

One copy

Reg. No. :

D 2185

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Computer Science

ADVANCED COMPUTER ARCHITECTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Give an overview of parallelism in uniprocessor systems. (20)
2. (a) Describe the parallel computer structures. (12)
(b) Elaborate the Flynn's computer system classification. (8)
3. (a) Explain the key aspects of temporal and data parallelism and compare the same. (10)
(b) Discuss the importance of instruction level parallel processing. (10)

4. (a) Describe the data buffering and busing structure. (8)
 - (b) Discuss the characteristics of pipelined vector processing methods. (12)
 5. (a) Explain masking and data routing mechanism. (8)
 - (b) Summarise the features of SIMD interconnection networks. (12)
 6. (a) Discuss the functions of loosely coupled and tightly coupled multiprocessors. (10)
 - (b) Explain the issues in order to design multistage networks for multiprocessors. (10)
 7. Outline the important aspects associated with using parallel algorithms. (20)
 8. Write short notes on the following :
 - (a) Internal forwarding and register tagging. (8)
 - (b) Inter-PE communication. (4)
 - (c) Parallel algorithm to perform matrix multiplication. (8)
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Q.P. Code : [D 07 PCS 02]

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Computer Science

COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Explain the important aspects associated with random-scan displays and color CRT monitors. (10)
- (b) Discuss the usage of different kinds of input devices used in the graphics system. (10)
2. (a) Describe any one of the line clipping algorithm. (8)
- (b) Elaborate the two-dimensional basic and composite geometric transformations. (12)

3. (a) Explain the three dimensional object representations. (8)
(b) Discuss the methods used for three dimensional display. (12)
4. (a) Describe the issues related with using text in multimedia projects. (8)
(b) Explain the role of basic software tools used in multimedia projects. (12)
5. (a) Discuss the techniques used for making still images. (8)
(b) Describe the broadcast video standards and video recording formats. (12)
6. Give an overview of graphical user interfaces and interactive input methods. (20)
7. How are visible-surface detection algorithms classified? Explain any two methods in detail. (20)
8. Write short notes on the following :
 - (a) DDA line-drawing algorithm. (6)
 - (b) Comparison between midi and digital audio. (6)
 - (c) Principles of animation. (8)

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Computer Science

SOFTWARE ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Describe the activities associated with a software process framework. (8)
- (b) What is an agile process? Explain the characteristics and importance of various agile process models? (12)
2. (a) Discuss the attributes of web-based systems and applications. (8)
- (b) Explain the role of web app engineering layers and describe the web engineering process in detail. (12)

3. (a) Elaborate the issues related with formulating web-based systems. (8)
(b) Describe the tasks involved in the requirements analysis of web apps. (12)
4. (a) Explain the management spectrum. (8)
(b) Give an overview of quality management. (12)
5. (a) Discuss the activities involved in the risk management. (10)
(b) Explain how decomposition techniques are used in various software estimation methods. (10)
6. (a) With an example, explain the Z specification language. (5)
(b) Give an outline of clean room software engineering. (15)
7. (a) Discuss the Key aspects of component based development. (10)
(b) Explain the software reengineering and business process reengineering models. (10)
8. Write short notes on the following.
 - (a) The RAD model. (5)
 - (b) The ten commandments of formal methods. (7)
 - (c) Domain Engineering. (8)

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D 2188

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Computer Science

COMPUTER NETWORKS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Explain the internetworking concept and architectural model. (10)
- (b) Discuss the functions of network interface layer. (10)
2. (a) Elaborate the issues related to internet addresses. (8)
- (b) How are mapping internet address to physical address implemented? Explain. (12)
3. (a) Describe the procedure for determining an internet address at startup. (8)
- (b) Give an outline of the domain name system. (12)

4. (a) Explain the fundamental principle of connectionless delivery and discuss how it is provided by the internet protocol. (10)
 - (b) Describe how routers forward IP datagrams and deliver them to their final destinations. (10)
 5. (a) Write a note on protocol layering. (10)
 - (b) Explain the role of IP routing table and routing algorithm. (10)
 6. (a) Elaborate TCP timer management. (8)
 - (b) Discuss the key aspects associated with socket level interface. (12)
 7. (a) Describe the features of file access and transfer protocols. (10)
 - (b) Explain the organization and functions of electronic mail system. (10)
 8. (a) Give an overview of TCP data structures and input processing. (10)
 - (b) Summarize the features of any two remote login systems. (10)
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