

18/5/16

SOFT. Architecture

BE Sem VIII

Comp (Rev)

Q.P. Code : 622401

OLD COURSE

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No.1 is compulsory.
(2) Attempt any four questions from the remaining.

1. Attempt any four from the following questions..

- | | |
|--|----|
| a) Compare and contrast stream connector and linkage connector. | 5 |
| b) What is reference architecture? How does it differ from ordinary software architecture? | 5 |
| c) Differentiate architectural erosion and architectural drift | 5 |
| d) What is a difference between view and viewpoint? | 5 |
| e) Differentiate software architecture and software design. | 5 |
| | |
| 2. a) Explain C2 style architecture. | 10 |
| b) What is architectural pattern? Explain any one pattern in detail with example. | 10 |
| | |
| 3 a) Compare and contrast event-based and client-server based data distribution connector. | 10 |
| b) What is stakeholder driven modelling? | 5 |
| c) Explain basic features of xADL. | 5 |
| | |
| 4. a) List various architectural styles. What are the differences between architectural styles and Architectural patterns. | 10 |
| b) Explain simulation base framework | 5 |
| c) Explain 4+1 view in UML? | 5 |
| | |
| 5. a) What is Domain specific software architecture? | 10 |
| b) What is perspective and descriptive architecture | 10 |
| | |
| 6. a) Explain in brief the guidelines of a good Software architecture for achieving NFP (non-functional property) goals. | 10 |
| b) Explain with an example software System Mobility and Architecture | 10 |
| | |
| 7. Write short notes on (any two): | 20 |
| i) SOA and web services? | |
| ii) ATAM | |
| iii) REST | |

Q.P. Code : 622600

(3 Hours)

| Total Marks: 100

- N.B. :** (1) Question 1 is **compulsory**.
(2) Attempt any **4** questions out of the rest
(3) **Figures** to the **right** indicate **full** marks.
(4) **All** Question carry **equal** marks.

1. (a) Compare NOS with DOS and middleware. **5**
(b) Compare Multi Computer Systems with Multi Processor systems? **5**
(c) Explain various forms of Message - Oriented Communication models? **5**
(d) Draw and explain the steps in RPC model of communication. **5**
2. (a) Explain the need for process migration, what is the role of resource to process and process to resource binding in process migration. **10**
(b) Explain architecture of DNS and also Name Resolution. **10**
3. (a) Explain group communication .What is Totally Ordered Multicasting. **10**
(b) Explain Distributed algorithm for Mutual Exclusion. **10**
What are its advantages/disadvantages over Centralized algorithms?
4. (a) What are the issues to be handled while designing Distributed Shared Memory. **10**
(b) Discuss any two algorithms to detect Distributed Deadlocks. **10**
5. (a) Compare load balancing to task assignment schemes. **10**
(b) Explain the difference between Data Centric and Client Centric Consistency Models. Explain one model of each. **10**
6. (a) What are the desirable conditions of a distributed file system? **10**
(b) Explain how Distributed Transaction Management is achieved. **10**
Explain advantages of 3PC over 2PC
7. Write short notes on: **(any 2)** **20**
 - a) Cache Consistency
 - b) CODA File Systems
 - c) Christian and Berkeley Algorithm for Clock Synchronization
 - d) Lightweight and Call back RPC