Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 13286

M.E./M.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Elective

Computer Science and Engineering

CP 7028 — ENTERPRISE APPLICATION INTEGRATION

(Common to M.E. Software Engineering, M.E. Computer Science and Engineering (With specialization in Networks) and M.Tech. Information Technology)

(Regulation 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is a legacy system?

2. What is Enterprise Information System?

3. What are design patterns?

4. Define the term : Data integrity.

5. What is a web service?

6. Define interoperability.

7. What is message oriented middleware?

8. What is Java IDL?

9. Define a federated enterprise service bus (ESB).

10. What is service-oriented architecture?

PART B — (5 × 16 = 80 marks)

11. (a) What is enterprise application integration (EAI)? Explain the components of EAI with a neat diagram. (16)

Or

(b) (i) Explain with an example how enterprise applications can be used in platforms for new cross-functional services. (8)

(ii) Explain the technologies involved in data level enterprise application integration. (8)

12. (a) What is an enterprise integration pattern? Explain with examples the process of designing with enterprise integration patterns. (16)

Or

(b) (i) Explain with diagrammatic illustration how publish/subscribe pattern is modeled. (8)

(ii) What is point-to-point messaging? Explain with diagrammatic illustration. (4)

(iii) What is heterogeneous data integration? Explain with an example. (4)

13. (a) (i) What is business process integration? Discuss briefly. (8)

(ii) How business process execution language (BPEL) is used to specify business collaborations and to implement them as composite web services. Explain with an example. (8)

Or

(b) Using business process modelling notation (BPMN), develop a model for an insurance claim registration system presented below:

When a claim is received, it is first checked whether the claimant has a valid insurance policy. If not, the claimant is informed that the claim is rejected due to an invalid policy. Otherwise, the severity of the claim is evaluated. Based on the outcome (simple or complex claims), relevant forms are sent to the claimant. Once the forms are returned, they are checked for completeness. If the forms are complete, the claim is registered in the Claims Management system and the evaluation of the claim may start. Otherwise, the claimant is asked to update the forms. Upon reception of the updated forms, they are checked again. (16)

14. (a) Explain synchronous and asynchronous messaging with example and diagrammatic illustrations. (16)

Or

(b) Explain the working principle of Java Messaging Services (JMS). (16)

15. (a) What is an enterprise service bus (ESB)? Explain the key characteristics of an ESB. (16)

Or

(b) Present an ESB centric view of the service oriented architecture (SOA) foundation logical model. Discuss its applications. (16)
