definition:** Changing the product's direction fundamentally to better meet user needs.
    - **Example:** Shifting from a hotel-specific reservation system to a platform supporting vacation rentals as well.

3. Explain the concept of "Platform as a Product". Give an example of a product for this. [3]

Answer:

- **Definition:** Platforms provide foundational technology or frameworks allowing third-party developers or users to build upon them.
- **Example:** Android OS is a platform enabling app developers to create and distribute applications, facilitating a broad ecosystem of products.

4. Identify the activities of the Agile project described below and associate these activities with different phases of Sprint cycle.

   A restaurant wanted to develop a mobile app to be used by waiters for taking orders, generating the bill, capture customer feedback, etc. An IT company was given the task of developing this software using Agile method. The IT company understood the requirements at a high level and did the estimation of effort, time and number of Sprints needed and the features to be developed in each Sprint. During each Sprint the team identified a set of features to be developed and assigned the tasks to each team member. The team members worked on the assigned tasks and monitored the progress every day during the daily scrum meeting. After the features were developed, the product was demonstrated to the restaurant staff to get their feedback. The team then met internally and discussed what went right and what challenges they faced and how they can improve the way of working in the subsequent Sprints. [4]

   Answer:

   1. **Understanding requirements and estimation:**
       - **Phase:** Sprint Planning
   2. **Identifying features and assigning tasks:**
       - **Phase:** Sprint Planning
   3. **Daily progress monitoring:**
       - **Phase:** Daily Scrum
   4. **Demonstrating the product:**
       - **Phase:** Sprint Review
   5. **Internal discussion for improvement:**
       - **Phase:** Sprint Retrospective

5. What kind of analytics is performed to understand how users use a software product? What kind of insights can be obtained from this analytics? Give examples of insights one can get from this analytics for an email software. [4]

Answer:

- **Type of Analytics:** Usage analytics, clickstream analysis, and behavioral analytics.
- **Insights for email software:**
    - Popular times users send emails (peak usage hours).
    - Commonly used features (e.g., search functionality or folders).
    - Drop-off points in user interactions (e.g., incomplete draft emails).

6. A/B testing is common in B2C products such as Amazon.com. Why? [2]

Answer:

- **Reason:** B2C products target large, diverse audiences. A/B testing enables companies to understand user preferences by comparing variations (e.g., layout, pricing, or recommendations). This leads to optimized conversion rates and user satisfaction.

7. Product lines leverage commonality between products. They have a core set of modules that are common across products and few modules that are specific to each product. However this approach sometimes leads to inefficiencies and performance issues. Give an example of this, from the case studies / profiles we discussed in the class. [2]

Answer:

- **Example:** Microsoft Office product line. Using the same rendering engine across Word and Excel sometimes results in slower performance for specific tasks like large dataset computations in Excel.

8. Team & People aspects: Product managers sometimes have to address resistance from different stakeholders when they have to innovate and build new products. Give an example of a Product manager who effectively handled this opposition using the Product manager profiles we discussed in the class. Describe how he / she addressed the challenge. [4]

Answer:

- **Example:** Satya Nadella at Microsoft.
    - **Challenge:** Resistance to adopting cloud-first strategies.
    - **Approach:** He emphasized data-driven results and worked on building trust through incremental successes (e.g., Azure's early adoption stories).

9. Pricing: Suggest 2 pricing models each, for the following products: [4]
    i. Spotify (online music streaming service)
    ii. Slack (Messaging and collaboration software for organizations)

Answer:

1. **Spotify:**
    - Freemium model (free tier with ads, premium tier without ads).
    - Family subscription model (discounts for grouped users).
2. **Slack:**
    - Per-user subscription model (based on the number of active users).
    - Tiered pricing model (different pricing for features like unlimited integrations or storage).

10. Create a brief business plan for Spotify (music streaming software) [3]

Answer:

1. **Vision:** To be the leading music streaming service globally.
2. **Key Features:** Personalized playlists, high-quality streaming, and offline downloads.
3. **Revenue Streams:**
    - Subscription fees (Premium accounts).
    - Advertising for free-tier users.
4. **Marketing Strategy:**
    - Partnerships with mobile carriers.
    - Campaigns targeting Gen Z with exclusive artist content.

11. Marketing:

a) What is the difference between positioning and messaging? Give an example of positioning and messaging for Ola (Electric scooter) as an example. [4]

Positioning vs. Messaging for Ola Electric Scooter

- **Positioning:** "A sustainable and innovative solution for urban commuting."
- **Messaging:** "With Ola, every ride is eco-friendly, cost-effective, and enjoyable."

b) Explain the chasm in the Product Adoption Lifecycle that we need to cross in order to market high tech products? Give an example of how a high tech product crossed the chasm. [3]

Crossing the chasm in Product Adoption Lifecycle:

- **Concept:** The "chasm" separates early adopters from the early majority in high-tech products.
- **Example:** Tesla bridged the chasm with its Model S, gaining traction beyond tech enthusiasts by emphasizing luxury and performance.

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