

MAY 2005 Paper I - FUNDAMENTALS OF COMPUTERS

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL questions.

(20 x 2 =40 marks)

1. What is the function of control unit?
2. What are different flow chart symbols?
3. What is a program?
4. What is a programming language?
5. What is the meaning of the term "external representation" of data?
6. What is ASCII code?
7. Convert $(165.32)_{10}$ into octal.
8. What do you mean by polymorphism?
9. Explain the term 'data in machine readable form'.
10. Describe the operation of a floppy disk reader.
11. What is the difference between a drum printer and a chain printer?
12. What is the difference between RAM and ROM?
13. What is an operating system of a computer?
14. What is batch operating system?
15. What are the two types of multiplexing?
16. Why is multiprogramming used in computers?
17. What is a local area Network?
18. Give an example of FDM.
19. What is a Hub?
20. Define the flow control protocol.

PART B

Answer ALL the questions.

(5 x 12 =60 marks)

21. (a) Draw the block diagram of a computer and explain its function. Or (b) Explain the function of various display devices.
22. (a). Represent 127 and -45 in signed magnitude, 1's complement and 2's complement schemes. Or (b) Discuss the factors that influence evolution of high-level languages in detail.
23. (a) Explain the function of various computing methods. Or (b). Explain the organization in computers.
24. (a) Explain the batch operating system in detail. Or (b) Discuss the various parts of the interface.
25. (a) Discuss about the IP addressing scheme. Or (b) Explain the network topologies in detail.

Paper III - SOFTWARE ENGINEERING May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL questions.

(20 x 2 =40 marks)

1. Define: Software Engineering.
2. How programmers spend their time in software engineering while developing software?
3. What are the components of Software Configuration Management?
4. What are the different approaches to proto typing?
5. What do you mean by "Team Communication"?
6. Define: Portability.
7. What are the major factors that influence Software Cost?
8. What are the components of risk management plan?
9. Define: Cohesion.
10. What are the major steps in structured design methodology?
11. What is a data flow diagram?
12. What are HIPO diagram?
13. What are different criteria for judging a program?
14. What do you mean by 'information hiding'?
15. What are the activities performed by the test plans?
16. Define: Walk through.
17. What are different approaches to testing?
18. Explain: Validation.
19. What are different definitions of time for software reliability models?
20. What are the components that a test plan should contain?

PART- B

Answer ALL Question

(5x12=60)

21. (a) Explain the different phases in software development Or. (b) Explain the factors that influence quality and productivity in software development.
22. (a) Explain the COCOMO model in detail. Or (b) Explain different planning activities in software development.
23. (a) Explain the software specification in detail. Or (b) Explain the prototype life-cycle model in detail.
24. (a) Explain various program verification methods in detail. Or (b) Write short notes on: (i) Milestones. (ii) Walk throughs. (iii) Inspections.
25. (a) Explain various testing process in detail. Or (b) Explain the activities performed during S/W Development to enhance the maintainability of a S/W.

Paper IV - OBJECT ORIENTED PROGRAMMING WITH C++ May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL questions

(20 x 2 =40 marks)

1. What are the features of IOSTREAM.H?
2. How does structures in C and C++ differ?
3. Write short notes on copy constructors.
4. Write is the use of file () function?
5. What is the difference between `cin » a;` and `cin.get(a);` ?
6. What is meant by identifier?
7. Mention the difference between the two operators `=` and `==`?
8. How a function is declared in C++?
9. What does array indexing mean?
10. What does operator-overloading mean?
11. What is the importance of using precedence rules in the C++ operators?
12. What is a unary operator? List out the different operators involved in the unary operators.
13. What is meant by incrementer and decrementer in C++?
14. Explain the syntactic rules governing `cin` and `cout`
15. How is the comment statement represented in C++? What are the uses of defining a comment statement in a program?
16. Explain the difference between a data member of a class and a conventional variable in C++.
17. What is the difference between the base and derived classes?
18. List the merits and demerits of single inheritance over multiple inheritance.
19. Explain the merits and demerits of private derivation over the public derivation.
20. Explain file updation.

PART B

Answer ALL questions

(5 x12 =60 marks)

21. (a) What is a scope resolution operator? How is it useful for defining the data member and member function of a class? Or (b). Explain the working style of switch statement with example.
22. (a) (i) What are the rules to be followed to declare a multiple inheritance class data type? (ii) Explain how logical operators can be used for overloading in C++.
23. (a) What is an object and how objects can be defined in C++? (i) Explain the syntactic rules of the virtual base class in C++. (ii) What is a class template? Or

(b) What is an array of class objects? How are the array of class objects are defined in C++?

24. (a) (i) What is function overloading? Explain it with example. (ii) Explain the operation of overloading of an Assignment operator. Or (b) Explain the uses of the following special operators in C++ (i) Pointer operator. (ii) Address operator. (iii) Ternary operator.

25. (a) Explain the salient features of the < fstream.h > header file in C++. Or (b) Explain the various functions involved in opening and closing a sequential file in C++.

Paper V - CLIENT/SERVER COMPUTING WITH ORACLE 7 May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL questions

(20 x 2 =40 marks)

1. Define middleware.
2. What is an entity?
3. What are the components of an open system environment?
4. What is meant by ACID test?
5. What do you mean by bridges?
6. Write down the factors that determine the performance of WAN?
7. Define messaging and queuing.
8. State any two DDL commands.
9. Mention the character data types in oracle.
10. What are the three types of exports?
11. What is meant by savepoint?
12. Write short notes on client application interface.
13. Define a procedure.
14. What are the parts of a PL/SQL block?
15. Define preemptive and non-preemptive threads.
16. Distinguish between nested tables and Varray.
17. What do you mean by cold and hot physical backups?
18. Define data security.
19. Give the syntax of grant statement with an example.
20. What is a constraint?

PART B

Answer ALL the questions

(5 x 12 =60 marks)

21. (a) Explain briefly the features of server machines. Or Explain the following:
- (i) Consistency (ii) Robustness (iii) Transaction (iv) Recovery

22. (a) List down the merits and demerits of client/server model. Or Write short notes on client application.
23. (a) Discuss the administrative steps in building a database. Or (b) Explain in detail the advantages of table partitioning.
- 24 (a) Write short notes on database triggers. What is database tuning meant by? (b) Explain the object tables and selecting values from object tables with suitable examples.
25. (a) Illustrate networking concepts in the oracle with examples, Or (b) Discuss in detail the transaction log management and threshold manager with respect to backup and recovery.

Paper VI - WINDOWS AND VISUAL BASIC May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL the questions

(20 x 2 =40 marks)

1. What is a GUI?
2. What is mean by dragging?
3. List the use of clipboard.
4. What is worksheet?
5. Give the command to change the size of the cell.
6. What is a cell?
7. What is an event?
8. List the use of combo box.
9. What are the properties of a form?
10. List the use of scroll box.
11. What is the purpose of ISP?
12. What is the function of modern?
13. What is MIME? Give example.
14. What is PPP?
15. What is the significance of gateway in internet?
16. What do you mean by direct internet link?
17. What is meant by duplex data transmission?
18. What is mailing list?
19. Write down the benefits of information provider.
20. List down any two management issues of information provider.

PARTB

Answer ALL the questions

(5 x 12 =60 marks)

21. (a) Discuss about the various issues of mail service. Or (b) Explain how to configure mail server.

22. (a) Explain the various services provided by the internet in detail. Or (b) Explain about Gopher Servers.
23. (a) Discuss about IP addresses and DNS. Or (b) Explain in detail about the resources required to use internet service provider.
24. (a) What is TCP/IP? Explain how to configure your machine for *TCP/IP* account. Or (b) Discuss about direct and dialup link. Explain the various trouble shooting of dialup connection.
25. (a) What are the benefits of Information Provider? Explain how it helps to reduce expenditure. Or (b) Discuss about the various management issues of information provider.

Paper II - COBOL AND DATAPROCESSING May 2005

PART A

Answer ALL questions

(20 x 2 = 40 marks)

1. What is data processing? List the advantages of electronic data processing.
2. What is the significance of figurative constant?
3. What is the acronym for COBOL and CODASYL?
4. List down the various operators of COBOL.
5. What is the significance of FILLER clause?
6. Write a short note on PICTURE clause.
7. Give the syntax of File Description entry.
8. Give the syntax of DIVIDE Verb.
9. State the purpose of JUSTIFIED clause.
10. Write the syntax of ACCEPT statement with an example.
11. What is the purpose of level number 66?
12. List the various verbs of File I/O.
13. Mention the usage of sign condition with the help of its syntax.
14. Give one example to condition-name condition.
15. What is the purpose of EXIT statement?
16. What is the significance of INDEXED BY phrase?
17. Give the syntax of FD entry for variable length records.
18. What is meant by file updation?
19. What is the purpose of RETURN statement?
20. What is the purpose of ALTERNATE RECORD KEY?

PART B

Answer ALL questions

(5 x 12 = 60 marks)

21. (a) Explain the different editing features of COBOL. Or (b) Briefly explain about level structure and PICTURE clause.

22. (a) State the rules governing the condition name condition and also explain with suitable example. Or (b) Write a program to compute Sales Commission for sales amount. The sales commission is computed using the following conditions. Sales amount < 1,000, Commission is 2% of Sales amount Sales amount >= 1,000 and < 5,000, Commission is 5% of Sales amount Sales amount >= 5,000, Commission is 10% of sales amount.

23. (a) Write a note on : (i) SET(ii) SEARCH verb. Or (b) A company has 3 categories of employees. Category 1 gets 30% of salary as HRA Category 2 gets 20% of salary as HRA Category 3 gets 15% of salary as HRA Given employee name, category and salary. Write a program using go to with depending on to calculate and print Gross salary of each employee.

24. a) Explain any four procedure division statements of Relative file. Or (b) Discuss the SORT verb. Give a suitable program example.

25. (a) Write a program to create a sequential file with the fields: Serial number, name, sex, department and designation. Using this file create two more files called MALE and FEMALE. Those records whose sex value is male, write it in the MALE file. Those records whose sex value is female, write it in the FEMALE file. Or (b) Write a program to prepare electricity bill for a consumer. The bill must have the following fields. (i) Consumer number (ii) Initial metre reading (iii) Final metre reading (iv) Units Consumed (v) Amount. The amount is calculated using the following conditions: (1) Rate above 200 units is Rs. 2/unit (2) Rate upto 100 units is 75 paise/unit (3) Rate from 101-200 units is Re. 1/unit Every consumer must pay a minimum of Rs.20

FUNDAMENTALS OF COMPUTERS AND PC SOFTWARE

Time: Three hours

Maximum: 100 marks

Answer any FIVE questions

(5x20=100marks)

1. (a) What are the three basic components of computers? Explain them. (b) Define Computer. Explain the major characteristics of computers.
2. (a) Explain any two types of secondary storage devices in detail. (b) Describe any two types of File organization.
3. (a) What are the various layers and their functions in the ISO proposal? (b) Write the expansion for the following: (i) TCP/IP (ii) WAN (iii) MAN (iv) LAN (v) FTP.
4. (a) Explain any five DOS commands with example. (b) What is an Operating System? Mention its various functions.
5. (a) Explain any four directory management commands in UNIX with example. (b) Explain the text editor vi with examples.

6. (a) What are the uses of mouse in Windows? (b) Explain the Windows Explorer in detail.
7. (a) Describe the method of editing and printing text in Word. (b) Explain in detail how tables are handled in Word with example.
- 8.(a) Explain the entering and editing of formulas in Excel. (b)Describe the various formatting of text in cell in Excel.
9. (a) Define RDBMS. Explain the structure of RDBMS with example. (b) What are the steps needed to create a database through table wizard in access? Give example.
10. (a) What are the steps needed for creating a new slide? Explain with example. (b) Explain the method of Inserting Picture in Presentation in detail.

VISUAL BASIC

Time: Three hours

Maximum: 100 marks

Answer any FIVE questions.

(5 x 20 =100 marks)

1. (a) Explain the Visual Basic's IDE with neat diagram. (b) How do you add code for the VB program? Explain with example.
2. (a) Explain the properties and simple event procedures for command button with example.
(b) Discuss the various properties for Labels with examples.
3. (a) Explain the different types of variables used in VB with example. (b) Explain the following: (i) Picture box (ii) Printer object
4. (a) Discuss the different types of indeterminate loops in detail. Sum = 1 + 3 + 5 + + 99
(b) Write a VB program to find the sum of series
5. (a) Explain function procedures and Sub procedures with example.(b) Define Array. Explain two-dimensional array with example.
6. (a) Explain the properties of Combo box with example. (b) Discuss the general properties of the Flex Grid control.
7. (a) How many ways are there to specify colors in VB? Illustrate with example. (b) Discuss Line method in VB graphics with example.
8. (a) What are the file commands in VB? Explain with example. (b) Write short note on the following: (i) Sequential file (ii) Drive list box.
9. (a) Explain the various methods in OLE. (b) Write a VB program to find simple interest. [Formula: $SI = P \cdot N \cdot R / 100$]
10. (a) Write about SQL basics in detail. (b) Write short note on the life cycle of a control.

SOFTWARE ENGINEERING May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer any SIX questions

(6 x 5 =30 marks)

1. According to Boehm, what are the skills most lacking in entry -level programmers?
2. What are the important management problems?
3. Write about staffing -level estimation.
4. Explain the cost estimation technique, expert judgement.
5. What is a transition table? Explain.
6. What are petri nets? Explain.
7. Explain: Aesthetics.
8. What are HIPO diagrams?
9. Explain: Unit testing.
10. What are the automated tool for s/w maintenance?

PART B **Answer any FOUR questions** **(4 x 10 =40 marks)**

11. Explain the programming team structure in detail.
12. Explain COCOMo in detail.
13. Explain Gist.
14. Explain the design techniques in detail.
15. Explain in detail about coupling and cohesion.
16. Explain the managerial aspects of software maintenance in detail.

PART C **Answer any TWO questions** **(2 x 15 =30 marks)**

17. Explain the steps required to plan a software project.
18. What are the major facts that influence the software cost? Explain.
19. Explain the steps required in the implementation phase of software development.

COMPUTER NETWORKS May 2005

Time: Three hours

Maximum: 100 marks

PART A **Answer any SIX questions** **(6 x 5 =30 marks)**

1. Describe the different classes of service primitives.
2. Describe the features of LAN.
3. Describe the Base band coaxial cable used for Transmission.
4. Describe features of Analog Cellular Telephones.
5. Write a note on 'framing'.
6. Compare the channel utilization with load for various random access protocols.
7. Describe the internal organization of Network layer.
8. Discuss on Transport Service Primitives.
9. What do you mean by Source Encoding? Explain.
10. Describe the parts of a web model.

PART B **Answer any FOUR questions** **(4 x 10 =40 marks)**

11. Describe the types of Transmission Technology.
12. Describe the various switching techniques handled in Telephone system.

13. Describe the structure of Telephone System.
14. Discuss the services provided by Data Link Layer to Network Layer.
15. Describe about Datagram Subnet and virtual circuit subnet. Compare them.
16. Describe the facilities available in E-mail system.

PART C **Answer any TWO questions** **(2 x 15 =30 marks)**

17. Describe the various layers of OSI Reference Model in detail.
18. Describe in detail about the following:(a) CDMA (b) WDMA (c) Wireless LAN Protocols.
19. Describe the following Routing Algorithms: (a) Shortest path Routing. (b) Flow base Routing.

MULTIMEDIA TECHNOLOGY AND APPLICATIONS May 2005

Time: Three hours

Maximum: 100 marks

PART A **Answer any SIX questions** **(6 x 5 =30 marks)**

1. What is KIOSK? Explain?
2. Explain the Data files of text.
3. Explain the multimedia training.
4. Describe the sound production tips.
5. Explain the graphics file and its format.
6. Explain Audio file formats.
7. What are the characteristics of digital video?
8. Differentiate between non-interactive and interactive multimedia.
9. Write note Web browsers and on page development.
10. Explain the method which making digital video.

PART B **Answer any FOUR questions** **(4 x 10 =40 marks)**

11. What are the Resources of Multimedia developers?
12. Explain the types of product.
13. Draw the block diagram of a multimedia system and discuss the working of functional blocks.
14. Explain the background resources on video.
15. Explain the multimedia authoring tool features.
16. Explain the Input and Output devices.

PART C **Answer any TWO questions** **(2 x 15 =30 marks)**

17. Explain the digital video and animation in details.
18. Discuss the uses of graphics in multimedia design.
19. Discuss the multimedia and the internet in detail.

JAVA PROGRAMMING May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer any SIX questions

(6 x 5 =30 marks)

1. Discuss all the Integer data types in Java.
2. Illustrate the use of 'Switch' statement in Java.
3. Explain the use of 'new' operator.
4. Illustrate the use of 'constructors'.
5. Explain the use of multiple 'catch' statements.
6. Explain how threads are synchronized.
7. Explain any five subclasses of writer class.
8. Explain the idea of UDP based network communication.
9. Develop an applet which displays 'Hello, World'!
10. Explain how AWT helps GUI development.

PART B

Answer any FOUR questions

(4 x 10 =40 marks)

11. Explain the ways of formatting the output.
12. Explain with a program, the usage of 'this' keyword.
13. Illustrate how copy constructors are used.
14. Explain the use of any five classes in Java utility package.
15. Explain the life cycle of an applet.
16. Explain the way of using socket class.

PART C

Answer any TWO questions

(2 x 15 =30 marks)

17. Bring out the importance of 'inheritance' with the help of an example and write a program based on the same idea.
18. Write a Java Program to illustrate interface inheritance idea.
19. Illustrate with a program synchronizing the idea of threads in Java.

Paper VII - INFORMATION TECHNOLOGY APPLICATIONS may 2005

Time: Three hours

Maximum: 100 mark

PART A

Answer ALL questions

(20 x2 =40 marks)

1. List down any two services of Internet.
2. What do you mean by internet standards?
3. What is the purpose of searchable data
4. Write down any two FTP commands.
5. Define the term: WWW.
6. What is IP address?
7. What is meant by Domain Name? example.
8. Define the term: URL.
9. What is SPAM?

10. What is the function of TCP/IP?
11. What is the purpose of ISP?
12. What is the function of modem?
13. What is MIME? Give example.
14. What is PPP?
15. What is the significance of gateway in internet?
16. What do you mean by direct internet link?
17. What is meant by duplex data transmission?
18. What is mailing list?
19. Write down the benefits of information provider.
20. List down any two management issues of information provider.

PART B

(5 x 12 =60 marks)

21. (a) Explain the various services provided by the internet in detail. Or (b) Explain about Gopher Servers.
22. (a) Discuss about IP addresses and DNS. Or (b) Explain in detail about the resources required to use internet service provider.
23. (a) What is TCP/IP? Explain how to configure your machine for TCP/IP account. Or (b) Discuss about direct and dialup link. Explain the various trouble shooting of dialup connection.
service.
24. (a) Discuss about the various issues of mail Or (b) Explain how to configure mail server.
25. (a) What are the benefits of Information Provider? Explain how it helps to reduce expenditure. Or (b) Discuss about the various management issues of information provider.

Paper VI - WINDOWS AND VISUAL BASIC

Time: Three hours

Maximum: 100

PART A

Answer ALL questions

(20 x 2 =40 marks)

1. What is a GUI?
2. What is mean by dragging?
3. List the use of clipboard.
4. What is worksheet?
5. Give the command to change the size of the
6. What is a cell?
7. What is an event?
8. List the use of combo box.
9. What are the properties of a form?
10. List the use of scroll box.

11. What is a frame?
12. Differentiate between image box and picture box.
13. Define the term "Multitasking".
14. What are hotkeys?
15. What is an icon?
16. Give the keystroke to open a file.
17. List the usage of dialog box.
18. What is MDI child?
19. What does debugging mean?
20. Give the need of REDIM statement.

PART B

(5 x 12 = 60 marks)

21. (a) List and explain various components of a window. Or (b) List and explain various built-in functions in excel.
22. (a) Explain the steps to be followed to develop a VB program with an example., Or (b) List various operators in visual basic and explain the usage of each operators with an example.
23. (a) Write a program to read 10 students name and sort them in alphabetical order. Or (b) Give the syntax of looping constructs and explain them with an example.
24. (a) What is blocking? Discuss cut and paste operations in word with an example. Or (b) List various options in print manager and explain the purpose of each options.
25. (a) Discuss step to be followed to prepare different variety of charts with an example? Or (b) Write short notes on I) Mail merge (ii) Event procedure (iii) Date functions.

Paper V - CLIENT/SERVER COMPUTING WITH ORACLE 7 May 2005

Time: Three hours

Maximum: 100 marks

PART A

Answer ALL the questions

(20 x 2 = 40 marks)

1. Define middleware.
2. What is an entity?
3. What are the components of an open system environment?
4. What is meant by ACID test?
5. What do you mean by bridges?
6. Write down the factors that determine the performance of WAN?
7. Define messaging and queuing.
8. State any two DDL commands.
9. Mention the character data types in oracle.
10. What are the three types of exports?
11. What is meant by savepoint?
12. Define a procedure.
13. What are the parts of a PUSQL block?

14. Define preemptive and non preemptive threads.
15. Distinguish between nested tables and varray.
16. What do you mean by cold and hot physical backups?
17. Define data security.
18. Give the syntax of grant statement with an example.
19. What is a constraint?
20. What is meant by database tuning?

PART B

(5 x 12 =60 marks)

21. (a) Explain briefly the features of server machines. Or (b) Explain the following: (i) Consistency (ii) Robustness (iii) Transaction Recovery
22. (a) Write short notes on client application (ii) List down the merits and demerits of client/server model. Or (b) Explain in detail the advantages of table Partitioning.
23. (a) (i) Write short notes on database triggers. (ii) Distinguish between conventional and direct path loading provided by SQL* loader Or (b) Explain the object tables and selecting values from object tables with suitable examples.
24. (a) Write short notes on: (i) View (iii) Pre-defined exceptions (ii) Bit map index Or (b) Discuss the administrative steps in building a database.
25. a) Illustrate, with examples oracle the networking concepts Or (b) Discuss in detail the transaction log management and threshold manager with respect to backup and recovery.

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