

USN

--	--	--	--	--	--	--	--	--	--

10CS/IS81

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021
Software Architecture

Time: 3 hrs.

Max. Marks:100

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

PART - A

- 1 a. Explain how the software architectures affect the factors of influence. Explain ABC. (08 Marks)
- b. Explain the technical importance of software architectures. Further elaborate on the fact that architecture is the vehicle for stakeholder communication. (07 Marks)
- c. What is an allocation structure as applied to software architecture? Explain the three allocation structures in practice. (05 Marks)
- 2 a. Define the following with an example:
 (i) Controlled variable (ii) Set point (iii) Open loop system
 (iv) Feedback control system (v) Feed forward control system (10 Marks)
- b. State the problem of Key Word In Context (KWIC). Propose implicit invocation and pipes and filters style to implement a solution for the same. (10 Marks)
- 3 a. Define a quality attribute scenario. List the parts of such a scenario. Differentiate between availability and modifiability scenarios. (08 Marks)
- b. Explain how faults are detected and prevented. (08 Marks)
- c. Write short notes on Design Time Tactics. (04 Marks)
- 4 a. With a neat diagram, explain the CRC cards for the pipes of filters architecture pattern. List the components of a pipe and filters architectural pattern. (08 Marks)
- b. Explain the forces that influence the solutions to problems based on blackboard pattern. (07 Marks)
- c. Write a short note on HEARSAY-II system. (05 Marks)

PART - B

- 5 a. What is the need of proxies and bridge components in a broker system? Explain. (06 Marks)
- b. With a suitable diagram, explain the possible dynamic behaviour of MVC pattern. (09 Marks)
- c. What are limitations of PAC pattern? (05 Marks)
- 6 a. List and explain the participating components of microkernel system. (10 Marks)
- b. What are the uses of reflection pattern? (10 Marks)
- 7 a. List and explain the benefits of Master slave design pattern. (06 Marks)
- b. List and explain the steps to implement a whole-part structure. (08 Marks)
- c. With a neat diagram, explain the typical dynamic scenario of proxy structure. (06 Marks)
- 8 a. List the steps of ADD. (04 Marks)
- b. Write a note on creating a skeletal system. (06 Marks)
- c. What are the uses of architectural documentation? Bring out the concept of view as applied to architectural documentation. (10 Marks)

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.