SASTRA DEEMED UNIVERSITY

(A University under section 3 of the UGC Act, 1956)

End Semester Examinations

Nov 2025

Course Code: **CSE332**

Course: **USABILITY DESIGN OF SOFTWARE APPLICATIONS**

QP No. :**S1032-7**

Duration: **3 hours**

Max. Marks:**100**

PART – A

Answer all the questions

4 x 5 = 20 Marks

1. Describe what makes a good and a bad interaction design for the speech recognition technology used for gas cylinder reservations.

2. Describe the key elements of communication and collaboration that are taken into consideration when designing a public survey application.

3. How to apply a lifecycle that reflects the qualities of effective interface design for marketing a pharma product.

4. A public health organization has released a pilot-tested mobile App in rural areas with limited digital literacy. It helps users track their daily water intake and receive hydration reminders. Outline the evaluation paradigms and techniques.

PART – B

4 x 15 = 60 Marks

Answer all the questions

5. A university is developing an online learning platform to support remote education. The design team follows the interaction design

process, starting with user login access, reading materials, listening to lecture videos and submitting assignments. Discuss how the interaction design process supports both students and faculty in the achievement of design goals and usability principles.

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(OR)

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6. A game studio is developing a real-time multiplayer strategy game for tablets. Early testing revealed confusion over controls and difficulties navigating the interface during fast gameplay. Define the problem space, interaction design principles, interface metaphors, and interaction paradigms that can enhance user understanding and improve the gameplay experience.

7. An online education platform is creating a mobile application for student course registration, enabling students to enroll in courses, communicate with instructors, and handle their enrollments. The design team's framework for the concept outlines that users can browse, filter, and acquire any course while learning. They guarantee that users can explore categories, utilize filters, and finalize purchases promptly. Describe a communication and collaboration framework with key user activities and goals.

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(OR)

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8. A smart retail shop helps customers find products and complete the checkout process by using smartphone Apps and digital kiosks. However, many users, especially older individuals, report experiencing difficulty navigating the environment and understanding how digital elements relate to real-world objects. How users create cognitive maps and mental models in hybrid digital and physical contexts. Provide suggestions on how users' spatial awareness and cognitive processes might be integrated with digital interfaces.

9. For rural consumers with low financial literacy, a Fintech startup is creating a mobile application for microloan lending and repayment. The team conducts interviews with local borrowers and

undertakes field visits to assess customer needs. Simple loan application procedures, unambiguous repayment plans, prompt reminders, and multilingual assistance are all requested by users. How determining requirements and needs helps the app succeed.

(OR)

10. Explain the kind of life cycle model that can be used to guarantee the activities of interaction design in the construction of a web application for module-specific models, such as employee profile management and payroll processing modules for both accounts and HR departments.

11. You are leading a diverse team of data analysts, financial advisers, and UX designers to develop a mobile financial app. As the lead product strategist, you need to decide whether to prioritize a gamified savings feature or a real-time fraud alarm. Set up a structured meeting to gather feedback on the technical feasibility, market demand, and user impact of each option. Focus the discussion on user needs and teamwork to weigh the benefits of both features and reach an agreement that aligns with your strategic goals.

(OR)

12. Design a prototype for a public health analyst to examine survey results from a rural area regarding vaccine hesitancy. vaccine hesitancy in a rural population by targeting three key dimensions—misinformation, logistical challenges, and cultural beliefs. The health department aims to create targeted interventions. Formulate a strategic survey plan focused on four key phases: Conceptual design, survey construction, physical design and tool support.

PART – C

Answer the following   1 x 20 = 20 Marks

13. ABC Motors, a leading automobile manufacturer, wants to develop an ERP system to optimize its car manufacturing process. The system should track vehicles from design to final delivery, ensuring smooth transitions through different production stages.
   a) Critically analyze the good design of usability goals.
   b) Draw a conceptual framework for software development.
   c) Propose a hybrid life cycle model for efficient team performance.
   d) Frame DECIDE evaluation strategies.

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