

F-7170

Sub. Code

7BIT1C1

B.Sc. DEGREE EXAMINATION, APRIL 2022

First Semester

Information Technology

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions, choosing either (a) or (b).

1. Compare the analog and digital ages.
2. Define connectivity.
3. List the three different types of user interfaces.
4. What is groupware?
5. How does telephone communication work?
6. How is ISDN accessed?
7. What do you mean by Knowledge Storage?
8. What is data storage?
9. Mention the role of software in information technology.
10. List any four programming languages.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Elucidate the six elements of a computer and communication system.

Or

- (b) Describe the ethics of Information Technology.

12. (a) What is Intellectual Property Rights? Explicate them.

Or

- (b) List and explain any two specialized software tools in detail.

13. (a) Describe the video / voice communication software.

Or

- (b) Write the differences between analog and digital channels.

14. (a) Illustrate the concepts of multimedia and knowledge storage capacity.

Or

- (b) Elaborate the types of Data Management Systems.

15. (a) What are the steps involved in programming? Explain them.

Or

- (b) Write a short note on Internet Programming.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss the recent development in computer technology.
 17. Write the features of any two web browsers in detail.
 18. Describe the concepts of Electronic Data Interchange.
 19. How to store the data into magnetic tapes? Explain its processes.
 20. Illustrate the concepts of Object Oriented Programming in detail.
-

F-7171

Sub. Code

7BIT2C1

B.Sc. DEGREE EXAMINATION, APRIL 2022

Second Semester

Information Technology

PROGRAMMING IN C AND DATA STRUCTURES

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the uses of C language?
2. How do you declare a global variable in C?
3. What is an array?
4. Which operation can be performed on pointers?
5. Define unions.
6. Mention the use of a data file?
7. How many types of stack are there?
8. How do you create a linked list?
9. Define binary trees.
10. List the types of trees applications in data structure.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What is character set? Discuss about the types of character set?

Or

- (b) Give a brief account on static variables.

12. (a) Discuss about passing on array to function.

Or

- (b) Explicate Dynamic Memory Allocation.

13. (a) Illustrate and brief the syntax of Structure declaration with an example.

Or

- (b) How do you access command line parameters with in code?

14. (a) Discuss about Infix and Postfix.

Or

- (b) Explain about Lists in C with a program.

15. (a) What is a binary tree? Explain with example.

Or

- (b) Mention the application of trees in data structures with explanation.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Elucidate about the branching and looping statements with examples.
17. Explicate the passing pointers to functions.

18. Give a detailed study report about Data Files.
 19. Illustrate the representing stacks in C.
 20. What are trees and explain about the binary tree representing with example?
-

F-7173

Sub. Code

7BIT4C1

B.Sc. DEGREE EXAMINATION, APRIL 2022

Fourth Semester

Information Technology

OPEN SOURCE SOFTWARE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List the Types of Open Source Software?
2. What is a Kernel?
3. Define Field.
4. List any two data types in MySQL.
5. Define Web.
6. List any five operators in PHP.
7. How to typecast in Python?
8. What are Lists?
9. Mention the use of a Parser?
10. Give the syntax for variable declaration in PERL.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Give a short note on Need for Open Source software.

Or

- (b) Give the features of Linux in brief.

12. (a) Write a short note on MySQL.

Or

- (b) Give a short account on Working with Metadata using an example.

13. (a) Write PHP code to display an array of numerals.

Or

- (b) Explain with syntax on creating functions in PHP.

14. (a) Write a Python code to calculate and display sum, product and difference between two numbers.

Or

- (b) Write a short note about PIP.

15. (a) Elucidate the features of PERL.

Or

- (b) Illustrate the Data Statements in PERL.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about Cloning, Signalling and Scheduling in Linux.

17. Explicate Sorting Query Results in detail using MySQL.

18. Mention the procedure to connect PHP to MySQL database with an example.
 19. List any ten events in JavaScript and explain any five of them with suitable examples.
 20. Briefly explain about Subroutines and Packages in PERL.
-

F-7177

Sub. Code

7BITE2A

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Fifth Semester

Information Technology

Elective : COMPUTER NETWORKS

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define networks.
2. Expand ISDN.
3. State the meaning of sliding window protocols.
4. What do you mean by ALOHA?
5. Mention any two uses of firewalls?
6. What is fragmentation?
7. Write the various services of transport layers.
8. Define UDP.
9. Expand
 - (a) JPEG.
 - (b) MPEG.
10. What is WWW?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Expound in short on the uses of computer networks.

Or

- (b) Explicate briefly on communication satellites.

12. (a) Illustrate the concept of Error Detection.

Or

- (b) What is HDLC? Write note on it.

13. (a) Explain briefly on ATM LANs.

Or

- (b) Give an account on routing.

14. (a) What is multiplexing? Write note on it.

Or

- (b) Mention the purpose of the User Datagram protocol.

15. (a) Write short note about data compression.

Or

- (b) Briefly explain about Multimedia.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Elaborate the concept of Transmission Media.

17. Discuss in detail the multiple access protocols.

18. Explain
 - (a) Fragmentation.
 - (b) Firewalls.
 19. Discuss in detail about TCP and UDP.
 20. Elaborate the concept of Cryptography.
-

F-7179

Sub. Code

7BIT6C1

B.Sc. DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Information Technology

SOFTWARE ENGINEERING

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is System Engineering?
2. Specify the reasons for the failure of Water fall model.
3. Define software requirement.
4. Differentiate top-down and bottom-up software cost estimation approaches.
5. Differentiate architectural and detailed design.
6. State the main use of automated testing tools.
7. Mention the automated testing tools.
8. Differentiate black box and white box testing.
9. Define measurement in software quality.
10. Define ISO 9000 quality standards.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Briefly discuss the quality factors.

Or

- (b) Discuss the various managerial issues involved in project development.

12. (a) Write a short note on estimating software maintenance costs.

Or

- (b) Explain the types of software cost factors.

13. (a) Write a short note on various Design guidelines.

Or

- (b) Elaborate any two structured coding techniques.

14. (a) What are the different types of system testing? Discuss them.

Or

- (b) Give a brief account on Unit Testing.

15. (a) Describe the software quality concepts.

Or

- (b) What is the objective of formal technical reviews? Discuss.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss the various activities of software project planning.
 17. Give an account on Software requirement specification.
 18. Explain the fundamental concepts of design notation and design techniques.
 19. Brief the Software Configuration Management and its processes.
 20. Elaborate the concepts of software quality assurance.
-

F-7180

Sub. Code

7BIT6C2

B.Sc. DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Information Technology

OPERATING SYSTEM AND SYSTEM SOFTWARE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. List out the functions of operating systems.
2. Define system calls.
3. What do you mean semaphores?
4. Mention the features of Windows 7.
5. What is thrashing?
6. Mention any four attributes of files.
7. Give the various / instruction sets.
8. What are literals?
9. Write any two functions of loaders.
10. What do you mean by dynamic linking?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write short note on history of operating system development.

Or

- (b) Describe about cache memory and its advantages.

12. (a) Describe the need for multithreading models.

Or

- (b) Write short note on process scheduling mechanisms.

13. (a) Discuss the various file allocation methods.

Or

- (b) Write short note about on disk sharing and protection mechanisms.

14. (a) Illustrate the SISC machine architecture.

Or

- (b) Mention the various addressing modes in modern computer.

15. (a) What are the options available in loader design?

Or

- (b) Write short note on MSDOS linker.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write brief note on multiprocessor and multicore organization.

17. Describe critical section problem in process synchronization.

18. Explain in detail the paging and demand paging memory managements.
 19. Discuss about instruction formats and program relocation.
 20. Explain the algorithm and data structures used for linking loader.
-

F-7181

Sub. Code

7BIT6C3

B.Sc. DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Information Technology

PRINCIPLES OF MULTIMEDIA

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Multimedia
2. What is evaluation?
3. Describe software.
4. What is Hypertext?
5. Explain about graphics.
6. Name any four audio file formats.
7. Define animation.
8. Define Storyboarding.
9. Describe internet browser.
10. What is website?

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write the use of Multimedia in markets.

Or

- (b) Clarify the concept of products and evaluation.

12. (a) Explain the concept of multimedia architecture.

Or

- (b) Neatly sketch the elements of text in detail.

13. (a) Clarify the concept of images and color.

Or

- (b) How do you use the digital audio system?

14. (a) What are the characteristics of digital video?

Or

- (b) Clarify the concept of computer animation.

15. (a) How do you use the categories of authoring tools?

Or

- (b) Write a short note on Internet.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Briefly explain the concept of resources for multimedia developers.
 17. Elucidate the concept of text in multimedia applications.
 18. How do you obtain the images for multimedia use?
 19. Neatly sketch the concept of content organizational strategies.
 20. Explain the concept of design consideration for webpage.
-

F-7182

Sub. Code

7BITE3A

B.Sc. DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Information Technology

Elective: MOBILE COMMUNICATION

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What do you mean by Spread Spectrum?
2. List out the uses of Antennas.
3. Mention the motivation for a specialized MAC.
4. Write the major elements of IMT 2000 system architecture.
5. Differentiate Infra red and radio transmission.
6. Mention the uses of Access pointer control protocol.
7. Why COA entity is needed for mobile IP?
8. List out the purpose of Dynamic Host Configuration Protocol.
9. Write note on support for mobility.
10. What is WWW?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Enumerate the frequencies for radio transmission.

Or

- (b) Write short note on cellular systems.

12. (a) Explain the handover and localization techniques in GSM.

Or

- (b) Write short note on (i) CDMA (ii) TDMA.

13. (a) Define wireless ATM. Also describe the functions of WATM.

Or

- (b) Explain the security features of Bluetooth.

14. (a) Give a brief account on Mobile Transport Layer

Or

- (b) Write short note transaction oriented TCP.

15. (a) Describe the concepts of Consistency in File system.

Or

- (b) Write a short note on HTTP.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss various types of multiplexing techniques.
17. Explain in detail the digital audio and digital video broadcasting.

18. Discuss the system architecture and protocol architecture of IEEE 802.11.
 19. Explicate the concepts of mobile IP and Ad hoc networks.
 20. Explain the components and interface of the WAP architecture.
-

F-7183

Sub. Code

7BITE3B

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Sixth Semester

Information Technology

Elective : E-COMMERCE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. What is the importance of E-Commerce?
2. Define Media Convergence.
3. What are the types of credit cards?
4. What is the risk involved in Electronic payment?
5. What is meant by Electronic Data Interchange?
6. Define VAN.
7. What are the two main types of micro marketing?
8. Define Broadcasting.
9. Write a note on Software Agents
10. What is known as Information Filtering?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on Internet Applications.

Or

- (b) Explain: Components of I-Way.

12. (a) Give a brief note on Digital Token-based Electronic Payment Systems.

Or

- (b) Explain the concept of smart cart and its advantages.

13. (a) What are the benefits of EDI? Explain.

Or

- (b) What are the different types of Financial EDI? Explain.

14. (a) Write a note on Information Filtering.

Or

- (b) Explain the concept of Market Research.

15. (a) What are, the advantages in On-line Education?

Or

- (b) List the properties of Mobile Software Agents.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the various Stages of Internet Growth.

17. Illustrate the types of Electronics payment systems.

18. Explain EDI software implementation.
 19. Explain the concept of Electronic commerce catalogs in details.
 20. Elucidate: The Technological Components of Education on-demand.
-