

Reg. No. :

D 1678

Q.P. Code : [D 07 PCS 01]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

First Year

Computer Science

ADVANCED COMPUTER ARCHITECTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) What are the three architectural configurations of parallel computers? Explain. (12)
(b) Write short notes on Multiprogramming and Time sharing. (8)
2. (a) What is Temporal parallelism? Explain with example. (12)
(b) Write the main advantages and disadvantages of Data parallelism. (8)

3. (a) Discuss in detail about classification of Pipeline processors. (12)
(b) Write short note on Job sequencing and Collision prevention. (8)
4. (a) What are the two categories of the SIMD interconnection networks? Explain. (12)
(b) Describe about Mesh-connected Iliac Network. (8)
5. (a) Discuss the various abstract machine models for parallel computers. (14)
(b) Describe the odd-even transposition sort for a parallel computer. (6)
6. (a) What are the four Flynn's machine organization? Explain. (12)
(b) Describe the characteristics of Vector processing. (8)
7. (a) Discuss in detail about Loosely coupled multiprocessors. (12)
(b) Explain the Crossbar switch and Multiport memories. (8)
8. (a) Explain the Instruction execution cycle. (15)
(b) Write short note on delay due to Data Dependency. (5)

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Q.P. Code : [D 07 PCS 02]

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M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

First Year

Computer Science

COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Explain any two applications of computer graphics. (10)
- (b) Discuss about raster-scan and random-scan displays in detail. (10)
2. (a) Describe the DDA line drawing algorithm. (10)
- (b) Explain the pixel addressing scheme. (10)

3. (a) Elaborate the 2D-composite transformations. (10)
(b) Discuss any one of the method used for line clipping. (10)
4. (a) Describe the logical classification of input devices. (12)
(b) Explain the Sutherland-Hodzeman polygon clipping. (8)
5. (a) Discuss about parallel and perspective projection. (8)
(b) How are visible-surface detection algorithms classified? Explain depth-buffer method in detail. (12)
6. (a) Write a note on hypertext and hypermedia. (8)
(b) Explain the features of :
(i) Painting and drawing tools. (6)
(ii) 3D modeling and animation tools. (6)
7. (a) Give the important aspects associated with using sound for multimedia projects. (12)
(b) Describe the video recording formats. (8)
8. (a) Explain the principles of animation. (10)
(b) Discuss the issues related to making still images for multimedia projects. (10)

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D 1680

Q.P. Code : [D 07 PCS 03]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

First Year

Computer Science

SOFTWARE ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) What are the five generic process framework activities? Explain (7)
(b) Describe the incremental process models. (13)
2. Summarize the important aspects of agile process models. (20)
3. (a) Explain the content architecture. (7)
(b) Discuss the testing concept for web Apps. (13)
4. (a) Elaborate the web engineering process. (7)
(b) Describe the requirements analysis for webApps. (13)

5. (a) Write a note on risk identification. (7)
(b) With an example, explain process – based estimation. (13)
6. (a) Discuss about software configuration management. (7)
(b) Explain how to conduct formal technical reviews. (13)
7. (a) Give an overview of the z - specification language. (8)
(b) Describe the black – box, clear – box and state – box specifications. (12)
8. (a) Discuss about code and data restructuring aspects. (8)
(b) Explain the domain engineering process. (12)

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D 1681

Q.P. Code : [D 07 PCS 04]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

First Year

Computer Science

COMPUTER NETWORKS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Discuss in detail about an Ethernet technology. (15)
(b) How are networks interconnected to form an internet work? (5)
2. (a) How a host maps an IP address to the correct physical address? Discuss in detail. (12)
(b) Make a note on multicast addressing. (8)

3. (a) Discuss about routing IP datagrams in detail. (16)
(b) State and explain the difference between X.25 and Internet layering. (4)
4. (a) Explain in detail about flow control and retransmission in TCP. (12)
(b) How to sending and receiving data through a socket? Explain. (8)
5. (a) Explain about FTP process model with neat diagram. (10)
(b) List and explain the most commonly implemented TELNET options. (10)
6. Explain the following in detail :
 - (a) Reverse address resolution protocol (RARP) (10)
 - (b) Subnet addressing. (10)
7. (a) Discuss about error and control messages in detail. (10)
(b) Describe in detail about electronic mail. (10)
8. Explain the following protocols in detail.
 - (a) GGP (b) EGP
 - (c) RIP (d) OSPF. (4 × 5 = 20)

Reg. No. :

D 1682

Q.P. Code : [D 07 PC 505]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Computer Science

ADVANCED OPERATING SYSTEM

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Describe the features of time sharing, batch and real-time operating systems. (8)
(b) Explain the concept of threads in detail. (12)
2. (a) Discuss about message passing. (8)
(b) Describe the readers and writers problem. (12)

3. (a) Explain the implementation of RPC mechanism. (10)
(b) Describe the communication protocols for RPCs. (10)
4. (a) Discuss about file-sharing semantics and file-caching schemes in distributed systems. (12)
(b) Explain the issue of file tolerance in distributed systems. (8)
5. Describe the internal representation of UNIX files in detail. (20)
6. (a) Explain the process scheduling in the UNIX system. (10)
(b) Describe the algorithm for booting the UNIX system and for Init process. (10)
7. (a) Elaborate the architecture of the UNIX operating system. (12)
(b) Discuss about Kernel data structures. (8)
8. Write a note on the following :
(a) Process Hierarchies. (6)
(b) Process states. (7)
(c) Implementation of processes. (7)

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D 1683

Q.P. Code : [D 07 PCS 06]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Computer Science

INTERNET PROGRAMMING AND WEB DESIGN

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Explain the two methods of listing items. (10)
(b) Discuss the various elements to get inputs from the users in a form. (10)
2. (a) Discuss the HTML tags used for formatting text. (10)
(b) Explain about headings, horizontal rule, paragraph tags with example. (10)
3. (a) Explain the selection structure statements in Javascript with examples. (12)
(b) Explain recursion in Javascript with an example. (8)
4. (a) Distinguish between break and continue with labelled break and continue statements. (8)
(b) Write notes on program modules in Javascript. (12)
5. (a) How to pass an array argument to a function? Explain with an example. (10)
(b) Describe the use of string object in Javascript. (10)
6. (a) How to link a style sheet to a HTML document? Explain. (10)
(b) Explain about sorting and searching arrays with example. (10)
7. (a) Discuss the mouse events with suitable example in DHTML. (10)
(b) List and explain DHTML filters with their effects. (10)
8. (a) Describe about ASP objects in detail. (10)
(b) Write notes on server-side includes. (10)

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D 1684

Q.P. Code : [D 07 PCS 07]

(For the candidates admitted from 2007 onwards)

M.Sc., DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Computer Science

DATA MINING AND WAREHOUSING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) What are the techniques used for the visual presentation of data? Explain. (8)
(b) Discuss the implementation issues associated with data mining. (12)
2. Give an overview of statistical concepts that are the basis for data mining techniques. (20)
3. (a) How is the decision tree algorithm C4.5 better than ID3? Explain. (8)
(b) Describe the neural network-based classification algorithms. (12)

4. (a) Discuss about distance-based classification algorithms. (10)
(b) Explain how to generate rules without a decision tree or neural network. (10)
5. (a) What are data and task parallelism? (8)
(b) Describe the important aspects associated with hierarchical clustering algorithms. (12)
6. (a) Compare OLTP and OLAP systems. (7)
(b) Give a detailed note on data marks. (13)
7. Elaborate the crucial decisions to be taken while designing a data warehouse. (20)
8. Explain the applications of data warehousing and data mining in government sectors. (20)