Reg. No. : .....

D 2670 Q.P. Code : [D 07 PCS 01]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, JUNE 2008.

First Year

Computer Science

ADVANCED COMPUTER ARCHITECTURE

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Discuss the trends towards parallel processing. (8)

(b) Explain the basic architectural features of pipeline and array computers. (12)

2. (a) What are known as temporal parallelism and data parallelism? (10)

(b) Give a comparison of temporal and data parallel processing. (10)

3. (a) State the principles of linear pipelining. (8)

(b) How are pipeline processors classified, according to the levels of processing? Explain. (12)

4. (a) Describe the SIMD computer organizations. (10)

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

5. (a) Explain the parallel algorithm for matrix multiplication operation. (10)

(b) Describe any one of the parallel-sorting alogrithm. (10)

6. (a) Explain the Flynn' s classification of various computer organizations. (10)

(b) Discuss the parallel processing applications related to engineering design and automation. (10)

7. (a) What are the characteristics of vector processing? Discuss. (8)

(b) Name the three types in the classification of pipelined vector processing methods and explain any two in detail. (12)

8. Write a note on the following :

(a) Shuffle-exchange and omega networks. (7)

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

(c) Hazard detection and resolution with respect to pipelined processors. (6)

8/06/08

Reg. No. : 07MCS0035

D 2671 **Q.P. Code : [D 07 PCS 02]**

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, JUNE 2008.

First Year

Computer Science

COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Give an overview of various video display systems. (12)

(b) Discuss about hard-copy devices. (8)

2. (a) Explain DDA line-drawing algorithm. (8)

(b) Describe the usage of different input devices in graphics systems. (12)

3. (a) Name the basic 2D geometric transformations and explain in detail. (10)

(b) What is referred to as 'Line clipping'? Explain any one of the algorithm used for line clipping. (10)

4. (a) Describe the technique used for interactive picture construction. (12)

(b) Explain the three kinds of input modes used in the graphical systems. (8)

5. (a) Explain the areas where multimedia is used. (8)

(b) Discuss the important aspects related to text in multimedia projects. (12)

6. (a) Describe the tools used for image-editing, sound-editing and 3D modeling in multimedia. (12)

(b) Give a comparison of MIDI and digital audio. (8)

7. (a) How does video work? Explain the features of various broadcast video standards. (12)

(b) Explain the issues related to making still images. (8)

8. Write a note on the following.

(a) Parallel and perspective projection. (6)

(b) Depth-buffer and depth-sorting visible – surface detection methods. (8)

(c) Cell animation and Computer animations. (6)

Reg. No. : 07MCS 0035

D 2673 **Q.P. Code : [D 07 PCS 04]**

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, JUNE 2008.

First Year

Computer Science

COMPUTER NETWORKS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Give an introduction to TCP/IP and Internet. (7)

(b) Explain the organization of a network interface layer. (13)

2. (a) How is mapping internet addresses to physical addresses implemented? (8)

(b) Describe the mechanism for determining an internet address at startup. (12)

3. (a) Explain the three primary classes of IP addresses. (5)

(b) Discuss on the domain name system in detail. (15)

4. (a) State the fundamental principle of connectionless delivery and discuss how it is provided by the internet protocol. (8)

(b) Describe how routers forward IP datagram and deliver them to their final destinations. (12)

5. (a) Explain how clients and servers use UDP. (7)

(b) Discuss the global organization of TCP software and describes the data structures TCP uses to manage information about connections. (13)

6. Explain the TCP-Finite state machine implementation in detail. (20)

7. Discuss about the file access and transfer protocols that are part of the TCP/IP protocol suite. (20)

8. Write a note on the following :

(a) IP Routing Table. (6)

(b) Socket-Level Interface. (8)

(c) Bootstrap protocol. (6)

Reg. No. : 07 MCS 0035

D 2672 **Q.P. Code : [D 07 PCS 03]**

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, JUNE 2008.

First Year

Computer Science

SOFTWARE ENGINEERING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) What are the characteristics of software? (5)

(b) Describe the incremental and evolutionary process models. (15)

2. (a) List the attributes of web-based applications. (8)

(b) Explain the major tasks in requirement analysis for WebApps. (12)

3. What are the four P's that have a substantial influence on software project management? Discuss. (20)

4. (a) Define clean room software engineering and differentiate it from conventional software engineering. (8)

(b) Explain the issues related with clean room design and testing. (12)

5. (a) What are the factors considered during component qualification? Explain the ingredients that are necessary to achieve component composition. (8)

(b) Discuss about reverse engineering. (12)

6. (a) State the principles of agility. (8)

(b) Explain any three agile process models in detail. (12)

7. (a) Name the three major categories of software engineering resources and briefly explain. (8)

(b) Describe the empirical estimation models. (12)

8. Write a note on the following :

(a) WebApp engineering layers. (7)

(b) The Z specification language. (7)

(c) Forward engineering. (6)