B.E. Sem-VIII (R), Computer Engg, Dec-2015
Elective-II :- Human computing Interaction
11/12/15
BE: Comp: Sem-VIII (Rev) Dec 2015
QP Code : 2616

(3 Hours) [Total Marks : 100

N.B. i)Question No. 1 is Compulsory.
ii) Attempt any four questions out of remaining questions.

Q.1 a) List the steps of User Interface Design Process [5]
b) What are different Indirect requirement collection techniques? [5]
c) What are different types of windows. [5]
d) What are qualities of visually pleasing composition? [5]

Q.2 a)Explain with example various types of Text messages. What are guideline principles for designing text messages. [10]
b) Explain different positioning and pointing devices. [10]

Q.3 a) What are possible uses of colors and problems associated with it? [10]
b) Give guideline principles for designing UI for elderly people [10]

Q.4 a) What is Card Sorting? Compare Open card sorting with Closed card sorting [10]
b) Design the User Interfaces for Online Cricket scorer part of Newspaper. How will you make interface more Learnable and Predictable. [10]

Q.5 a) What is Grouping? Explain techniques of Grouping of screen data with example [10]
b) Explain various operable controls with example [10]

Q 6 a) What are characteristics of Web based systems. [10]
b)What are problems associated with UI design. [10]

Q.7 Write short note on any two of the following: [20]
(i) Types of Menus
(ii) UI building tools
(ii) Applications of HCI
(iv)UI Internationalization

B.E. Sem-VIII (R), Computer Engg, Dec-2015
Software Architecture 16/12/2015

01|01

QP Code : 2697

(3 Hours) [Total Marks 100]

N.B.:
1. **Question No.1 is Compulsory.**
2. **Attempt any four out of remaining Questions.**
3. **Figures to the right indicate full marks.**

Q1. Attempt any **four** from the following questions.
- a) Compare and contrast stream connector and linkage connector. [05]
- b) What is reference architecture? How does it differ from ordinary software architecture? [05]
- c) Differentiate architectural erosion and architectural drift [05]
- d) What is a difference between view and viewpoint? [05]
- e) Differentiate software architecture and software design. [05]

Q2. a) What is SOA and web services? [10]
- b) What is architectural pattern? Explain any one pattern in detail with example. [10]

Q3 a) Compare and contrast event-based and client-server based data distribution connector.
- b) What is stakeholder driven modelling? [05]
- c) Explain basic features of xADL. [05]

Q4. a) List various architectural styles. What are the differences between architectural styles and Architectural patterns. [10]
- b) Explain simulation base framework [05]
- c) Explain 4+1 view in UML? [05]

Q5. a) What is REST? Explain its architecture. [10]
- b) What is perspective and descriptive architecture [10]

Q6. a) Explain in brief the guidlines of a good Software architecture for achieving NFP (no-functional property) goals. [10]
- b) Explain with an example software System Mobility and Architecture [10]

Q7. Write short notes on [Any TWO] [20]
- i) C2 style Architecture
- ii) ATAM
- iii) Domain specific software architecture

QP-Con. 11427-15.

B.E. Sem VIII (R), Computer Engg, Dec-2015
Multimedia System Design

18/12/15
01/01

QP Code : 2761

(3 Hours) **[Total Marks : 100**

N.B. (1) Question No. 01 is compulsory.

(2) Attempt Any Four questions from the remaining Five Questions.

(3) Assume suitable data wherever required.

1. a) With neat and labeled diagram explain design steps for multimedia systems. 10

   b) Draw and explain workstation based architecture for multimedia system, Also specify hardware and software expected at each layer (if any) considering an example. 10

2. a) Write a detailed note on storage & retrieval technologies. 10

   b) What is an Authoring System? Explain it's type with an example 10

3. a) Explain Chroma sub Sampling. 05

   b) Explain elements of multimedia systems. 05

   c) Explain in detail MIDI communication protocol . 10

4. a) Explain MPEG-1 compression in detail. 10

   b) Explain Virtual Reality design considerations. 10

5. a) Explain Audio compression in detail. 10

   b) Explain Streaming Protocols. 10

6. a) Explain Level 0 through Level 5 of RAID functionality. 10

   b) You are appointed as a consultant to set up Multimedia laboratory in Engineering Institute. 10

   Give the specifications of various components, configuration, connectivity , software etc. along with the assumption.

7. Write short notes on following. (Any two) 20

   a) Digital Camera

   b) Distributed Multimedia databases.

   c) Knowledge based multimedia system.

   d) Multimedia Animation.

B.E. Sem-VIII (R), Computer Engineering, Dec-2015
Distributed Computing

21/12/15 01/01

QP Code : 2931

Total Marks : 100 marks

3 hrs.

Note :

1. Question 1 is compulsory
2. Attempt any 4 out of the remaining questions.

Q1.

a) Comparison of NOS and DOS. (05)
b) Explain the issues in designing Distributed Systems (05)
c) Explain RPC Model for communication in a Distributed system. (10)

Q2.

a) Explain Absolute as well as Causal ordering semantics for group communication in a distributed system, with an example for each. (10)
b) Explain the need for coordinator selection in a distributed system. Explain one of the strategies for the same in detail. (10)

Q3.

a) Explain implementation of sequential consistency model for "Replicated and Migrating" block for distributed shared memory. (10)

b) What do you understand by clock synchronization? Explain Lamport's Mechanism (10)

Q 4.

a) What is phantom reads problem. Explain any one algorithm for distributed deadlock detection. (10)
b) What are data centric and client centric consistency models. Explain one model (10)

Q5)

a) List desirable features of a good distributed file system. How are modifications propagated in file caching schemes? (10)
b) Compare Load sharing to task assignment and Load balancing strategies for scheduling processes in a distributed system. (10)

Q6)

a) Explain Address Space transfer mechanisms in process migration in a distributed System. (10)
b) Explain stateless and stateful server implementation justifying advantages disadvantage of each (10)

Q7) Write short note on any 4 (20)

a) Issues in designing DSM.
b) Naming Service
c) Distributed Transactions
d) Desirable feature of a good Naming System
e) Lightweight RPC and Call back RPC.
