

Reg. No. :

D 1674

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

(For candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2009.

First Year

Computer Science

COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Give the features of raster-scan displays. (8)
(b) List and explain the devices used for data input on graphics workstations. (12)
2. (a) What are the properties of circles and ellipses? (8)
(b) Describe the DDA line-drawing algorithm. (12)
3. (a) Explain any one of the line-clipping algorithms. (8)
(b) Discuss the important aspects related to graphical input functions. (12)

4. (a) Compare the parallel and perspective projection. (8)
(b) How are visible-surface detection algorithms classified? Explain any one in detail. (12)
5. (a) What are the basic stages in a multimedia project? Discuss. (8)
(b) Briefly explain the usage of various basic multimedia software tools. (12)
6. (a) Describe the applications of multimedia. (8)
(b) Discuss the issues related with using text in multimedia. (12)
7. (a) Explain how to make still images for multimedia project. (8)
(b) Describe the principles of animation and the techniques for using it in multimedia. (12)
8. Write a note on the following :
 - (a) Two-dimensional basic transformations. (6)
 - (b) Polygon representation. (8)
 - (c) Broadcast video standards. (6)

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

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M.Sc. DEGREE EXAMINATION, MAY 2009.

First Year

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Computer Science

ADVANCED COMPUTER ARCHITECTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Describe the basic uniprocessor architecture. (8)
- (b) How are parallel processing mechanisms categorized? Explain. (12)
2. (a) Explain the parallel processing applications related to predictive modeling and simulation. (8)
- (b) Describe the Feng's classification of computer systems. (12)

3. (a) Discuss about pipelining of processing elements. (12)

(b) State the difficulties and problems in pipelining. (8)

4. (a) Explain the internal forwarding and register tagging techniques for enhancing the performance of computers with multiple execution pipelines. (12)

(b) Name the three classes of data-dependent hazards and briefly explain. (8)

5. (a) What are the principles of linear pipelining? Discuss. (8)

(b) Describe any two pipelined vector processing methods. (12)

6. (a) Discuss the important features of static and dynamic SIMD interconnection networks. (10)

(b) Explain the masking and data routing mechanism. (10)

7. (a) Describe the parallel algorithm for matrix multiplication operation. (10)

(b) Discuss issues associated with analysis of parallel algorithms. (10)

8. Write a note on the following :

(a) Tightly coupled multiprocessors. (7)

(b) Crossbar switch and multiport memories. (7)

(c) Multiprogramming and time sharing. (6)

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D 1675

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2009.

First Year

Computer Science

SOFTWARE ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) List the seven broad categories of computer software and briefly explain. (7)
(b) Describe any three agile process models. (13)
2. (a) What are the attributes of web-based systems and applications? (8)
(b) Explain the requirements analysis activities for web-based systems and applications. (12)
3. (a) Discuss the types of resources required to accomplish the software development. (8)
(b) Describe the empirical estimation models for computer software. (12)

4. (a) How is refinement accomplished as part of a box structure specification in clean room software engineering? (8)

(b) Explain the strategy and tactics of clean room design and testing. (12)

5. (a) Discuss the issues associated with component-based development. (13)

(b) Explain the economics of CBSE. (7)

6. (a) How do process models differ from one another? (7)

(b) Describe the evolutionary process models. (13)

7. Give an overview of quality management with respect to computer software. (20)

8. Write a note on the following :

(a) Object-oriented hypermedia design method. (10)

(b) Business process reengineering. (5)

(c) The ten commandments of formal methods. (5)

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D 1676

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2009.

First Year

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Computer Science

COMPUTER NETWORKS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Give an introduction to digital networks. (10)
- (b) Describe the internet working concept and architectural model. (10)
2. (a) Discuss the weakness in internet addressing. (8)
- (b) Explain the issues associated with address resolution protocol software. (12)

3. (a) How is mapping internet addresses to physical addresses implemented? (8)
- (b) Give an overview of domain name system. (12)
4. (a) Describe how routers forward IP datagrams and deliver them to their final destinations. (10)
- (b) Discuss a mechanism that internet routers and hosts use to communicate control or error information. (10)
5. (a) Explain the features of interior gateway protocol. (8)
- (b) Describe the organization of an IP routing table and the definitions of data structures that implement it. (12)
6. (a) Discuss about UDP ports and demultiplexing. (8)
- (b) Explain the important aspects related to data structures and input processing with respect to TCP. (12)
7. (a) Describe the feature of TELNET protocol. (8)
- (b) Discuss the electronic mail system. (12)

8. Write a note on the following:
- (a) Adaptive retransmission with respect to TCP (6)
- (b) Socket-level interface (7)
- (c) X.25 networks. (7)