

BF (comp) SEM VIII (Rev) may 2013  
AIT 2015/13

25 : 1st half.13-AM(z)

Con. 8716-13.

(REVISED COURSE)

GS-3583

(3 Hours)

[Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.

(2) Attempt any **four** questions out of remaining **six** questions.

1. (a) State and explain ports, commands and communication steps used in FTP. 10  
(b) Describe virtual private Network and state its usefulness in various industries. 10
  2. (a) Compare and explain SOA and ROA in detail. 10  
(b) Discuss the security issues in cloud. 10
  3. (a) Explain the REST architecture and give its design constraints. 10  
(b) Explain the concept of hierarchical routing with an example. 10
  4. (a) Explain public key Infrastructure and secure payment mechanism in detail. 10  
(b) Explain the concept of DNS and DNS header format. 10
  5. (a) Explain the working of peer to peer over internet with example. 10  
(b) Explain IPv6 and its advantages. 10
  6. (a) How does DHCP work ? Explain its packet format. 10  
(b) How Google App Engine works ? Explain in brief. 10
  7. Write a short notes on any **four** of the following :— 20
    - (a) RSS
    - (b) VOIP
    - (c) HTML 5.0
    - (d) Data base vulnerabilities
    - (e) AJAX.
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Con. 8527-13.

GS-3577

(3 Hours)

[ Total Marks : 100

- N.B.** (1) Question No. 1 is compulsory.  
 (2) Attempt any **four** questions out of remaining **six** questions.  
 (3) Assume suitable **data** whenever **necessary** and justify the same.  
 (4) **Figures** to the **right** indicate **full marks**..

1. (a) Give all the steps involved in recognition methodology and briefly explain each. **10**  
 (b) Explain 'opening' and 'closing' with example. **10**
2. (a) Explain Hough transform with example. Mention all its merits and demerits. **10**  
 (b) What is knowledge based vision ? Explain different forms of knowledge representation used in computer vision. **10**
3. (a) Explain Border tracking algorithm with suitable example. **10**  
 (b) Explain inverse perspective projection. **10**
4. (a) Explain intensity matching of 1 dimensional signals. **10**  
 (b) Explain back-tracking algorithm with suitable example. **10**
5. (a) Apply 'iterative' and 'classical' connected component labelling algorithms on following image :- **10**

0	0	0	0	0	0	0	1	1	0
0	1	1	0	0	0	1	1	1	0
0	1	1	1	0	1	1	1	1	0
0	0	1	1	0	0	0	1	1	0

- (b) Explain boundry descriptors. **10**
6. (a) Explain 'thinning' and 'thickening' with the help of examples. **10**  
 (b) Explain mixed spatial gray-level moments. **10**
7. Write short note on :-
- (a) External points ~~Extrem~~ <sup>Extremal</sup> **5**
  - (b) Principal component analysis **5**
  - (c) View class matching **5**
  - (d) Global V/s local features. **5**

Correction

Q. 7.9. Extremal points

(REVISED COURSE)

(3 Hours)

[ Total Marks : 100

- N.B. (1) Question No. 1 is **compulsory**, solve any **four** questions from **remaining** questions.  
(2) **All** questions carry **equal** marks.  
(3) Specify your answers with neat **diagrams** and **examples** wherever **necessary**.

1. (a) Explain various human characteristics which are considered while designing the user interface. 10  
(b) How text messages are important to communicate with user, explain with few examples. 10
2. (a) What are general principles of user interface design ? 10  
(b) Design a user interface for Automated Ticket Vending machine for State Road Transport Service, consider all necessary elements in your design. 10
3. (a) Explain screen based and device based control mechanism in detail. 10  
(b) How ordering of screen data necessary in user interface design ? Explain. 10
4. (a) What are various tools in building Graphical user interface ? 10  
(b) Explain different types of windows. 10
5. (a) What is visually pleasing composition for user interface ? 10  
(b) What are general principles in user interface design ? 10
6. (a) Write a brief note on information retrieval for web applications. 10  
(b) What is use, usage and usability of interface system ? 10
7. Write short notes on following :— 20
  - (a) Speech recognition
  - (b) Statistical Graphics
  - (c) Interaction Devices
  - (d) Importance of good design.

Replace

Q. 5(b) - specify User Interface for any two home appliances in detail

8/5/13

BE VIII CMPN (REV)

Software Architecture.

VI-F.II.Exam. April(1)-13-101

Con. 7478-13.

GS-2974

(REVISED COURSE)

( 3 Hours )

[ Total Marks : 100

**N. B. :** (1) Question No. 1 is **compulsory**.

(2) Attempt any **four** questions from remaining **six** questions.

(3) Assume **suitable** data wherever **necessary**.

1. (a) What do you mean by architectural degradation ? Explain architectural drift and erosion. 4
- (b) Define product Line Architecture. 4
- (c) Why system based analysis important, if you have already completed component and component level analysis ? 4
- (d) What is a reference architecture ? How does it differ from an ordinary Software Architecture ? 4
- (e) What is a difference between view and viewpoint ? 4
2. (a) What are different criterias for evaluating implementation framework ? 8
- (b) Explain REST with a diagram. 8
- (c) Differentiate Software Architecture and Design. 4
3. (a) Define following terms :- 6
  - (i) Component
  - (ii) Connector
  - (iii) Configuration.
- (b) Explain 4 + 1 view in UML. 5
- (c) What do you mean by stakeholder driven modeling. 5
- (d) Differentiate accuracy and precesion. 4
4. A Lunar Lander game is to be developed with following specifications:- 20

**User input** – It takes input from pilot as increase/decrease speed which is directly mapped to required burn rate.

**Other inputs** –Lunar Lander has two sensors
  - (i) Current Burn Rate
  - (ii) Current altitude.

**Output** – Based on this 3 inputs determine new burn rate and set different parameters like altitude, velocity etc. and display them.

Draw an architecture using any of two styles :-

  - (a) Object Oriented Style
  - (b) Role Based Style
  - (c) Black Board Style.

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**Con. 7478-GS-2974-13.**

**2**

5. (a) Explain with example software system mobility and architecture. **10**  
(b) Explain any **two** connectors in detail :- **10**  
    (i) Data access connector  
    (ii) Stream connector  
    (iii) Procedure call connector.
6. (a) What is SOA and web services. **10**  
(b) What is an architecture implementation framework ? How does an architecture implementation framework differ from middleware ? **5**  
(c) What domain specific S.A. ? **5**
7. (a) What is C2 Style Architecture ? **6**  
(b) Design issues for non functional properties – Scalability and Hetrogeneity. **6**  
(c) Explain distributed object style in connection with CORBA architecture. **8**

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BE / C M P N I VIII (REV)

13 / 05 / 13

Multimedia Systems  
Design

113 : 1ST HALF-13 (q)-JP

Con. 8220-13.

(REVISED COURSE)

GS-3196

(3 Hours)

[ Total Marks : 100

**N.B. :** (1) Question No. 1 is **compulsory**.

(2) Solve any **four** from the remaining **six** questions.

(3) Assume **suitable** data wherever **required**.

1. (a) What are the different types of workflow ? Suggest application of mail enabled workflow. 10
- (b) You are appointed as a Consultant to set up a multimedia laboratory in an Engineering institute. Give specification of components, configuration, connectivity, software etc. along with the assumption. 10
2. (a) Explain the printout technology. Hence explain the working of a Laser printer. 10
- (b) Explain JPEG compression in detail. 10
3. (a) Explain level 0 through level five of RAID functionality. 10
- (b) Explain WAVE file format. 10
4. (a) Explain working of Scanner and hence explain reasons for use of CCD by these scanner. 10
- (b) Describe the algorithm for CCITT Group 3 standard. How does CCITT Group differ from CCITT Group 3 ? 10
5. (a) Explain Authoring system and also explain different types of Authoring. 10
- (b) What are the components of Distributed multimedia system ? 10
6. (a) Explain ADPCM in speech coding scheme. 10
- (b) Explain MPEG-1 compression in detail. 10
7. Write short notes on following (any two) :— 20
  - (a) Knowledge based multimedia system
  - (b) MIDI communication protocol
  - (c) Video conferencing : Design issues.

B.E (comp) viii

24/5/13

Distributed computing,

24 : 1st half.13-AM(aa)

Con. 9122-13.

(REVISED COURSE)

GS-3817

(3 Hours)

[Total Marks : 100

**N.B. :** (1) Attempt any **five** questions.  
(2) All questions carry **equal** marks.

1. (a) Explain Absolute Ordering and Causal Ordering process with the help of 10  
example for many to many communication.  
(b) Explain RPC system model in detail. 10
  2. (a) Discuss the need of the co-ordinator. Also give any one algorithm for 10  
co-ordinator selection.  
(b) What is the difference between strict consistency model and sequential 10  
consistency model ? How sequential consistency model is implemented  
in DSM ?
  3. (a) What is physical clock synchronization ? Explain any one algorithm in detail. 10  
(b) Explain deadlock avoidance algorithm in a distributed system. 10
  4. (a) How does light weight RPC work in cross domain architecture ? 10  
(b) Discuss file caching for distributed system. 10
  5. (a) Discuss how processes and resources are bound together. How does process 10  
migration take place in Heterogeneous environment ?  
(b) What are the good features of a Distributed File Systems ? Explain file 10  
sharing semantics of it.
  6. (a) Justify the need of stateful and stateless server in RPC management. 10  
(b) How are failures handled in message passing system in distributed systems ? 10
  7. Write any **two** of the following :— 20
    - (a) Distributed Transaction Management
    - (b) System Oriented Names for Distributed Computing
    - (c) Load Balancing Issues
    - (d) Distributed System Models.
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