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B.TECH DEGREE EXAMINATIONS: APRIL 2018

(Regulation 2014)

Eighth Semester

INFORMATION TECHNOLOGY

U14ITTE32**:** Building Enterprise Applications

COURSE OUTCOMES

CO1:   Interpret the role of various phases involved in ERP application

CO2:   Explain the functionality of various layers associated with enterprise application

CO3:   Demonstrate the need of various testing techniques involved in enterprise applications

CO4:   Identify the role of SOA in enterprise

CO5:   Explain the concepts & technology for service orchestration and the guidelines to integrate a Business Process Management Solution in an Enterprise SOA

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1.   Match list 1 (architecture pattern) with list 2 (solution) and select the correct answer using the   CO4   [K$_2$] codes below the list:

List I	List II
A. Model – View - Controller	i. Dynamic change of structure and behavior
B. Presentation – Abstraction – Control	ii. Problem solving agents
C. Reflection	iii. Separate the application
D. Blackboard	iv. Tree structure

	A	B	C	D
a)	iii	iv	i	ii
b)	ii	iv	i	iii
c)	ii	iv	iii	i
d)	iii	ii	iv	i

2. The high-level design is present in   CO2 [K₂]

   a) System Architecture Document   b) Design document

   c) SRS   d) Use Case document

3. The following are the challenges faced by todays enterprise applications   CO1 [K₂]

   1. Automation

   2. Security

   3. Integration

   4. Technology Selection

   a) 1, 3, 4   b) 1, 2, 3

   c) 1, 2, 3, 4   d) 2, 3, 4

4. The following are the components of an infrastructure services layer   CO2 [K₂]

   1. Logging

   2. Exception Handling

   3. Session Management

   4. Association

   a) 1, 3, 4   b) 1, 2, 3

   c) 1, 2, 3, 4   d) 2, 3, 4

5. Assertion (A): Use Case diagrams represent the functional requirements view   CO1 [K₂]

   Reason (R): An actor represents a role

   a) Both A and R are Individually true and   b) Both A and R are Individually true but
      R is the correct explanation of A   R is not the correct explanation of A

   c) A is true but R is false   d) A is false but R is true

6. Unit Testing is done in   CO3 [K₂]

   a) Inception   b) Design

   c) Construction   d) Testing

7. Arrange the phases to develop the SOA layer for the enterprise: CO4 [K₂]

   1. SOA blueprint

   2. Service Orchestration

   3. Service Integration

   4. Service Enablement

   a) 1-2-3-4   b) 2-4-1-2

   c) 2-4-3-1   d) 1-4-3-2

8. Arrange the stages of enterprise application testing CO3 [K₂]
    1. Test planning
    2. Test strategy
    3. Test analysis
    4. Test execution
    a) 1-3-2-4 b) 2-3-4-1
    c) 2-1-4-3 d) 3-4-2-1

9. Assertion (A): Service consumers look up the service registry to know what services are available. CO4 [K₂]

   Reason (R): Service registry is a directory that contains information about available services.
    a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
    c) A is true but R is false d) A is false but R is true

10. Match list 1 (terms) with list 2 (purpose) and select the correct answer using the codes below the list: CO5 [K₂]

A. AJAX	1. Software application delivery model
B. REST	2. Data interchange format
C. JSON	3. Set of Web development techniques
D. SaaS	4. Communication interface

    a) A-3 B-4 C-2 D-1 b) A-2 B-1 C-4 D-3
    c) A-2 B-3 C-1 D-4 d) A-3 B-1 C-4 D-2

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. How will you measure the success of an enterprise application? CO1 [K₂]
12. What are the ways to validate the requirements? CO1 [K₂]
13. Mention the types of integration. CO2 [K₂]
14. Discuss the advantages of virtualization. CO2 [K₂]
15. What are the objectives of code review? CO3 [K₂]
16. Compare white-box and black-box testing. CO3 [K₂]
17. List out the key components of SOA. CO4 [K₂]

18.	Mention the principles in the development of Object oriented applications.	CO4	[K$_2$]
19.	What is WSDL?	CO5	[K$_2$]
20.	Differentiate between authorization and authentication.	CO5	[K$_2$]

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

| 21. | Explain the various non-functional requirements for an Enterprise Application. | CO1 | [K$_2$] |
| 22. | Describe the design of a presentation layer with its supported technologies. | CO2 | [K$_2$] |

23. Write notes on the following: CO3   [K$_2$]

     i.   Static Code Analysis   (7)

     ii. Dynamic Code Analysis   (7)

24.	Discuss the importance of various testing performed at different levels in an Enterprise Application Environment.	CO3	[K$_2$]
25.	Describe the Strawman architecture for an enterprise wide SOA.	CO5	[K$_2$]
26.	Explain the design of data services and client services in an enterprise SOA.	CO4	[K$_2$]
27.	Discuss the high level architecture of an enterprise application.	CO5	[K$_2$]

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