

# LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL

(An Autonomous and Re-accredited with 'A' Grade by NAAC)

MCA Examination, January 2013

Subject : Middleware Technologies

Note : Answer all questions.

Each question carry equal marks

5 X 20 = 100 Marks

1. A) Differentiate all the types of middleware servers. 10  
B) Explain SOA in detail? 10  
(OR)
2. A) Explain structure of SOAP messages with its advantages. 10  
B) Differences between structured and unstructured Peer-to-Peer systems. 10  
(OR)
3. A) Explain flow of requests and responses in EJB architecture. 10  
B) Explain differences between Session Bean and Entity Bean. 10  
(OR)
4. A) Write short note on different transactional attributes in EJBs. 10  
B) Explain list of call back methods and their purposes in CMP bean. 10  
(OR)
5. A) Explain Persistence-management with EJBs. 12  
B) Explain different methods of Container-Managed-Persistence bean. 8  
(OR)
6. A) Write are the new features of EJB 3.1 15  
B) Write general syntax for Home and Remote Interfaces using EJB. 5
7. A) Explain Net working model of CORBA. 10  
B) Short note on CORBA IDL. 10  
(OR)
8. A) Explain COM data types. 10  
B) How features of CORBA and COM can be compared. 10
9. A) Write a program to find factorial of a number using RMI. 10  
B) Explain fundamentals of distributed object system. 10  
(OR)
10. A) What are the main components of .Net 10  
B) Explain .Net remoting. 10

**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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MCA Examination, January 2013

**Subject : Mobile Computing**  
**Sub. Code : MCA11509**

**Exam Time : 3 hrs**  
**Max. Marks : 100**

**Answer the following questions**

**5 x 20M = 100M**

**UNIT-I**

1. a) Define modulation? Explain MSK modulation with a neat diagram? 8M  
 b) Define spread spectrum? Explain about DSSS and FHSS. 10M  
 c) What are the different ranges of signal propagation? Draw a neat diagram. 2M
- (OR)**
2. a) What is CDMA? Explain its features. 10M  
 b) Explain the various signal propagation effects with neat diagrams. 8M  
 c) Write short notes on hidden and exposed terminals? 2M

**UNIT-II**

3. a) Explain the GSM System Architecture? 15M  
 b) Explain the handover scenario in GSM? 5M
- (OR)**
4. a) Write short notes on i) DECT ii) TETRA 10M  
 b) Give a brief description of the following in satellite systems 10M  
 (i) Routing (ii) Localization

**UNIT-III**

5. a) Differentiate between infrared Vs. Radio Transmission and Infrastructure Vs. Adhoc networks. 10M  
 b) Write short notes on Bluetooth 10M
- (OR)**
6. a) Explain the basic DFWMAC-DCF using CSMA/CA protocol? 10M  
 b) What are the different types of handovers supported by WATM explain? 10M

**UNIT-IV**

7. Explain the following concepts in detail 20M  
 (i) Agent Discovery (ii) Tunneling  
 (iii) Registration (iv) Encapsulation
- (OR)**
8. a) Write short notes on 15M  
 (i) Traditional TCP (ii) Snooping TCP (iii) Indirect TCP  
 b) Differentiate between ADHOC networks and fixed networks? 5M

**UNIT-V**

9. a) Explain the features of Windows CE? 10M  
 b) Explain WAP Architecture? 10M
- (OR)**
10. a) Write a short note on WML Script? 10M  
 b) Explain the following 10M  
 (i) Wireless Session Protocol (ii) Wireless Transaction Protocol



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**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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**MCA Examination, January 2013**

**Subject : E-Commerce**  
**Sub. Code : MCA11504**

**Exam Time : 3 hrs**  
**Max. Marks : 100**

**Answer the following questions**

**5 x 20M = 100M**

**UNIT-I**

1. Explain the framework of E-Commerce with neat diagram.
- (OR)
2. Explain the consumer oriented applications of E-Commerce

**UNIT-II**

3. Explain the various types of electronic payment systems relevant to interest.
- (OR)
4. What are the Electronic payment associated risks? How do you overcome these risks? Explain.

**UNIT-III**

5. a) What is EDI. List the benefits of EDI.  
b) Give a note on security and privacy issues of EDI.
- (OR)
6. a) What is the difference between inter-organizational E-Commerce and Intra-Organizational E-Commerce.  
b) What are the issues involved in EDI implementation.

**UNIT-IV**

7. Explain the scope of advertising and marketing on the internet.
- (OR)
8. What are the various dimensions of internal electronic commerce system? Explain.

**UNIT-V**

9. Explain the key multimedia concepts in E-Commerce.
- (OR)
10. What are the emerging tools in consumer data interface. Explain.

**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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MCA Examination, January 2013

**Subject : Object Oriented System Development**  
**Sub. Code : MCA11503**

**Exam Time : 3 hrs**  
**Max. Marks : 100**

**Answer the following questions**

**5 x 20M = 100M**

**UNIT – I**

1. (a) Explain about packages and instances.  
(b) Discuss about interfaces, types and roles.

**OR**

2. (a) Explain about Relationships and interfaces  
(b) Discuss about object diagrams and class diagrams with examples.

**UNIT – II**

3. (a) Explain about active classes, processes and threads.  
(b) Discuss about interaction diagrams with suitable examples.

**OR**

4. (a) Explain about processes and threads.  
(b) Explain about the characteristics of interaction diagrams and activity diagrams.

**UNIT – III**

5. What are the collaborations? Discuss the structural and behavioral aspects in detail.

**OR**

6. (a) Explain about systems and models  
(b) Explain about deployment collaborations.

**UNIT – IV**

7. Explain about unified software **development** process in detail.

**OR**

8. (a) Explain about centric process.  
(b) Explain about a use-case drive process.

**UNIT – V**

9. How use cases are useful in capturing requirements. Explain with suitable examples.

**OR**

10. Explain the workflow of requirements capture in detail.



**Subject : Mobile Computing**  
**Sub. Code : MCA11509**

**Exam Time : 3 hrs**

**Max. Marks : 100**

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1. a) Define modulation? Explain MSK modulation with a neat diagram? 8M  
b) Define spread spectrum? Explain about DSSS and FHSS. 10M  
c) What are the different ranges of signal propagation? Draw a neat diagram. 2M
2. a) What is CDMA? Explain its features. 10M  
b) Explain the various signal propagation effects with neat diagrams. 8M  
c) Write short notes on hidden and exposed terminals? 2M

**(OR)**

**UNIT-II**

3. a) Explain the GSM System Architecture? 15M  
b) Explain the handover scenario in GSM? 5M
4. a) Write short notes on i) DECT ii) TETRA 10M  
b) Give a brief description of the following in satellite systems 10M  
(i) Routing (ii) Localization

**(OR)**

**UNIT-III**

5. a) Differentiate between infrared Vs. Radio Transmission and Infrastructure Vs. Adhoc networks. 10M  
b) Write short notes on Bluetooth 10M
6. a) Explain the basic DFWMAC-DCF using CSMA/CA protocol? 10M  
b) What are the different types of handovers supported by WATM explain? 10M

**(OR)**

**UNIT-IV**

7. Explain the following concepts in detail 20M  
(i) Agent Discovery (ii) Tunneling  
(iii) Registration (iv) Encapsulation
8. a) Write short notes on 15M  
(i) Traditional TCP (ii) Snooping TCP (iii) Indirect TCP  
b) Differentiate between ADHOC networks and fixed networks? 5M

**(OR)**

**UNIT-V**

9. a) Explain the features of Windows CE? 10M  
b) Explain WAP Architecture? 10M
10. a) Write a short note on WML Script? 10M  
b) Explain the following 10M  
(i) Wireless Session Protocol (ii) Wireless Transaction Protocol

**(OR)**

**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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MCA Examination, December 2013

**Subject : Object Oriented System Development**  
**Sub. Code : MCA12503**

**Exam Time : 3 hrs**  
**Max. Marks : 100**

**Answer the following questions**

**5 x 20M = 100M**

1. Explain about building blocks of UML. (OR)
2. a) Briefly explain about modeling.  
b) Discuss about interfaces, types and roles.
3. a) Explain about state machine with example.  
b) Write short notes on activity diagram. (OR)
4. a) Explain about use case diagram with examples.  
b) Write notes on Events and Signals.
5. a) Write about deployment diagram.  
b) Explain about patterns and Frame Works. (OR)
6. a) Write notes on systems and Models.  
b) What are collaborations? Discuss the structural and behavioural aspects in detail.
7. a) Write notes on FOUR P's in the software development.  
b) Explain the Architecture Centric concept of the Unified Process. (OR)
8. Discuss the Unified Software Development Process (USDP) in detail with a neat diagram.
9. Explain the work flow of Requirements Capture in detail. (OR)
10. a) Discuss the workflows of testing in detail.  
b) Write about activities of implementation workflow.

**LOYOLA ACADEMY DEGREE & P.G. COLLEGE, ALWAL, SECUNDERABAD-10**  
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**III YEAR – I SEMESTER, MCA Examinations, July, 2013**

Subject : Object Oriented System Development  
Sub. Code : MCA 12503  
Date : 10-07-2013

Duration : 3 hrs.  
Max. Marks : 100

Note: Answer any ONE from each unit. All Questions carry equal marks: [5 x 20 = 100 M]

**UNIT – I**

1. Explain the role of various diagrams in UML with neat sketches.

**[OR]**

2. [a] Explain about Advanced Relationships.  
[b] Discuss about class diagrams and object diagrams with examples.

**UNIT – II**

3. [a] Draw a state chart diagram for answering this examination paper.  
[b] Explain about state machines with a suitable diagram.

**[OR]**

4. [a] Explain about active classes, processes and threads.  
[b] Explain about events and signals.

**UNIT – III**

5. [a] Explain about patterns and frameworks.  
[b] What is the role of deployment diagram in UML? Explain

**[OR]**

6. [a] Explain about systems and models.  
[b] Discuss about Artifacts.

**UNIT – IV**

7. [a] Write notes on four P's in the software development.  
[b] Explain the architecture centric concept of the unified process.

**[OR]**

8. Explain about use-case driven process with architecture.

**UNIT – V**

9. [a] Explain the activities of the implementation workflow.  
[b] What is the purpose of design workflow?

**[OR]**

10. [a] Explain about implementation.  
[b] Explain about testing.



**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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MCA Examination, December 2013

Subject : Mobile Computing  
Sub. Code : MCA12509

Exam Time : 3 hrs  
Max. Marks : 100

Answer the following questions

5 x 20M = 100M

1. a) Define the terms user mobility and device portability? 2M  
b) Explain in detail various applications of mobile computing? 8M  
c) What is multiplexing? What are the different types of multiplexing techniques, explain in detail with suitable diagrams? 10M
- (OR)
2. a) Explain in detail about cellular systems? 10M  
b) Define MAC? Compare the various medium access control methods. 10M
3. a) Explain the various services provided by GSM? 10M  
b) What is handover? Explain how handover takes place in satellite systems. 10M
- (OR)
4. a) Write short notes on following terms (i) DAB (ii) DVB 10M  
b) Explain the various types of satellites available in detail. 10M
5. a) Define WLAN's? What are advantages and disadvantages of WLAN's? 10M  
b) Write short notes on HIPERLAN? 10M
- (OR)
6. a) Explain 802.11 CSMA/CA protocol? 10M  
b) Explain the reference model of WATM? 10M
7. a) Explain with neat diagram about IP packet delivery in mobile IP? 8M  
b) What is reverse tunneling? Explain the need of it? 8M  
c) What are the advantages and disadvantages of mobile TCP? 4M
- (OR)
8. a) Explain about mobile-ADHOC networks in detail. 10M  
b) Explain DHCP? 10M
9. a) Give a brief description on CODA file system? 4M  
b) Explain WAP architecture? 10M  
c) Write short note on (i) PALM os (ii) JAVA CARD 6M
- (OR)
10. a) Explain system architecture of Symbian OS? 10M  
b) Explain about WWW? 10M



**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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MCA Examination, December 2013

**Subject : Electronic Commerce**  
**Sub. Code : MCA12504**

**Exam Time : 3 hrs**  
**Max. Marks : 100**

**Answer the following questions**

**5 x 20M = 100M**

1. Draw the frame of e-commerce. Explain each component of it.  
(OR)
2. Discuss the mercantile models of E-Commerce from the consumer perspective.
3. a) Give a brief note on Smart card electronic payment system.  
b) Explain the process involved in credit card based electronic system.  
(OR)
4. What are risks involved in the various types of electronic payment systems relevant to business.
5. a) Compare traditional EDI with present EDI.  
b) What are the applications of Intra-Organizational E-Commerce?  
(OR)
6. Explain various EDI applications in modern business environment.
7. Explain the various types of digital documents in corporate digital library.  
(OR)
8. What is corporate digital library? Explain the various issues involved behind document infrastructure.
9. What are the search and resource discovery paradigms? Explain.  
(OR)
10. How digital video helps to do e-commerce? Develop a case study on this aspect.

**LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL**  
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**MCA Examination, December 2013**

**Subject : Object Oriented System Development**  
**Sub. Code : MCA12503**

**Exam Time : 3 hrs**  
**Max. Marks : 100**  
**5 x 20M = 100M**

**Answer the following questions**

1. Explain about building blocks of UML.  
(OR)
2. a) Briefly explain about modeling.  
b) Discuss about interfaces, types and roles.
3. a) Explain about state machine with example.  
b) Write short notes on activity diagram.  
(OR)
4. a) Explain about use case diagram with examples.  
b) Write notes on Events and Signals.
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7. a) Write notes on FOUR P's in the software development.  
b) Explain the Architecture Centric concept of the Unified Process.  
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8. Discuss the Unified Software Development Process (USDP) in detail with a neat diagram.
9. Explain the work flow of Requirements Capture in detail.  
(OR)
10. a) Discuss the workflows of testing in detail.  
b) Write about activities of implementation workflow.



III YEAR – I SEMESTER, MCA Examinations, July, 2013

Subject : Object Oriented System Development  
Sub. Code : MCA 12503  
Date : 10-07-2013

Duration : 3 hrs.  
Max. Marks : 100

Note: Answer any ONE from each unit. All Questions carry equal marks: [5 x 20 = 100 M]

UNIT – I

1. Explain the role of various diagrams in UML with neat sketches.

[OR]

2. [a] Explain about Advanced Relationships.  
[b] Discuss about class diagrams and object diagrams with examples.

UNIT – II

3. [a] Draw a state chart diagram for answering this examination paper.  
[b] Explain about state machines with a suitable diagram.

[OR]

4. [a] Explain about active classes, processes and threads.  
[b] Explain about events and signals.

UNIT – III

5. [a] Explain about patterns and frameworks.  
[b] What is the role of deployment diagram in UML? Explain

[OR]

6. [a] Explain about systems and models.  
[b] Discuss about Artifacts.

UNIT – IV

7. [a] Write notes on four P's in the software development.  
[b] Explain the architecture centric concept of the unified process.

[OR]

8. Explain about use-case driven process with architecture.

UNIT – V

9. [a] Explain the activities of the implementation workflow.  
[b] What is the purpose of design workflow?

[OR]

10. [a] Explain about implementation.  
[b] Explain about testing.

**LOYOLA ACADEMY DEGREE & P.G. COLLEGE**  
**MID-SEM – I**

**Class : DMCA**  
**Subject : MWT**  
**Date : 18-10-2012**

**Time : 2 Hours**  
**Max. Marks : 28**

**Answer any four of the following**

**4 x 7M = 28M**

1. a) What are the services provided by a server? 4 M  
b) Explain different types of servers? 3 M
2. a) Differentiate between Remote Procedure Call and Message Oriented Middleware. 4 M  
b) Write short notes on Peer-to-Peer network 3 M
3. What is middleware? Differentiate between General Middleware and service specific middleware? 7 M
4. Explain Life Cycle of a servlet? 7 M
5. Explain session tracking in servlets? 7 M
6. Explain different types of JSP elements? 7 M



**LOYOLA ACADEMY DEGREE & P.G. COLLEGE**  
**MID-SEM – I**

**Class : DMCA**  
**Subject : Software Testing**  
**Date : 19-10-2012**

**Time : 2 Hours**  
**Max. Marks : 28**

**Answer any four of the following**

**4 x 7M = 28M**

1. a) Explain about Boundary value testing?  
b) Write the worst-case test cases for triangle problem?
2. a) Explain decision table based testing?  
b) Write decision table test cases with rule count?
3. a) Write the guidelines of functional testing?  
b) Write different structural test coverage metrics?
4. Write weak, strong normal and Robust equivalence class test cases for next date problem?
5. Explain McCabe's Basis path Algorithm?
6. a) Discuss levels of testing?  
b) Discuss testing life cycle?

**LOYOLA ACADEMY DEGREE & P.G. COLLEGE**  
**MID-SEM – I**

Class : DMCA  
Subject : OOSD  
Date : 18-10-2012

Time : 2 Hours  
Max. Marks : 28

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Answer any four of the following

4 x 7M = 28M

1. Explain about the building blocks of UML
2. Discuss about advanced relationship in structural modeling.
3. Define class diagram. Explain how to model a class diagram with examples.
4. What is dependency relationship? Briefly describe the various stereotypes that apply to dependency relationships among classes and objects in class diagram.
5. What are interactions? Explain in detail about various concepts involved in it.
6. Explain the concepts of use cases and use case diagrams in detail with suitable examples.