2018

MCA 1st Semester Examination

SOFTWARE ARCHITECTURE

PAPER—MCA-105

Full Marks : 100

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group—A

Answer any *five* questions : 5×4

1. Briefly explain the working of architecture business cycle.

2. Explain the control loop solution for a mobile robot.

3. What is quality attribute scenario ? List the parts of scenario with an example.

4. Give the structure of blackboard with CRC cards.

5. Depict the dynamic behavior of MVC, with any one scenario.

6. What are the three steps for choosing views for a project ?

7. Explain the three allocation structures as applied to software architecture.

Group—B

Answer any *two* questions : 2×15

8. (a) What is software architecture ? Why is software architecture so important ? 2+3

   (b) Enumerate and explain in detail the different groups, software architecture structure are categorized into with the help of appropriate pictorial descriptions. 10

9. (a) Explain the process control paradigm with various process control definitions. 5

(b) State the problem of KWIC. Propose implicit invocation and pipes & filters style to implement a solution for the same. 10

10. (a) Classify Security Tactics. What are the different tactics for registing attacks ? 10

(b) Distinguish between availability scenario and modifiability scenarios. 5

Group—C

Answer any *one* questions : 1×20

11. (a) Discuss the 3-part schema which underlies the layer architectural patterns, with reference to networking protocols. 15

(b) Briefly explain the benefits offered by the pipes & filters pattern. 5

12. (a) What do you mean by broker architecture ? What are the steps involved in implementing distributed broker architecture pattern ? What is the necessity of proxies and bridge components in a broker system. 3+7+5

(b) Write a short note on the design time tactics. 5

[*Internal Assessment : 30*]

———