# Institute of Information Technology
## Jahangirnagar University
### Program: B.Sc(Hons.)

**4ᵗʰ year 2ⁿᵈ Semester**
Duration: 3 Hours
Course Code: IT-4201
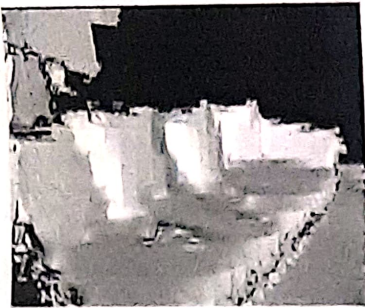
**Final Exam**
Full Marks: 60
Course Title: Human Computer Interfacing

**Do not write anything on the question paper.**
There are **7 (Seven)** questions. Answer any **5 (Five)** of them.
Figures in the right margin indicate marks.

1.
   a. What do you see? "Constructivist theory states that context plays a major role in what we see in an image", how? [3]



   I.                    II.                    III.

   b. List and explain the advantages and disadvantages of graphical system [3]
   c. Mention some guidelines for using voice input and voice output devices. Also explain why? [3]
   d. "A healthy office chair", how it is important for a user and a company? What are the other things in the office that may help to improve our efficiency you think? [3]

2.
   a. "HCI is the study of bridge between them, which includes observation of interactions", give any example and explain it. What else also a part of HCI study? [3]
   b. "Utility affects effectiveness", is it true? Explain with example? [2]
   c. Define HCI by ACM, Dix and Carroll. Are all the definitions same? If not differentiate them. [4]
   d. List and explain important human characteristics in designing user interface and explain the response of user for a poor design. [3]

3.
   a. Explain acceptance testing. Why acceptance testing plays an important role in successful project completion? [4]
   b. Explain how one can implement shneiderman's eight golden rules to design an efficient interface. [4]
   c. What are the three principles of direct manipulation? [4]

4.    a.    Compare characteristics of WEB and GUI interface design.    [3]

     b.    List and explain the advantages and disadvantages of graphical system    [3]

     c.    Write a brief notes on www , web user interface and WYSIWYG? List and explain the characteristics of graphical user interfaces    [3]

     d.    List and explain the principles of user interfaces design    [3]

5.    a.    Comment to justify the following statement:    [4]
        "Most users are neither beginners nor experts; instead they are intermediates". What are the pointing devices? Explain trackball as pointing device?

     b.    Explain low fidelity prototyping and high fidelity prototyping in details.    [4]

     c.    What is the difference between Tertiary and Analogous colors?    [4]

6.    a.    Build and explain a Lifecycle model for student-teacher interaction in the class.    [3]

     b.    Suppose for a 21 inch flat panel display, the average distance the cursor between the menu bars is 80 mm. Given, size of menu bar for Macintosh: 30 mm & Windows: 20mm, a=50, b=150    [3]

        Calculated time to move the cursor to a menu item on Macintosh and Windows.

     c.    What are the Norman's 7 Principles of Usability?    [3]

     d.    "Interaction: communication between user & system", is it true? Prove it.    [3]

7.    a.    Explain with figure the general principles of HCI design, Compatibility, Ease of Learning, Memorability, Predictability, Simplicity, Flexibility, Responsiveness, Protection, Invisible Technology, Control and WYSIWYG.    [3]

     b.    "Consider a company that wants to develop a wireless information system to help tourists with personal digital assistants (PDAs) at Cox's Bazar Airport.", develop a conceptual model for this system. Draw it.    [3]

     c.    Draw the block diagram of memory model. How information goes to long-term memory? How chunking improves memory?    [3]

     d.    How do you choose among alternative designs? Draw and explain any life-cycle model.    [3]