(DMSIT01)

Total No. of Questions : 18] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DEC. – 2016

First Year

INFORMATION TECHNOLOGY

Basics of IT

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three questions

Q1) Define flowchart? Draw the symbols used and state their purposes.

Q2) What is OS? Discuss its functions.

Q3) Elaborate the role of IT in modern organizations.

Q4) What is a network? Explain different type of network topologies.

Q5) What is MIS? Explain the role of MIS in an organization.

Section - B

(5 x 4 = 20)

Answer any Five questions

Q6) What is web browser? List different browsers.

Q7) Write a short note on EDP.

Q8) Write about different types of printers.

Q9) What are the applications of e-commerce.

Q10) Write about LAN Topologies.

Q11) Write about TCP/IP

Q12) Differentiate between Internet and Extranet.

Q13) What are the responsibilities of a database administrator.

Section - C

(5 x 1 = 5)

Answer All questions

Q14) What is a switch?

Q15) Define Data Mining.

Q16) What is a GPS?

Q17) Differentiate between data and information.

Q18) Define software.

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(DMSIT02)

Total No. of Questions : 16] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DEC. – 2016

First Year

INFORMATION TECHNOLOGY

(Paper – IX) : Computer Networks

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three questions

Q1) Differentiate between TCP/IP and OSI Reference Models.

Q2) Explain in detail the Error Detection and Correction Techniques.

Q3) Explain in detail the SMTP and HTTP Protocols.

Q4) Write about connectionless and connection-oriented transport UDP & TCP.

Q5) Explain in detail the Routing in the Internet.

Section - B

(5 x 4 = 20)

Answer any Five questions

Q6) Write about NAPS and ISPS.

Q7) Write about electronic mail in the internet.

Q8) Write about connectionless transport.

Q9) Write about network service modes.

Q10) Write about point-to-point protocol.

Q11) Write LAN address and ARP.

Section - C

(5 x 1 = 5)

Answer All questions

Q12) What is protocol? List out different types.

Q13) Define Ethernet.

Q14) What are switches and Hubs?

Q15) What is addressing?

Q16) What is meant by network core?

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(DMSIT03)

Total No. of Questions : 18] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DEC. – 2016

First Year

INFORMATION TECHNOLOGY

(Paper – III): Computer Organization

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three of the following

Q1) Write down different instruction formats in detail.

Q2) Explain about the generations of computers.

Q3) Explain in detail the multiplication algorithm.

Q4) What is instruction cycle? Explain instruction sub-cycle.

Q5) Explain Basic computer registers with Common Bus Structure.

Section - B

(5 x 4 = 20)

Answer any Five of the following

Q6) Write a short note on shift registers.

Q7) Explain the 'Seek Time' and 'Rotational Delay'.

Q8) Write about full adder and half adder.

Q9) Explain the power pc processor organization.

Q10) Explain multiple bus organization.

Q11) Write about full adder and half adder.

Q12) How data is read from magnetic disk.

Q13) Explain different logic gates with the diagram.

Section - C

(5 x 1 = 5)

Answer All questions

Q14) What is a Register?

Q15) What is an interrupt?

Q16) What is an assembler?

Q17) What is pipeline?

Q18) What is a bus?

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(DMSIT 04)

Total No. of Questions : 18] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DECEMBER – 2016

First Year

INFORMATION TECHNOLOGY

Data Structures with C

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three questions

Q1) Explain Merge sort technique and apply it on the following values : 8, 3, 25, 6, 10, 17, 1, 2, 18, 5.

Q2) What is searching? Explain Binary search algorithm and its time complexity.

Q3) What is a Binary search Tree? Explain in detail the tree traversals with an example.

Q4) Describe clearly operations related to word processing with suitable examples.

Q5) What is recursion? Explain various types to recursions.

Section - B

(5 x 4 = 20)

Answer any Five questions

Q6) Explain loop control structures.

Q7) Write a C program to implement linear search.

Q8) State the operations on a binary tree.

Q9) Explain malloc(), calloc(), free() functions.

Q10) Define queue and state its types.

Q11) Explain about records.

Q12) Define the following : pointer, dangling pointer and NULL pointer.

Q13) Implement simple queue as an ADT.

Section - C

(5 x 1 = 5)

Answer All questions

Q14) Define leaf node.

Q15) List operations in a DQUEUE.

Q16) What is an ADT?

Q17) Define a complete binary tree.

Q18) State any 2 applications of queues.

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(DMSIT05)

Total No. of Questions : 18] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DEC. – 2016

First Year

INFORMATION TECHNOLOGY

Operating Systems

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three questions

Q1) What are the components of OS and its services? Explain.

Q2) What is ISO protocol? Explain.

Q3) What is a deadlock? Explain deadlock prevention methods.

Q4) Explain in detail about directory structure.

Q5) Explain the types of security threats and goals.

Section - B

(5 x 4 = 20)

Answer any Five questions

Q6) Explain the functions of OS.

Q7) Explain different states of a process.

Q8) Differentiate between synchronous and asynchronous I/O.

Q9) Write a brief note on long and short term schedulers.

Q10) Explain deadlock characterization.

Q11) What is cache memory? State its purpose.

Q12) Explain LRU page replacement algorithm.

Q13) What is swap space? Explain.

Section - C

(5 x 1 = 5)

Answer All questions

Q14) Define segmentation.

Q15) Define Thrashing.

Q16) What is PCB?

Q17) What is disk scheduling?

Q18) What is Relocation?

(DMSIT06)

Total No. of Questions : 18] **[Total No. of Pages : 02**

M.Sc. DEGREE EXAMINATION, DEC. – 2016

(First Year)

INFORMATION TECHNOLOGY

Database Management System

Time : 3 Hours **Maximum Marks : 70**

Section - A

(3 x 15 = 45)

Answer any Three questions

Q1) What is File organization? Describe various categories of file organizations.

Q2) Explain network model in detail.

Q3) Describe the importance of Database Recovery? How is it achieved?

Q4) Explain any 4 Normal Forms.

Q5) Illustrate DDL commands with suitable examples.

Section - B

(5 x 4 = 20)

Answer any Five questions

Q6) Discuss about classification of Information System.

Q7) What is an Entity? Explain.

Q8) Explain join command and its types.

Q9) Explain the ACID properties of a Transaction.

Q10) Write a short note on primary key, secondary key and super key.

Q11) Write a short note on Relational Calculus.

Q12) Differentiate between view and table.

Q13) How is concurrency achieved in DBMS.

Section - C

(5 x 1 = 5)

Answer All questions

Q14) What is Data Integrity?

Q15) What are integrity constraints?

Q16) What is Timestamp?

Q17) Define deadlock.

Q18) What is aggregation?

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