



10IS81

Eighth Semester B.E. Degree Examination, Aug./Sept.2020
Software Architecture

Time: 3 hrs.

Max. Marks:100

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

PART - A

- 1 a. Why software architecture is important? (04 Marks)
b. Define Software Process. Explain its activities. (08 Marks)
c. Explain module and allocation structures. (08 Marks)
- 2 a. Explain the control loop solution for mobile robot. (06 Marks)
b. Explain KWIC with implicit invocation scheme. (06 Marks)
c. Define the following with an example:
(i) Set point (ii) Controlled variable
(iii) Feed control system (iv) Feed forward control system. (08 Marks)
- 3 a. What is availability? Explain the general scenario for availability. (08 Marks)
b. Explain Business Qualities. (06 Marks)
c. Explain Usability Tactics. (06 Marks)
- 4 a. What are the CRC's of a blackboard pattern? (06 Marks)
b. Explain the scenarios of pipes and fillers pattern. (08 Marks)
c. Explain any six implementation steps of layer pattern. (06 Marks)

PART - B

- 5 a. Explain the benefits and liabilities of broker pattern. (07 Marks)
b. Explain the dynamic scenarios of MVC pattern. (08 Marks)
c. Explain any 5 implementation steps of PAC pattern. (05 Marks)
- 6 a. What are the known uses of reflection pattern? (05 Marks)
b. What are the steps involved in implementing microkernel pattern. (10 Marks)
c. Explain Reflection pattern with its content, problem and solution. (05 Marks)
- 7 a. List and explain the steps to implement a whole-part structure. (10 Marks)
b. What are the benefits and liability of proxy structure? (05 Marks)
c. Explain the steps to implement Master Slave structure. (05 Marks)
- 8 a. Explain the steps involved in designing an architecture using ADD. (10 Marks)
b. Explain the parts of a document view. (10 Marks)



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Eighth Semester B.E. Degree Examination, July/August 2022

Software Architectures

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Explain briefly the properties of a good software architecture design. (04 Marks)
 b. Discuss software structures in detail. (08 Marks)
 c. Define architectural patterns, reference models and reference architecture. Explain briefly the relationships between them. (08 Marks)
- 2 a. Explain in brief about KWIC (Keyword in context) problem with abstract data types and implicit invocation styles to implement solutions. (08 Marks)
 b. Explain the advantages and disadvantages of pipes and filters in architectural styles. (08 Marks)
 c. Define architectural styles. Mention any four commonly used styles. (04 Marks)
- 3 a. Explain the quality attribute scenarios for system quality attributes. (07 Marks)
 b. Explain availability. Explain the general scenario for availability. (07 Marks)
 c. Explain Testability tactics and write a brief note on them. (06 Marks)
- 4 a. Discuss the steps involved in the implementation of pipes and filters architecture. (08 Marks)
 b. Define blackboard architectural pattern. Explain the implantation of the blackboard pattern using example. (08 Marks)
 c. What are the benefits of Layered patterns? (04 Marks)

PART – B

- 5 a. What is model-view architectural pattern? With an example illustration, write its structure and implementation over a scenario. (08 Marks)
 b. Define the Broker architectural pattern explain the types of participating components which comprises it. (08 Marks)
 c. List the benefits of presentation abstraction control (PAC) pattern. (04 Marks)
- 6 a. Explain in brief the components comprising the structure of microkernel architectural pattern. (10 Marks)
 b. Explain the reflection architecture pattern and its known uses. (10 Marks)
- 7 a. Explain the five steps implementation of Master – Slave pattern. (10 Marks)
 b. Define proxy design pattern. List the known uses and liabilities of the proxy design pattern. (10 Marks)
- 8 a. Explain the evolutionary delivery life cycle model with a diagram. (06 Marks)
 b. What are the steps in ADD? (06 Marks)
 c. Explain views with reference to concept choosing the view and its documentation. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.