IS761

Seventh Semester B.E. Degree Examination, Dec.07 / Jan.08
Principles of User Interface Design

Time: 3 hrs.

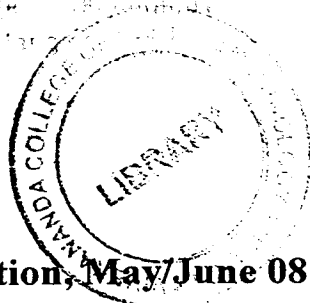Max. Marks:100

Note : *Answer any FIVE full questions.*

1 a. What are the goals of system engineer in user interface design? (06 Marks)
   b. Explain the five measurable factors to evaluate user interface. (04 Marks)
   c. How human diversity affects the user interface design process? (10 Marks)

2 a. Explain the eight golden rules of user interface designing. (08 Marks)
   b. Explain the guidelines for data entry. (04 Marks)
   c. Explain about three pillars of design. (08 Marks)

3 a. Bring out the different methods of expert review. (04 Marks)
   b. Briefly explain the different specifications methods. (08 Marks)
   c. Explain three examples of direct manipulation systems. (08 Marks)

4 a. Explain the guidelines for menu selection design. (08 Marks)
   b. What are the guidelines for dialog box designing? (04 Marks)
   c. What strategy is to be followed for naming and abbreviations? (08 Marks)

5 a. Explain the use of Fitts Law. (04 Marks)
   b. For what kind of tasks pointing devices are applicable? Explain direct control pointing device. (08 Marks)
   c. What different aspects must be considered for designing generation of error messages? Explain. (08 Marks)

6 a. What guidelines we must follow while using colors? Give illustrations. (10 Marks)
   b. What are the advantages and disadvantages of online facility? Discuss. (10 Marks)

7 a. What different objects and actions windows contain? Explain. (10 Marks)
   b. What different features must be considered while designing web pages? Describe. (10 Marks)

8 Write short notes on any four of the following:
   a. Goals of UI (User Interface) designer
   b. Guidelines for data display
   c. Natural language in computing
   d. Speech recognition
   e. Object Action Interaction Model for web site design. (20 Marks)

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4 a. Explain the exception model of .NET framework with examples. **(08 Marks)**
   b. Design a custom exception for a Stack class by writing Push, Pop, Display methods and add appropriate exceptions for overflow and underflow. Show the helper class to demonstrate its working. **(12 Marks)**

5 a. Explain the implicit and explicit interfaces in C# with examples. **(10 Marks)**
   b. Write the following classes with appropriate members: Customer that holds all the bank customer details. An interface Loan to calculate the premium and other details. Two subclasses Account and LoanAccount to create customers with and without loan respectively. Show an implementation for this problem in C#. **(10 Marks)**

6 a. How does .NET Framework manage garbage collection? **(05 Marks)**
   b. With examples, explain the following:
      (i) IConvertible
      (ii) IEnumerator and IEnumerable
      (iii) ICloneable
      (iv) IDictionary
      (v) IList
      (15 Marks)

7 a. Write a complete C# program to add and subtract two complex numbers by writing Add and Subtract methods which could be called through the delegate method of programming. **(10 Marks)**
   b. What do you understand by event based programming in C#? Give an example. **(10 Marks)**

8 a. It is required to maintain a dictionary of names and telephone numbers of persons. We may need to retrieve the telephone number of a person given his name. Design a C# program to do this, using indexers. **(12 Marks)**
   b. What is an assembly in .NET framework? How do you create a .dll file and add it in GAC? Demonstrate it with an example. **(08 Marks)**
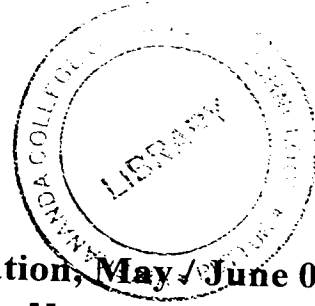
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IS761

Seventh Semester B.E. Degree Examination, May/June 08
Principles of interface Design

Time: 3 hrs.

Max. Marks:100

Note . *Answer any FIVE full questions.*

1 a. Explain goals of System Engineering. (10 Marks)
   b. Explain briefly guidelines for data display and data entry. (10 Marks)

2 a. With a neat diagram explain the three pillars of design. (10 Marks)
   b. Explain briefly expert reviews and surveys. (10 Marks)

3 a. Discuss the different specification methods. (10 Marks)
   b. Discuss the features of user-interface Building tools. (10 Marks)

4 a. With examples explain direct manipulation systems. (10 Marks)
   b. Explain task-related organization. (10 Marks)

5 a. Briefly explain menu-layout design guidelines. (10 Marks)
   b. Explain naming and abbreviations. (10 Marks)

6 a. Explain briefly pointing devices. (10 Marks)
   b. Describe guidelines related to error messages. (10 Marks)

7 a. Describe individual-window design. (10 Marks)
   b. Explain briefly object-action interface model for web-site design. (10 Marks)

8 Write a short note on (Answer any four)
   a. Form fillin.
   b. Image and video displays
   c. Response-time guidelines
   d. Color guidelines
   e. User-manual guidelines (20Marks)

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Seventh Semester B.E. Degree Examination, May / June 08
Computer Networks – II

Time: 3 hrs.

Max. Marks: 100

Note : *Answer any FIVE full questions.*

1 a. What are DNS name spaces? Explain the top – level domain name space of internet.
   (08 Marks)
   b. What is resource record? Explain the format of resource record.
   (12 Marks)

2 a. Explain with a diagram server side dynamic web page generation steps.   **(06 Marks)**
   b. List the differences between XHTML and HTML 4.   **(06 Marks)**
   c. What is HTTP? Name the important properties of HTTP. What are the different methods of HTTP?
   (08 Marks)

3 a. Explain the three broad classes of multimedia applications.   **(06 Marks)**
   b. What are the hurdles for multimedia?   **(06 Marks)**
   c. Explain the types of redundancy in video compression.   **(04 Marks)**
   d. What are the differences between H . 261 and H . 263.   **(04 Marks)**

4 a. Explain the three limitations of the best - effort service.   **(06 Marks)**
   b. With suitable example explain RTSP messages exchanged between media player and server.   **(08 Marks)**
   c. Explain multimedia file format.   **(06 Marks)**

5 a. Explain scheduling and policing mechanism used in multimedia applications.   **(12 Marks)**
   b. What is SIP? Explain the functions of SIP.   **(08 Marks)**

6 a. What are the desirable properties to secure communication? Explain briefly.   **(10 Marks)**
   b. Write a note on DES.   **(10 Marks)**

7 Define the terms and explain the following :
   a. Authentication
   b. Digital signature
   c. RSA algorithm
   d. Fire wall.
   (20 Marks)

8 a. Explain security and administration of S N M P V 3.   **(10 Marks)**
   b. Write   short notes on :
      i) IMAP
      ii) RTP.
   (10 Marks)

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Seventh Semester B.E. Degree Examination, Dec.09/Jan.10
User Interface Design

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting*
at least TWO questions from each part.

PART – A

1 a. Briefly explain the goals of system engineering.   **(06 Marks)**
   b. List the different diversities that challenge the interactive system designers and explain any one of them.   **(06 Marks)**
   c. Explain the golden rules of interface design.   **(08 Marks)**

2 a. What are the techniques for getting users attention?   **(06 Marks)**
   b. Which are the three pillars of user interface design? What are the pros and cans of participatory design?   **(06 Marks)**
   c. Give the guidelines for performing field (ethnographic) study.   **(08 Marks)**

3 a. Give one statement description of the different review methods.   **(06 Marks)**
   b. List the various design specification methods. Briefly describe any one of them.   **(06 Marks)**
   c. What are direct manipulation systems? What are the benefits and drawbacks of direct manipulation?   **(08 Marks)**

4 a. Enumerate the guidelines for menu layout.   **(06 Marks)**
   b. Give the guidelines for internal layout and external relationship for dialog boxes. **(06 Marks)**
   c. List the elements (guidelines) for form-filler design.   **(08 Marks)**

PART – B

5 a. With the examples, give the strategies for abbreviation.   **(06 Marks)**
   b. What are the different display technologies? When is speech generation preferable? **(06 Marks)**
   c. What are the different variables (factors) to be considered for pointing devices? State Fitt's laws.   **(08 Marks)**

6 a. What are the guidelines for developing non-anthropomorphic messages?   **(06 Marks)**
   b. How and when should colours be used for displays?   **(06 Marks)**
   c. Give the guidelines for error messages and the development process.   **(08 Marks)**

7 a. What are the guidelines for preparing a good user manual?   **(06 Marks)**
   b. List the benefits of online tutorials. How can they be made effective?   **(06 Marks)**
   c. What are the different solutions for providing access to multiple sources of information? **(08 Marks)**

8 a. Explain the concept of developing coordinated window using tight coupling among windows.   **(10 Marks)**
   b. Write short notes on:
      i) Elastic windows   ii) OAI model for website design.   **(10 Marks)**

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