

Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur

Directorate of Distance Education

PROFESSIONAL/TECHNICAL 4TH SEMESTER

BSCIT/4th Semeter/13-16: Bachelor of Science in Information Technology

Paper-BIT19: Fundamental of Algorithms: MODEL QUESTIONS (Full Marks -70)

ANSWER ANY FIVE QUESTIONS

- Q. 1. What is Algorithm? Give the different characteristics of an Algorithm.
- Q. 2. Write the algorithm for sorting by Partitioning.
- Q. 3. Discuss and explain the Binary Search Method.
- Q. 4. Explain the different control mechanisms and control structures in an algorithm.
- Q. 5. Write the Algorithm to find the maximum and minimum items in a set of n element.
- Q. 6. Explain the technique involved in Optimal Merge Pattern.
- Q. 7. Define Graph. Explain the concept of Multistage Graphs.
- Q. 8. Explain the concept of travelling Salesman Problem.
- Q. 9. Write the algorithm of sum of Subsets.
- Q. 10. What do you mean by Bounding? Write the general method of Branch and Bound.
- Q. 11. Draw two different binary trees with five vertices having maximum number of leaves.
- Q. 12. Discuss and explain Kruskal Algorithm.
- Q. 13. Prove that a given connected graph G is an Euler graph if and only if all the vertices of G are of even degree.
- Q. 14. Give an example of a directed tree with five vertices.
- Q. 15. Write short notes on any two of the following:
 - a) Prim's Algorithm
 - b) Backtracking Strategy
 - c) Greedy Method

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Paper-BIT20: Software Engineering: MODEL QUESTIONS (Full Marks -70)

ANSWER ANY FIVE QUESTIONS

- Q. 1. What is Software Engineering? Explain the need of Software Engineering techniques in software development.
- Q. 2. What is the principal aim of the software engineering discipline? What does the discipline of software engineering discuss?
- Q. 3. Name the basic techniques used by the software engineering techniques to handle complexity in a problem.
- Q. 4. Write and explain waterfall model.
- Q. 5. What are the major advantages of first constructing a working prototype before developing the actual product?
- Q. 6. Explain the steps of Software Engineering Life Cycle.
- Q. 7. Discuss and explain spiral life cycle model.
- Q. 8. What are the different categories of software development projects according to the COCOMO estimation model?
- Q. 9. Define SRS (Software Requirements and Specification). What are characteristics of good SRS?
- Q. 10. What are the activities of function oriented design? Explain.
- Q. 11. What is software testing? Explain testing objectives and testing principles.
- Q. 12. Write and explain the strategic approach to software testing.
- Q. 13. What do you mean by Code Reading? Also explain about code inspection.
- Q. 14. Explain the process of Top-down Integration and Bottom-up Integeration.
- Q. 15. Write short notes on any two of the following:
 - a) Coupling and Cohesion
 - b) Black Box Testing
 - c) Structure Chart

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Paper-BIT21: Visual Basic: MODEL QUESTIONS (Full Marks -70)

ANSWER ANY FIVE QUESTIONS

- Q. 1. Discuss about .NET. Describe the importance and use of .NET framework in Visual Studio.
- Q. 2. Briefly discuss about .Net class library.
- Q. 3. What is namespaces? Discuss about types of .Net Namespace.
- Q. 4. Explain various basic data types and variables in Visual Basic.
- Q. 5. Describe the theory behind using arrays in VB.Net.
- Q. 6. Describe various kinds of operators used in VB.Net.
- Q. 7. Describe in brief with examples about functions and procedures in VB.Net.
- Q. 8. Create a function to find out biggest number in an array of size 10.
- Q. 9. Develop a form based interface to demonstrate the usage of combo box and list box controls.
- Q. 10. What do you mean by method overriding? Explain with example.
- Q. 11. Describe the Data Form Wizard in Visual Studio.Net.
- Q. 12. Describe the process of extracting and drawing images using Image List control.
- Q. 13. Explain the usage of constructors and destructors in VB.Net programs.
- Q. 14. Explain the mechanics of implementing an Interface.
- Q. 15. Write short notes on any two of the following:
 - a) Method
 - b) threads in VB.Net
 - c) Exception Handling

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Paper-BIT22: Server Site Programming Theory: MODEL QUESTIONS (Full Marks -70)

ANSWER ANY FIVE QUESTIONS

- Q. 1. What is Java EE? What are the various Java EE technologies?
- Q. 2. What is Web server? What are the various Web servers?
- Q. 3. What is Servlet Life Cycle? Explain in detail.
- Q. 4. What are the various methods of HttpServletResponse interface?
- Q. 5. What are the ways of handing exception? Explain any one in details.
- Q. 6. What is exception? Explain the keywords used for exception handling.
- Q. 7. What are Cookies? Explain with an example.
- Q. 8. What is Session? What are the various techniques of Session Managements?
- Q. 9. What is BASIC Authentication? Explain with example.
- Q. 10. What is JDBC? Describe different JDBC drivers.
- Q. 11. What are the life cycle methods of JSP?
- Q. 12. What are common errors in the process of translating the JSP?
- Q. 13. Describe the process of deactivating Individual Expression Language statements.
- Q. 14. Describe the theory behind accessing bean properties. Also explain theory of referencing implicit objects.
- Q. 15. Write short notes on any two of the following:
a) Model View Controller b) autoFlush attributes c) JSP elements

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Paper-BIT23: Technical Communication: MODEL QUESTIONS (Full Marks -70)

ANSWER ANY FIVE QUESTIONS

- Q. 1. **What do you mean by writing skill? What are the skills involved in effective writing?**
- Q. 2. **Define communication. Differentiate between oral and written communication.**
- Q. 3. What is Electronic Communication system? Discuss its features.
- Q. 4. What is the significance of Technical Communications?
- Q. 5. Discuss the importance of Business Communication. Also discuss Technical writing skills.
- Q. 6. What are the basic steps involved in technical communication?
- Q. 7. Discuss and explain Audience Analysis. Write about different levels of audience.
- Q. 8. Define Subject Matter Expert. What are the needs for preparing for the subject matter expert interview?
- Q. 9. What do you mean by Crystal clear writing? Create a style sheet incorporating all the points vital to technical writing.
- Q. 10. What is Proof Reading? Create a table with all the proofreading symbols that a technical editor uses.
- Q. 11. Discuss about System Development Life Cycle. Develop your own SDLC model for preparing your project.
- Q. 12. What are the Legal vs Ethical issues in technical communications?
- Q. 13. Discuss and explain about approach of listing common errors.
- Q. 14. Define Abstract? Write an abstract on your project.
- Q. 15. Write short notes on any two of the following:
a) Elements of Project Report b) Writing Instruction Manual c) Journal Book.
