

Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur
Directorate of Distance Education
Professional / Technical 1st Semester (Session 2015-17)
Subject:- M.Sc.IT
Paper – I
Model Paper (Full Marks – 70)

Basic of IT (2013-2014)

1. Explain the generation of computer in details.
2. Draw the block diagram of digital computer. Also explain the function of various device of a computer.
3. What is memory? Distinguish between primary and secondary memory.
4. What is an input device? Discuss the list of input device used in digital computer.
5. What is printer? Describe the types of printer.
6. What are logic gates? Describe the types of logic gates. Also write down the truth table of logic gates.
7. What is language translator? Describe the types of translator.
8. What is an operating system? Discuss the type of operating system.
9. What is a window XP? Write down the features of window XP.
10. What is Word processor? Write down the feature and application of Ms Word XP.
11. What is Mail Merge? Write down the steps to perform Mail Merge.
12. What is electronic spread sheet package? Write down the feature and application of Ms-Excel XP.
13. Convert the following.
 - a) $(137)_{10} = ()_2$
 - b) $(10010101)_2 = ()_8$
 - c) $(1010101)_2 = ()_{10}$
 - d) $(21.75)_{10} = ()_2$
 - e) $(417.54)_8 = ()_{10}$
 - f) $(635.50)_{10} = ()_2$
 - g) $110011-100100$
 - h) 101100.10111110
 - i) $11010-10010$ (using 1st Complements Method)
 - j) $101010+110111$
14. What is presentation package? Write down the feature and application of Power Point.
15. Write short notes on any two of the following CRT Monitor
 - a) History of computer
 - b) Function in Ms- Excel
 - c) Types of information
 - d) System software

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Paper – II
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Structure system analysis and design (SSAD) (2013-2014)

1. What is system? Describe the types of system.
2. Discuss the system development model in detail.
3. What is information? Discuss the importance characteristics of information.
4. What is decision support system? Explain the attributes of decision support system.
5. What is system analysis? Describe the procedure of analyzing the existing system.
6. Explain the system development life cycle in details.
7. What is feasibility study? Discuss the types of feasibility study used in SDLC.
8. Describe the role of personnel involved in data processing organization and their responsibilities and duties.
9. What is system project? Discuss the important reasons for system project.
10. What is system flow chart? Draw a system flow chart for roll system.
11. What is decision table? Discuss the advantage and drawback of decision table.
12. What is data flow diagram? Discuss the symbol used in DFD.
13. What is data dictionary? Discuss the four rules that govern the construction of data dictionary.
14. Explain the objective and characteristics of good documentation.
15. Write short notes on any two of the following:
 - a) Systems Communication
 - b) System Implementation
 - c) Decision Trees

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Paper – III
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Data structure using C (2013-2014)

1. What is Data Structure? Discuss the type of data structure used in “C”.
2. (a) What is Array? Discuss the type of Array.
(b) Write a C program to enter N number in an Array , print the numbers in sorted order.
3. What is pointer? Write a C program to find maximum and minimum of the given N number using pointer.
4. What is structure? Write a program to enter 5 student’s details as name, roll number, total marks and address, and also print the details of 5 students’.
5. (a) What is link list? Discuss the type of link list.
(b) Write a C program to demonstrate the operation in a singly link list operation using pointers.
6. What do you understand by doubly linked list? Write a program to implement the operation for doubly link list using pointer.
7. What is stack? Write a C program to implements stack using array.
8. Define stack with neat diagram. Discuss the algorithm for push and pop operation.
9. What is Queue? Discuss the type of Queue. Write a C program to demonstrate the concept of ordinary Queue.
10. Define Tree? Explain binary Tree with its properties.
11. What is Tree traversal? Explain the algorithms for different type of Tree traversal.
12. Define spanning tree with neat diagram.
13. (a) What is sorting? Discuss the type of sorting.
(b) Write a C program to sort N number using bubble sorting.
14. What is searching? Discuss the type of searching technique.
15. Write short notes on any two of the following:
 - (a) Binary search
 - (b) Looping Structure in “C”
 - (c) Call by value Vs Call by reference
 - (d) Functions in “C”

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Paper – IV

Model Paper (Full Marks – 70)

DBMS & SQL Server (2013-2014)

1. Define RDBMS? Also explain Hierarchical model of DBMS.
2. Explain three schema structures. What are the limitations of the Hierarchical model or Network data model?
3. What is the purpose of Hashing? What do you mean by the collision?
4. What is the signification of Integrity constraints? Differentiate entity integrity and referential integrity constraints.
5. Explain data independence. What are the limitations of a database approach?
6. Define an entity, an attribute and a relationship. Discuss different kinds of relationship.
7. Explain the following SQL commands with example CREATE, SELECT, and JOIN.
8. What is normalization? Differentiate 3NF, BCNF and 4NF.
9. Explain the use of cryptography. What do you understand by public key encryption?
10. Describe feature about RDBMS. Explain about primary, foreign and candidate key.
11. What are the SQL server 2005 administrative tools?
12. Explain in brief the installation procedure for SQL server 2005.
13. What are the data types used in SQL server 2005?
14. Why are use indexes? How many types of indexes are there in SQL server 2005?
15. Write short notes on any two of the following:
 - (a) Transact SQL
 - (b) Views
 - (c) The Relational Model
 - (d) Second Normal Form

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Paper – V
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Internet and Multimedia (2013-2014)

1. What is Internet? Also explain Internet service provider.
2. Write and explain Web browser with example.
3. Define WWW. Discuss and explain web page, web sites and web server.
4. Define Electronic Mail. Write the advantages of Electronic Mail.
5. Write the procedure to create free e-mail id using any web based free e-mail site. Also write the process to send message to director.ddebrabu@gmail.com.
6. Discuss about HTML and structure of HTML document.
7. Discuss a HTML by using paragraph, line break and ordered list tag.
8. How to create link list and images in the HTML program.
9. Write the HTML file containing the efficient use of tables.
10. Define frames. Also explain different styles of frame in HTML.
11. What is Multimedia? Explain minimum hardware requirements to setup a multimedia in computer.
12. Discuss and explain some common sound file format.
13. What do you mean by Animations?
14. Describe the role of multimedia application in education and training.
15. Write short notes on any two of the following:
 - (a) Voice Recognition
 - (b) E- mail addresses and mail boxes
 - (c) FTP (File Transfer Protocol) Application
 - (d) Search Engines.
