M.Sc. DEGREE ASSIGNMENTS' 2017

PART - II : FINAL

BRANCH -COMPUTER SCIENCE

PAPER - MSCS 201 : COMPUTER NETWORKS

(W.e.f. the batch of students admitted in First Year during the academic year 2008-09)

Max. Marks: 20

PART-A

1. Write a short note on Ethernet, internet and intranet.
2. Explain about different types of LAN cables with neat sketch.
3. Explain about point to point protocol.
4. Explain about ATM reference model.
5. Differentiate connection oriented and connectionless protocols.
6. Explain about hamming codes and CRC.
7. Explain about BOOTP and OSPF.
8. What is congestion and how it affects data transmission.

PART-B

9. Explain about Time division and Wavelength division multiplexing.

OR

10. Explain about TCP/IP Reference Model.

11. a) Discuss about DTE-DCE interface with the help of diagram.

    b) Explain the working principle of data communication through optical fiber cable highlighting the advantage over metallic cable.

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OR

12. Explain about Go Back N and Selective Repeat Protocols.

13. Explain Bluetooth Architecture along with its salient features and applications.

OR

14. Explain about Binary Exponential Backoff Algorithm.

15. Explain message authentication protocol using one-way hash function.

OR

16. Explain about Leaky Bucket and Token Bucket Algorithm.

M.Sc. DEGREE ASSIGNMENT' 2017

PART - II : FINAL

Branch - Computer Science

PAPER : MSCS 202 - SOFTWARE ENGINEERING

(With effect from the batch of students admitted in First Year during the academic year 2008-09)

Max. Marks: 20

PART - A

1. Briefly explain about software myths.
2. Explain RAD Model.
3. Briefly explain software risks
4. Write about the design issues of a user interface
5. Briefly explain the design process.
6. What is Unit testing? Briefly explain about unit testing.
7. What are the Project planning objectives.
8. Explain about Behavioral modelling.

PART - B

9. Explain metrics for software quality

OR

10. Write the phases of the unified process. Explain with diagram.

11. Explain different decomposition techniques for project estimation.

OR

12. Explain software quality concepts in detail.

13. a) Explain system Engineering Hierarchy.

b) Explain various functional and non functional Requirements.

OR

14. Explain Data modelling concepts with suitable examples.

15. What is interface design? Explain Interface design guidelines.

OR

16. What is testing? Explain various types of software testing.

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PART - II : FINAL

BRANCH : Computer Science

PAPER - MSCS 203 - SYSTEM SOFTWARE

(w.e.f. the batch of students admitted in First Year during the academic year 2008-09)

Max. Marks: 20

PART - A

1. What are the different systems programs which are significant? Explain their role.
2. Explain the concept of Program relocation.
3. Explain Instruction set of SIC with examples.
4. Define a Loader? Write its basic functions.
5. Explain conditional macro expansion.
6. What Lexical analysis?
7. Write short notes on boot strap loader.
8. Write short notes on interrupt processing.

PART - B

UNIT-I

9. a) Explain Simplified Instruction Computer (SIC).

   b) Explain about VAX architecture

OR

10. a) Write about basic assembler functions

    b) Write short notes on MASM assembler

UNIT-II

11. a) Explain about linkage editors briefly

    b) Explain the concept dynamic linking

OR

12. Explain macro processor design options and its features.

UNIT-III

13. Write about Grammar and Syntactic analysis in detail.

OR

14. a) Write about Code generation

    b) Explain about machine-dependent code optimization

UNIT-IV

15. Write about Machine-Independent operating system features.

OR

16. a) Write short notes on basic operating system functions

    b) Explain about process scheduling.

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PART II- FINAL

BRANCH : Computer Science

Paper : MSCS 204 - COMPUTER GRAPHICS

(w.e.f. the batch of students admitted in First Year during the academic year 2008-09)

Max. Marks: 20

PART-A

1. Compare Raster and Random Scan Techniques.
2. Write short notes on any three output devices along with their working principles.
3. Mention different anti aliasing techniques.
4. Explain about window to viewport transformation.
5. What is spline and how is it represented.
6. How is reflection performed with reference to fixed point and write the transformed matrix.
7. Explain about Back face detection.
8. Explain about isometric and orthogonal projections.

PART-B

UNIT-I

9. Explain Bresenham line drawing algorithm and construct line for A (10,20) and B(20,45).

OR

10. Explain about Ellipse Drawing algorithm.

UNIT-II

11. Construct a transformation matrix for reflection about a line y=mx+c.

OR

12. Explain Sutherland Hodgeman clipping algorithm with an example.

UNIT-III

13. Explain about virtual reality environments and how pictures are constructed.

OR

14. a) How do you differentiate interpolation and approximation.

    b) Explain about Beta splines.

UNIT-IV

15. Explain different Polygon rendering methods.

OR

16. Explain about Depth Buffer method and BSP tree method.

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PART - II : FINAL

Branch : Computer Science

PAPER : MSCS 205 A - CRYPTOGRAPHY AND NETWORK SECURITY

(w.e.f. 2009-10)

Max. Marks: 20

PART - A

1. Distinguish between Symmetric and Asymmetric Cryptography.
2. What is steganography? Give the techniques of Steganography.
3. Give any five characteristics of advanced symmetric block ciphers.
4. Write about link versus End-to-End encryption.
5. What is meant by relatively prime numbers?
6. Write about TCP segment.
7. Give the limitations of SET.
8. Explain types of viruses.

PART - B

9. a) Explain about modern stream ciphers.
   b) Explain cryptanalysis of hill cipher.

OR

10. Explain overall IDEA structure.

UNIT - II

11. Explain the characteristics of Blowfish and RC5.

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OR

12. Write about

    i) Traffic confidentiality and

    ii) Key distribution.

UNIT - III

13. a) Explain Chinese Remainder theorem.

    b) Give the requirements for a Hash function.

OR

14. Discuss about RSA digital signature scheme with Illustrations.

UNIT - IV

15. Explain about Kerberos in detail.

OR

16. a) Explain firewall design principles.

    b) Discuss three classes of intruders.

M.Sc. DEGREE ASSIGNMENT' 2017

PART II - FINAL

BRANCH - Computer Science

Elective - II

PAPER : MSCS B - SOFTWARE TESTING

Max. Marks: 20

PART - A

1. Define Testing. Also explain its various levels?
2. List and explain the consequences of Bugs?
3. Briefly discuss about Data-Flow anomalies?
4. Illustrate Syntax testing with example?
5. List and explain various bugs in Domain Testing?
6. State and explain Delimiter Errors?
7. Discuss about the importance of specification in Logic Based Testing?
8. Write the steps for Modeling a State Testing?

PART - B

UNIT - I

9. Explain Path Instrumentation with examples?

OR

10. Explain Testing Model with neat sketch?

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UNIT - II

11. Explain Data-Flow model with example?

OR

12. Explain the following
    a) Steps of Transaction Flow Structure
    b) Steps of Transaction Flow Sensitization

UNIT - III

13. Briefly discuss about Nice Domains and Ugly Domains with examples?

OR

14. Write notes on the following
    a) Design Automation
    b) String Errors

UNIT - IV

15. What is Decision Table? Explain its significance in Logic-Based Testing with example?

OR

16. Explain various State Bugs with examples?