S–2054	Sub. Code
	22BIT1C1

B.Sc. DEGREE EXAMINATION, APRIL 2024.

First Semester

Information Technology

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define ALU.
2. Illustrate block diagram of computer.
3. Compare RAM and ROM.
4. What is virtual memory?
5. Convert $(98)_{10}$ to octal system.
6. Differentiate compiler and interpreter.
7. Write a note on protocol.
8. What are the LAN topologies?
9. Define Email.
10. What is WWW?

Part B (5 × 5 = 25)

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

11. (a) Discuss the Evolution of Computer.

Or

(b) Demonstrate the limitation of computer.

12. (a) Discuss about printer and its types.

Or

(b) Write a brief note on EPROM and EEPROM.

13. (a) Discuss about computer languages in detail.

Or

(b) Convert the binary to octal number: 1011.01101.

14. (a) What are the characteristics of Modem? Explain.

Or

(b) Discuss about Data Transmission Medias.

15. (a) Write a note on Internet Protocol.

Or

(b) List the advantages and disadvantages of Email.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Illustrate the classification of computer.

17. Write a detailed note on optical disks with neat sketch.

18. Explain in detail about Instruction Cycle.

19. Write a detailed note on Network and its types.

20. What are the formatting tags available in HTML? Explain.

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S–2055

Sub. Code
22BITA1

U.G. DEGREE EXAMINATION, APRIL 2024

Information Technology

Allied – FUNDAMENTALS OF COMPUTER

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions

1. Write the concept of input-process-output.
2. Define ALU.
3. Write a note on CPU registers.
4. Compare PROM and EPROM.
5. What is software?
6. List out the output devices.
7. Define Process.
8. Write the three kinds of control structures.
9. Define Internet.
10. What is Domain name?

Part B (5 × 5 = 25)

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

11. (a) Describe about application of computers in detail.

Or

(b) Discuss about the classification of microprocessors.

12. (a) Explain the types of storage devices in detail.

Or

(b) Discuss about usage of magnetic disk in detail.

13. (a) Write short notes on working of I/O system.

Or

(b) What are the different kinds of application software? Explain.

14. (a) Write about memory management in detail.

Or

(b) Describe about control structures in detail.

15. (a) Discuss about important internet services in detail.

Or

(b) Elucidate about Internet Address in detail.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain about the components of computer in detail.

17. Elucidate categories of primary memory in detail.

18. Write the working procedure of I/O system.

19. Describe about Program development Life cycle in detail.

20. Write a detailed note on uses of Internet.

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S–2056	Sub. Code
	22BIT2C1

B.Sc. DEGREE EXAMINATION, APRIL 2024

Second Semester

Information Technology

PROGRAMMING IN JAVA

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. List out the features of Java.
2. What is World Wide Web?
3. Mention the various logical operators in Java.
4. What do you mean by labeled loops?
5. What do you mean by abstract class?
6. How do you accessing the class members?
7. List out the any two built-in exception.
8. How do you stopping and blocking a thread?
9. What do you mean by is an Applet?
10. How do you draw a bar charts?

Part B (5 × 5 = 25)

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

11. (a) Write a simple Java program to display your bio data.

Or

(b) Illustrate the various data types available in Java.

12. (a) Illustrate the various control statements in Java.

Or

(b) Write a java program to print the numbers form 1000, 1100 .....5000 using While and for loop.

13. (a) Explain in detail the method overriding and method overriding.

Or

(b) Describe about strings in Java with simple programs.

14. (a) Write a Java program to print the message "Welcome" in 10 times using threads.

Or

(b) Describe about Creating Packages and accessing packages in Java.

15. (a) Enumerate the life cycle of Applet.

Or

(b) Write short note on working with File objects.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Enumerate the various concepts Object Oriented Programming.

17. Explain the various operators available in lava.

18. Illustrate interfaces and its implementation.

19. Write a Java program to implement the array out of bounds exception.

20. Write Java program to draw a human face using AWT.

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S–2057	Sub. Code
	22BITA2

U.G. DEGREE EXAMINATION, APRIL 2024

Information Technology

Allied – DIGITAL ELECTRONICS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. What are logic gates?

2. Specify any two applications of Hexadecimal Number System.

3. Define Encoders.

4. What is meant by Excess-3 code?

5. State the 2's complement value of 5.

6. Define Fast adder.

7. What does TTL stand for in digital electronics?

8. What is flip-flop? Draw the logical symbol of flip-flop.

9. Specify the primary uses of shift register.

10. Mention any two applications of counter.

Part B (5 × 5 = 25)

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

11. (a) Classify the logic gates with truth table and logic symbols.

Or

(b) Draw and explain the functions of Multiplexer.

12. (a) Convert the following decimal numbers into binary and octal:

(i) 970

(ii) 42

Or

(b) Write a short note on Fixed Point Representations.

13. (a) How to perform binary addition? Draw the circuit used for binary addition.

Or

(b) Elaborate the procedures to represent sign-magnitude numbers.

14. (a) What does a Schmitt trigger do? How does it work?

Or

(b) Describe the logical design of JK flip flop.

15. (a) Explicate the functionalities of Synchronous Counters.

Or

(b) What are decoding gates used for? Explain with circuit diagram.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Discuss the functions of Seven Segment Decoders with neat diagram.

17. Convert the following decimal fractions into binary, octal and hexadecimal : 10.125.

18. State and elaborate the concepts of Half Adder and Full Adder.

19. Give a brief account on RS Flip-Flops and Edge-triggered RS Flip-Flops.

20. Elaborate the different types of Registers in detail.

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S–2058

Sub. Code
22BIT3C1

B.Sc. DEGREE EXAMINATION, APRIL 2024

Third Semester

Information Technology

PHP PROGRAMMING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Section A (10 × 2 = 20)

Answer **all** the questions.

1. What is hyperlink?
2. List out the control elements used for creating forms.
3. What is Constant? Give Example.
4. What are the Looping statements used in PHP?
5. Define Index based Array.
6. Write the query for string concatenation.
7. What is directory?
8. Define Exception.
9. What is Cookie?
10. Write the update query for database.

Section B (5 × 5 = 25)

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

11. (a) How do you create a table? Explain with example.

Or

(b) Write a short note on incorporating sound and video on web page.

12. (a) Clarify the concept of Looping statements with example.

Or

(b) How do you handle the forms? Explain.

13. (a) How do you create looping with associative array using foreach()?

Or

(b) What is call by value and Call by reference? Explain with example.

14. (a) Explain the copying and renaming a file with examples.

Or

(b) How do you send and receive the emails? Explain.

15. (a) How do you delete the cookies in PHP? Explain.

Or

(b) Explain the process of creating connection with MySql database.

Section C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a HTML program to create a form for opening a savings bank account.

17. Write a PHP program to create student mark statement using control structures.

18. Enumerate the concept of string operations with example.

19. Briefly Explain the concept of Exception Handling with examples.

20. Discuss in detail about registering session variables and destroying session variables.

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S–2059	Sub. Code
	22BIT3C2

B.Sc. DEGREE EXAMINATION, APRIL 2024

Third Semester

Information Technology

DATABASE MANAGEMENT SYSTEMS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. What is database system?
2. List out any two applications of Database systems.
3. Define Subschema.
4. Mention the advantages of Normalizing the table.
5. What do you mean by cursors?
6. Write the uses of Joins in Query.
7. Define Parallelism.
8. What are distributed transactions?
9. Mention the uses of Indexed files.
10. List out the uses of secondary storage devices.

Part B (5 × 5 = 25)

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

11. (a) Write short note on relational model.

Or

(b) Illustrate about database languages and its advantages.

12. (a) Define keys. Write note on different keys.

Or

(b) Write short note on functional dependencies with example.

13. (a) Illustrate the various aggregate functions in MYSQL.

Or

(b) Write short note on Inner Join and Outer Join with an example in MYSQL.

14. (a) Enumerate the client-server architectures with diagram.

Or

(b) Write short note on distributed query processing.

15. (a) Write short note on Storage and file structure.

Or

(b) Compare magnetic disk and flash storage.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Enumerate the different views of data.

17. Describe about database schema and schema diagrams.

18. Explain in detail the various commands available in DDL, DML, DCL with their syntax and uses.

19. Enumerate the distributed databases in detail.

20. Discuss the following Static Hashing and B-tree Index files.

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S–2060	Sub. Code
	22BITA3

U.G. DEGREE EXAMINATION, APRIL 2024

Information Technology

Allied – MULTIMEDIA AND ITS APPLICATIONS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Multimedia.
2. What do you mean by hypertext?
3. Compare RGB and CMYK.
4. What is digital audio?
5. Define Morphing.
6. What is CCD?
7. Define SCSI.
8. Compare RAM and ROM.
9. What is Panel?
10. What are the types of tweens in multimedia?

Part B (5 × 5 = 25)

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

11. (a) Describe about use of multimedia in detail.

Or

(b) Explain about menus for navigation in interactive multimedia.

12. (a) How to capture and edit images? Explain.

Or

(b) Write the advantages and disadvantages of MIDI.

13. (a) Write the steps to make a bouncing ball animation.

Or

(b) How to shoot and edit the video? Explain.

14. (a) Discuss about types of communication devices.

Or

(b) Write a note on editing tools for animation.

15. (a) Write the procedure to work with shapes.

Or

(b) Describe in detail about timeline panels.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write the steps to choose the designed text in Fonts.

17. Explain in detail about computer color models.

18. How to make animation video? Explain.

19. Illustrate the storage devices and its types in detail.

20. Write in detail about interactive motion graphics for the web.

S–2061

Sub. Code
22BIT4C1

B.Sc. DEGREE EXAMINATION, APRIL 2024

Fourth Semester

Information Technology

PYTHON PROGRAMMING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Variable.
2. What is a Data Type?
3. Define Lists.
4. What is multiple assignment in python?
5. Define Function.
6. What is Inheritance?
7. What is threading?
8. Define Raising Exceptions.
9. What is Event programming?
10. What is web form?

Part B (5 × 5 = 25)

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

11. (a) Give a short note on how comments can be used in Python.

Or

(b) Develop a step by step procedure on how you would find if a number is even or not in Python.

12. (a) What is Nested Lists? Explain with an example.

Or

(b) How to create and access values in Tuples?

13. (a) Explain the types of arguments in functions.

Or

(b) Briefly explain the Read / Write operations on a file.

14. (a) Write a note on handling exceptions in python.

Or

(b) Explain the Assert statements in exception handling.

15. (a) Write a code to create Label and Button Widgets in Tkinter.

Or

(b) List and explain the keyboard and mouse events in TKinter.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. How can you make a distinction between various conditional statements available in Python? Explain.

17. How to Add and Modify an item in a Dictionary? Explain in detail.

18. Explain the method overloading in python with an example.

19. Discuss the threading module in detail.

20. How to create web programming using flask in Tkinter? Explain.

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S–2062	Sub. Code 22BIT4C2

B.Sc. DEGREE EXAMINATION, APRIL 2024

Fourth Semester

Information Technology

COMPUTER NETWORKS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What are the uses of Internet?

2. List out any two standards of network.

3. Write any two design issues in data link layer.

4. Mention the need for collision free protocols.

5. Define firewalls.

6. What do you mean by internetworking?

7. What are the performance issues involved in transport layer?

8. How to measure network performance?

9. List out the different MPEG standards.

10. Expand DNS and SNMP.

Part B (5 × 5 = 25)

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

11. (a) Write short notes on Communication satellites.

Or

(b) Explain about network hardware and network software.

12. (a) Illustrate on error detection and Error Control.

Or

(b) Write short note on Multiple Access protocols.

13. (a) Describe about services categories in ATN networks.

Or

(b) Write short note on network layer in the internet.

14. (a) Enumerate the transport services provided by transport layer.

Or

(b) Illustrate the protocols for Gigabit network.

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

Or

(b) Explain briefly about the electronic mail privacy.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain in detail the OSI reference model with diagram.

17. Describe about the sliding window protocols.

18. Enumerate the tunneling and fragmentation with an example.

19. Write a brief note on TCP and UDP.

20. Illustrate the secret and public key algorithms.

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S–2063	Sub. Code
	22BITA4

U.G. DEGREE EXAMINATION, APRIL 2024

Information Technology

Allied – OPEN SOURCE TECHNOLOGIES

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define GET method.
2. Write the basic script of PHP.
3. Define an Array.
4. How to concatenate string values in PHP?
5. Illustrate Try and Catch statement.
6. What is Email?
7. What is indentation?
8. How to add items in dictionary?
9. Write about regular expressions.
10. How to open files in python?

Part B (5 × 5 = 25)

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

11. (a) What are the data types in PHP? Explain.

Or

(b) Write the advantages of open sources in detail.

12. (a) Write a program to add all the integers between 0 to 30 and display the total using PHP script.

Or

(b) How to search and replace the string in the file using PHP script?

13. (a) How to track and debug the errors in PHP? Explain.

Or

(b) Write the steps to create and delete the folder in PHP.

14. (a) How to sort items in dictionary? Explain.

Or

(b) Explain about types of expressions in detail.

15. (a) What are the string functions available in python? Explain.

Or

(b) Write a note on call by function using python with example.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write the procedure to handle HTML form with PHP.

17. Discuss about looping with index based array in detail.

18. Explain in detail about file operations in PHP with example.

19. Illustrate the general form of looping statements in python with example.

20. How to handle exceptions in python? Explain with example.

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