

Reg. No. :

D 1109

Q.P. Code : [07 DMCA 06]

(For the candidates admitted from 2007 onwards)

M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

OOPS USING C++ AND JAVA PROGRAMMING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

Each questions carries 20 marks.

- (a) Illustrate the benefits of object oriented programming approach over the traditional approach. (10)

(b) Differentiate between data encapsulation and data abstraction. (4)

(c) Describe the process of finding class and objects with suitable examples. (6)
- (a) Explain constructor and destructor functions with examples. (8)

(b) What is meant by operator overloading? Write a C++ program for overloading the binary operator '+'. (8)

(c) Explain copy constructor with an example. (4)

- (a) Explain multiple and multi-level inheritance with suitable examples. (8)

(b) Differentiate inheritance from polymorphism. (4)

(c) Explain dynamic binding with an example. (8)
- (a) What is virtual function? Explain. (8)

(b) Describe the concept of polymorphism, with a typical program. (8)

(c) What is meant by exception handling? (4)
- (a) Compare and contrast Java with C++. (10)

(b) Write a Java program for explaining the methods overloading concept. (10)
- (a) Briefly explain the applications of wrapper classes. (5)

(b) Explain in detail about AWT controls in Java. (15)
- (a) Explain the states of a thread during its life cycle with neat state transition diagram. (10)

(b) Explain how to create threads in Java with an example. (10)
- (a) Explain about try and catch in exception handling. (8)

(b) Explain applet with an example program. (8)

(c) Mention the purpose of JDBC. What are its merits? _____ (4)

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D 1110

Q.P. Code : [07 DMCA 07]

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M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

COMPUTER NETWORKS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

Each question carries 20 marks.

(5 × 20 = 100)

1. (a) List out the various applications of computer networks. (10)
- (b) Compare OSI and TCP/IP reference models. (10)
2. (a) What is the principle difference between connectionless communication and connection oriented communication? (10)
- (b) Define peer to peer network, unicasting, multicasting and distributed networks. (10)
3. Discuss various communication media in detail. (20)

4. (a) Explain CRC error detection code with suitable example. (10)
- (b) Describe Differential Manchester encoding technique with an example. (10)
5. (a) Explain CSMA / CD with binary exponential back-off. (10)
- (b) What is character stuffing? Explain with an example. (10)
6. (a) Explain distance vector routing algorithm with an example. (10)
- (b) Discuss various functions of session layer. (5)
- (c) What is stop-and-wait protocol? Give its advantages. (5)
7. (a) Write short notes on Quality of service. (10)
- (b) Discuss any one congestion control techniques in detail. (10)
8. Write short notes on following :
 - (a) Session layer (5)
 - (b) cryptography (5)
 - (c) IP address (5)
 - (d) Quality factors of software (5)

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Q.P. Code : [07 DMCA 08]

D 1111

(For the candidates admitted from 2007 onwards)

M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

SOFTWARE ENGINEERING

Time : Three hours Maximum : 100 marks *

Answer any FIVE questions.

Each question carries 20 marks.
(5 × 20 = 100)

1. (a) Write short notes software crises and software myths. (10)
(b) Discuss the advantages of layered approach in software development process. (10)
2. Explain different types of data modeling. Discuss any one of the data modeling with bank database as example. (20)
3. Discuss software project estimation techniques in detail. (20)

4. (a) Draw the dataflow diagram for Hospital management system. (10)
(b) Explain spiral model for software development process. Give its various advantages and disadvantages. (10)
5. (a) Explain various design notations with an example. (10)
(b) Define object and class. How object are identified in an object oriented design process. (10)
6. (a) Write short notes on software standards. (10)
(b) How control structure testing is effectively handled in testing phase. Give an example. (10)
7. (a) Describe user interface design in detail. (10)
(b) Write short notes on software security and software availability. (10)
8. Write short notes on following :
 - (a) Critical systems (5)
 - (b) Software re-engineering (5)
 - (c) CASE tools (5)
 - (d) Quality factors of software (5)

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Reg. No. :

D 1112 Q.P. Code : [07 DMCA 09]

(For the candidates admitted from 2007 onwards)

M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

VISUAL PROGRAMMING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

Each question carries 20 marks.
(5 × 20 = 100)

1. (a) State and explain the various data types and branching structures supported by Visual Basic. (10)
(b) List and explain the intrinsic controls in VB NET. (10)
2. (a) Write a VB program to find the average of marks and print the grade for the students, given the student number, name and marks for 5 subjects. If average marks >=60 print the grade as "A" and if the average >=50 and <60 print the grade as "B" for the rest of the cases print the grade as "C". (10)
(b) Write about the graphics methods in VB. (10)

3. What is a form? List and explain the properties, events and methods used for describing any objects or form. (20)
4. (a) List the importance of Naming controls in VB. (10)
(b) What are the different types of dialog boxes supported by VB? Explain. (10)
5. (a) Write detailed notes on various types of file controls that can be used in VB. (10)
(b) Create an employee database and write a VB application to perform the operations such as addition, modification and deletion of records in the database. (10)
6. (a) How MFC creates threads? Explain. (10)
(b) What are the member functions of C Archive and C Dialog classes? Explain. (10)
7. (a) Compare and contrast SDI and MDI applications. (10)
(b) What is Document/View architecture? Explain how different views for a document are created. (10)
8. (a) Explain in detail the steps involved in building DAO application. (10)
(b) What is ODBC? Explain its advantages. (10)

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D 1113

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(For the candidates admitted from 2007 onwards)

M.C.A DEGREE EXAMINATION, DECEMBER 2010.

Elective : Second Year

E-COMMERCE

Time : Three hours

Maximum : 100 marks

(5 × 20 = 100)

Answer any FIVE questions.

Each question carry 20 marks.

1. (a) Explain in detail about the anatomy of e-commerce applications. (10)
(b) Write in detail why student to learn the e-commerce concept to all types of business systems? (10)
2. (a) Explain about WWW as architecture for e-commerce. (10)
(b) Explain in detail about various consumer oriented applications. (10)

3. (a) Write in detail about the technology behind web security and the web. (10)
(b) Outline the Mercantile model from the Merchant's perspective. (10)
4. (a) Explain about smart cards and electronic payment systems. (10)
(b) What is the risk in electronic payment system? Explain in detail. (10)
5. (a) What is Digital token based electronic payment system? Discuss in detail. (10)
(b) Discuss the various EDI applications in business. (10)
6. (a) Explain in detail about macro forces and internal commerce. (10)
(b) Briefly explain in detail about supply chain commerce system. (10)
7. (a) Explain the issues behind document infrastructure. (10)
(b) What is customization and internal commerce? Explain it. (10)

8. (a) How can we advertise on the Internet? Explain in detail. (10)
(b) Explain in detail about consumer data Internet emerging tools. (10)

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(For the candidates admitted from 2007 onwards)

M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Elective – CLIENT SERVER TECHNOLOGY

Time : Three hours

Maximum : 100 marks

(5 × 20 = 100 marks)

Answer any FIVE questions.

1. Describe the services of any five servers. (20)
2. (a) Describe the anatomy of a server program. (10)
(b) What does a server need from an operating system? Explain. (10)
3. (a) Discuss about Peer-to-Peer communications. (10)
(b) Compare MOM and RPC. (10)
4. (a) Explain the compound document framework. (10)
(b) Briefly discuss about component of Groupware. (10)

5. (a) Describe the OLE's constituent technologies. (10)
(b) Discuss about the distributed component object model (DCOM). (10)
6. (a) Explain stored procedure, triggers and rules. (10)
(b) Explain the uses of OLTP, DSS, EIS and data warehouse systems. (10)
7. (a) Describe any two SQL database server architectures. (10)
(b) Discuss the various elements of a data warehousing system. (10)
8. (a) Describe the 3-tier client/server web style. (10)
(b) Describe the CORBA object web. (10)

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M.C.A. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Elective – MULTIMEDIA AND ITS APPLICATIONS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions choosing atleast one full question from each unit.

UNIT I

1. (a) Describe various business applications for multimedia. (8)
- (b) Write brief note on MCI. (4)
- (c) Explain basic multimedia software tools. (8)

UNIT II

2. (a) Explain Icon-based and time-based multimedia authoring tools in detail. (10)
- (b) Write notes on Audio file formats. (5)
- (c) How to map text across platforms? Explain. (5)

3. (a) Explain in detail how to make, record and edit sounds in multimedia. (10)
- (b) Explain the various types of authoring tools for organizing multimedia elements and events. (10)

UNIT III

4. (a) Discuss about the different types of still images used in multimedia. (10)
- (b) Elaborate the role of animation in multimedia. (10)
5. (a) Compare bitmaps with vector-drawn objects. (5)
- (b) Explain the following video compression techniques :
- (i) JPEG (5)
 - (ii) MPEG (5)
 - (iii) DVI (5)

UNIT IV

6. (a) Explain the features of Internet useful in developing multimedia for www. (10)
- (b) Explain the role of plug-ins in detail. (10)

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7. (a) Explain the various Internet services available with their purpose. (10)
- (b) Describe essential multimedia tools for World Wide Web. (10)

UNIT V

8. (a) What is HDTV? Explain. (8)
- (b) Explain briefly on viewing condition. (4)
- (c) Describe knowledge based multimedia systems. (8)