

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL questions.

1. What is a mainframe computer?
2. Mention the advantages of portable computers.
3. What is meant by multi programming?
4. Mention the difference between byte and a word.
5. What are registers?
6. Define the term program.
7. Why decimal system is not used in digital computer?
8. What are the uses of programming languages?
9. Mention the advantages of ROM.
10. What is the difference between dot matrix printer and ink jet printer?

11. What is meant by resolution of a monitor?
12. Name different operating system types.
13. What is meant by GUI?
14. What are files?
15. Define the term memory management.
16. Mention any two network operating systems.
17. What is the need for networking?
18. Define the term protocol.
19. Name any two protocols used in the Internet.
20. Define the term topology.

PART B — (5 × 12 = 60 marks)

Answer ALL questions.

21. (a) Explain the working of a computer system.

Or

- (b) Explain the following :

- (i) Time sharing systems.
- (ii) Personal computers.

22. (a) Why do we need different data representation? Explain.

Or

- (b) Explain the method of doing following conversions with examples

- (i) Hexadecimal to Decimal.
- (ii) Binary to Decimal.

23. (a) Explain display unit in detail.

Or

- (b) Discuss the operation and structure of computer memory.

24. (a) Explain the concept of process management.

Or

- (b) Discuss the services provided by the operating system.

25. (a) Explain transmission media characteristics.

Or

- (b) What is a LAN? Explain its features.

24. (a) Write a program to arrange the given numbers into descending order.

Or

(b) Write a COBOL program for mark sheet processing. Assume your own data.

25. (a) Explain file handling features of COBOL.

Or

(b) Write short notes on :

(i) ALTER statement

(ii) WORKING STORAGE SECTION.

9. List the four arithmetic verbs.

10. How do you insert a comment in a Cobol program?

11. Define FILLER clause.

12. What is the function of DISPLAY statement?

13. Re write the following statement using COMPUTE option MULTIPLY LENGTH by BREDTH AREA.

14. Mention the use of STOP RUN statement.

15. Specify the syntax of SIGN Clause.

16. Write the Cobol statement for the COBOL expression.

$$C = \frac{xy + a}{x^2 + y^2}.$$

17. What is the use of GOTO statement?

18. What is the use of MERGE statement?

19. What are sequential files?

20. Specify any two file i/o statements.

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Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL questions.

1. Specify the decisions of a COBOL program.
2. What are figurative constants?
3. Mention the role of identification division.
4. List four level numbers.
5. Mention the use of value clause.
6. What is the role of PICTURE clause?
7. Mention the difference between MOVE and MOVE CORRESPONDING verbs.
8. Mention the difference between elementary and group items.

PART B — (5 × 12 = 60 marks)

Answer ALL the questions.

21. (a) Explain the general program structure of COBOL.

Or

(b) Discuss the following :

(i) USAGE Clause

(ii) FILLER Clause.

22. (a) How data are represented in COBOL programs? Discuss in detail.

Or

(b) Explain conditional statements and Looping statements of COBOL.

23. (a) Explain the following with examples.

(i) MOVE

(ii) MOVE with EDIT.

Or

(b) Write a COBOL program to compute the electricity bill. Assume Opening unit, closing unit and tariff slabs.

Paper III — SOFTWARE ENGINEERING

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL questions.

1. Define the term software engineering.
2. What is a model?
3. Mention four qualities of a good software.
4. Specify any two uses of DFD.
5. List the basic issues addressed by SRS.
6. What are the basic elements of configuration management?
7. What are decision tables?
8. What is the role of review?
9. Mention any four desirable properties of software system design.

10. What is meant by top-down design approach?
11. Specify the role of risk management.
12. Name any four metrics used in software design.
13. Define the term PDR.
14. Mention the use of HIPO chart.
15. Mention the role of static analysis.
16. What are Walk throughs?
17. Mention different types of testing.
18. What is meant by quality assurance?
19. Specify the need for code reviews.
20. Define the term validation.

PART B — (5 × 12 = 60 marks)

Answer ALL questions.

21. (a) Explain the phases of software development.

Or

- (b) What are the steps involved in software requirement specification?

22. (a) Discuss in detail about cost estimation.

Or

- (b) What are the major activities of staffing and personal planning?

23. (a) Explain the objectives of software design.

Or

- (b) What are the major techniques in modular specification?

24. (a) Discuss the trends in coding practice.

Or

- (b) Write short notes on :
 - (i) Static analysis.
 - (ii) Structured programming.

25. (a) Explain functional testing in detail.

Or

- (b) Explain the following :
 - (i) Cocomo model.
 - (ii) Software risks.

**Paper IV — OBJECT ORIENTED PROGRAMMING
WITH C++**

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL the questions.

1. Define the term data abstraction.
2. What is the use of protected mode?
3. What are member functions?
4. How do you declare a friend function?
5. How a destructor is defined?
6. What are default parameter values?
7. What is meant by overriding?
8. Name any two integer data types.
9. How an object of a class is created in main ()?

10. What is meant by parameter passing?
11. Give the general syntax of single inheritance.
12. Name any two file related operations.
13. Mention the difference between C out and C in operations.
14. What is meant by dynamic binding?
15. Mention two operators that cannot be overloaded.
16. What is a void pointer?
17. How do you declare an integer array?
18. What is the use of virtual keyword?
19. What is the use of setw manipulator?
20. Define the term polymorphism.

PART B — (5 × 12 = 60 marks)

Answer ALL questions.

21. (a) Explain the method of designing a class with an example.

Or

- (b) Explain the control structures of C++.

22. (a) What are the methods of passing parameters? Explain with examples.

Or

- (b) Explain function overloading with example.

23. (a) Explain the method of overloading a binary operator.

Or

- (b) Explain multiple inheritance with an example.

24. (a) Explain the method of handling arrays.

Or

- (b) Write a C++ program to input a string and print in reverse.

25. (a) Explain virtual functions with example.

Or

- (b) Write short notes on :

- (i) Nested classes
- (ii) File output.

25. (a) Discuss about data control in detail.

Or

(b) Write short notes on :

(i) Packages

(ii) Database planning.

6. Specify the use of DDL.

7. Mention four benefits of object oriented approach.

8. Specify the role of delete command.

9. Name any two SQL functions.

10. Mention the use of roll back.

11. Mention the difference between SQL and PL/SQL.

12. What are the categories of operators supported by SQL?

13. Define the term segment.

14. Define the term schema.

15. What are constants?

16. Mention the use of sequences.

17. List the activities of DBA.

18. Mention the need for error handling.

19. Define the term audit.

20. Mention two operations with tables.

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL questions.

1. Expand the following :

(a) RDBMS

(b) SQL

(c) DML

(d) DCL.

2. What are attributes of a record?

3. Define the term availability.

4. Mention the role of a client.

5. What is a query?

PART B — (5 × 12 = 60 marks)

Answer ALL questions.

21. (a) Discuss the features of RDBMS in detail.

Or

(b) Explain the concept of concurrency.

22. (a) Explain the following :

(i) Integrity

(ii) Security.

Or

(b) Explain various DML commands.

23. (a) Explain loop control constructs of PL/SQL.

Or

(b) Explain the following command pairs :

(i) COMMIT-ROLL BACK

(ii) GRANT-REVOKE.

24. (a) Explain view command in detail.

Or

(b) Write a PL/SQL program to need the salary of employees and calculate tax. (Assume your own data).

Paper VI — WINDOWS AND VISUAL BASIC

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

PART A — (20 × 2 = 40 marks)

Answer ALL questions.

1. Name any two operating systems which supports GUI concepts.
 2. What is the difference between GUI and CUI?
 3. Define multitasking.
 4. How to move the windows?
 5. Give the purpose of tool bar.
 6. What is Icon?
 7. How to customize the desktop?
 8. How to use the option paste in word?
 9. How to maintain uniform right margin?
 10. Give the purpose of auto save.
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11. How to select the fonts in word?
 12. What is the use of undo option?
 13. What is a work book?
 14. Name any two types of charts that can be drawn through Excel sheet.
 15. How to open an existing work sheet?
 16. Distinguish between cell and cell address.
 17. How variables are declared in Visual Basic?
 18. Define shadowing.
 19. What is an event?
 20. Name any two branching statements in Visual Basic.
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- PART B — (5 × 12 = 60 marks)
- Answer ALL questions.
21. (a) What are the characteristics of good GUI?
Or
(b) Give the importance of the descriptions in the control panel.
 22. (a) How to create and open a document in MS Word?
Or
(b) Discuss the usage of mail merge in MS-Word.
 23. (a) What are the salient features of MS-Excel?
Or
(b) Explain the technique of creating charts through Excel sheets.
 24. (a) Discuss on Msg box and Check box.
Or
(b) Explain the concept of event driven programming.
 25. (a) How multiple forms are used in Visual Programming?
Or
(b) Discuss on :
(i) Event handling
(ii) Control array.

Paper VII — INFORMATION TECHNOLOGY AND ITS APPLICATIONS

(For those who joined in July 1999 and after)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (20 × 2 = 40 marks)

1. Define Networking.
2. How Internet differs from Intranet?
3. What is the purpose of URL?
4. Give the importance of MIME.
5. Mention the expansion for TCP.
6. What is the purpose of search engine?
7. List any two ways to gain access to the Internet.
8. How to have the domain name?
9. What is the purpose of a browser?
10. What is use net?

11. Mention any two types of modems.
12. What is the purpose of Navigator?
13. Define a packet.
14. What is Netscape?
15. How to prepare the mail list?
16. Give the expansion for GIF.
17. Define web.
18. How to prepare a document on the web?
19. Name any two factors to be considered while selecting an ISP.
20. Give the expansion for IP.

PART B — (5 × 12 = 60 marks)

21. (a) Mention the concepts of Internet.
Or
(b) Discuss on Gopher Servers.
22. (a) Mention the applications of Internet.
Or
(b) Discuss the equipment needed for net connectivity.

23. (a) Explain the working style of modems.
Or
(b) How Internet works?
24. (a) How to send and receive Electronic Mail?
Or
(b) Explain the concept of video conferencing.
25. (a) How to improve the productivity through Internet?
Or
(b) How to increase the security measures in Internet?