

**F-4619**

**Sub. Code**

**7BIT6C1**

**B.Sc DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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 Software?
2. Define Accuracy.
3. How to measure product complexity?
4. What is critical design review?
5. Differentiate Coupling and Cohesion.
6. List the various elements of data design.
7. State uses of automated testing tools.
8. Differentiate unit testing and system testing.
9. Define software quality.
10. State any two software quality standards.

**Part B**

(5 × 5 = 25)

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

11. (a) Explain various the managerial issues in software engineering.

Or

- (b) Describe the steps involved in developing a solution strategy.

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

Or

- (b) How to estimate software cost? What are the factors influencing software cost?

13. (a) Illustrate any two design notations with appropriate depictions.

Or

- (b) Discuss the guidelines considered for coding style.

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

Or

- (b) Write a brief note on Configuration Management.

15. (a) What are the factors influencing Software Quality? Justify them.

Or

- (b) Elaborate the concepts of Statistical Software Quality Assurance.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the steps involved in Phased Life Cycle model.
17. Narrate the format of a Software Requirement Specification.
18. Illustrate any two software design techniques.
19. What are the strategic issues available in software testing? Explain them.
20. Discuss the goals of Software Quality Assurance.

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**F-4620**

**Sub. Code**

**7BIT6C2**

**B.Sc DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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** questions.

1. Define Operating systems.
2. What are the advantages of Cache memory?
3. What are threads?
4. Mention the four necessary conditions for deadlock.
5. What do you mean by Paging?
6. List out the various addressing modes.
7. Mention the functions of assemblers.
8. Differentiate one pass assemblers and multi pass assemblers.
9. What is bootstrap loader?
10. List out the uses of linkage editors.

**Part B**

(5 × 5 = 25)

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

11. (a) Write short note on system calls.

Or

- (b) Describe the multiprocessor and multicore organizations.

12. (a) Write short note on critical section problem.

Or

- (b) Enumerate the operations on processes and interprocess communications.

13. (a) How does the file can be organized? Discuss it.

Or

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

14. (a) Write short note on features of machine independent assembler.

Or

- (b) Give a detailed account on features of machine dependent assembler.

15. (a) How to implement MSDOS linker?

Or

- (b) What are the features of machine dependent loader? Discuss it.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail the operating system structures and operations.
  17. Discuss about interprocess communication with example.
  18. Write brief note on page replacement technique in demand paging.
  19. Enumerate the dimplified Instructional computer with diagram.
  20. How to design an absolute loader? Explain in detail.
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**F-4621**

**Sub. Code**

**7BIT6C3**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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. List any two Multimedia Software.
3. Expand JPEG?
4. What are the types of Images?
5. What is AAC?
6. Define Audio
7. What is Animation?
8. Define Playback.
9. Define Authoring.
10. Expand HTTP.

**Part B**

(5 × 5 = 25)

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

11. (a) List and explain the different Multimedia Computer Components.

Or

- (b) What is Content and Copyright? Explain.

12. (a) Mention the features of an Multimedia Computer architecture.

Or

- (b) Write a short note on the Elements of Text.

13. (a) List the events where Audio is used in Computer Applications.

Or

- (b) Briefly write about WAV audio format.

14. (a) Elucidate the features of a Digital Video.

Or

- (b) What are the Building Blocks for Multimedia Products?

15. (a) Mention the Features of a Multimedia Authoring Tool.

Or

- (b) Mention the various Internet functions with regard to Multimedia in brief.



**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Give a detailed account on the resources required for Multimedia Developers.
  17. Elucidate on Operating Systems and software.
  18. Explain about the various phases in Digital Sound Processing.
  19. Write in detail with examples about Storyboarding.
  20. List and explain the Categories of Authoring Tools in Multimedia.
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**F-4622**

**Sub. Code**

**7BITE3A**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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 is Cellular System?
2. Specify any two Benefits of Wireless Transmission.
3. Mention the use of VLR in GSM technology.
4. Expand DAB and DVB
5. Differentiate Infra red and radio transmission.
6. What are the advantages provided by WLAN?
7. List out the main features of TCP.
8. Define Mobile IP.
9. What is meant by Reintegration in a file system?
10. What is the primary advantage of HTTP.

**Part B**

(5 × 5 = 25)

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

11. (a) Illustrate the various signal propagation effects.

Or

- (b) Illustrate the various radiation patterns of antennas.

12. (a) Give a brief account on Satellite system.

Or

- (b) Explain the GSM architecture with its functional components.

13. (a) Explain the evolution of Mobile IP.

Or

- (b) List out and define any five types of Wireless LAN.

14. (a) List and discuss the WATM services.

Or

- (b) How does IEEE 802.11 solve the hidden terminal problem? Discuss.

15. (a) Explicate the concepts of WWW.

Or

- (b) Write a short note on Hyper Text Markup Language.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Give a brief account on multiplexing techniques.
17. Describe UMTS system architecture with its functionalities.
18. Elaborate the concept of Ad HOC Networks.
19. Give a brief account on following concepts:
  - (a) Indirect TCP. (5)
  - (b) Snooping TCP. (5)
20. Explain the components and interface of the WAP architecture.

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**F-4623**

**Sub. Code**

**7BITE3B**

**B.Sc DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**Sixth Semester**

**Information Technology**

**Elective: E-COMMERCE**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is media convergence?
2. What are the applications of Internet?
3. Why does security important in E-Commerce?
4. State the different modes of payments in E-Commerce.
5. Define EDI.
6. What is Internet based EDI?
7. Mention the uses of E-Marketing.
8. Define Electronic Commerce Catalogs.
9. What do you mean by computer based training?
10. Why do need digital copyrights?

**Part B**

(5 × 5 = 25)

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

11. (a) Explain the usage of E-Commerce applications.

Or

- (b) Describe the architecture of WWW.

12. (a) What is hypertext publishing? Explicate with an example.

Or

- (b) Elaborate the security mechanisms adopted for EPS.

13. (a) Give a short note on EDI envelops.

Or

- (b) Explain the role and responsibilities of EDI coordinator in EDI implementation.

14. (a) Why does commercial advertising on Internet needed? Justify.

Or

- (b) List and explicate the different types of ISPs.

15. (a) State and explain any two tools used for computer based education and training.

Or

- (b) Write the properties of Software Agents.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the consumer information access devices in detail.
  17. Discuss the various types of electronic payment systems.
  18. Write and elaborate the different standards of EDI.
  19. Why does commercial advertising on Internet needed? Justify.
  20. Discuss the technological components of education on demand
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**F-4879**

**Sub. Code**

**7BITA3**

**U.G. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**Information Technology**

**Allied – DISCRETE MATHEMATICS**

**(CBCS 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(10 × 2 = 20)**

Answer **all** questions.

1. What are atomic statements?
2. What is tautology?
3. Define elementary sum.
4. What is conjunctive normal form?
5. Define graph.
6. What is cycle in graph?
7. Define cut set and cut vertices.
8. What is meant by spanning tree?
9. What is meant by equivalence relation?
10. Define Lattice.



**Part B**

(5 × 5 = 25)

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

11. (a) Mention different connectives with truth tables.

Or

- (b) What are the rules to generate well formed formula?

12. (a) Write a short note on open statements with example.

Or

- (b) Describe the principles of normal form.

13. (a) Write short note on connectedness in graph.

Or

- (b) Describe the following statements with example

(i) Paths

(ii) Edges

14. (a) Discuss about Hamiltonian graph with neat diagram.

Or

- (b) Narrate Dijkstra's algorithm with suitable example.

15. (a) Write short note on partial ordering and posets.

Or

- (b) Describe about sub lattices and special lattices.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain about conditional and compound statements with suitable example.
17. Write a brief note on theory of inference for predicate calculus.
18. Discuss about complete graph with suitable example.
19. Enumerate the Prim's algorithm with suitable example.
20. Describe different properties of Binary relation in a set and Boolean algebra.

**F-4880**

**Sub. Code**

**7BITA4**

**U.G. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary / Improvement/ Arrear Examinations**

**Information Technology**

**Allied – OPERATION RESEARCH**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define OR.
2. State Descriptive Model.
3. What are the essential characteristics of LPP?
4. What is Optimum Basic Feasible Solution?
5. Define Gomeory's Constraint.
6. State Zew-one integer programming problem.
7. What is Assignment Problem?
8. Name the solution methods of assignment problem?
9. What is Transportation Problem?
10. Describe an unbalanced Transportation Table.

**Part B**

(5 × 5 = 25)

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

11. (a) Explain the main Phases of Operation Research.

Or

- (b) Name some of the tools of Operation Research.  
Discuss with examples.

12. (a) A company makes two kinds of leather belts. Belt A is a high quality belt, and belt B is of lower quality. The respective profits are Rs.4.00 and Rs.3.00 per belt. Each belt of type A requires twice as much time as a belt of type B, and if all belts were of type B, the company could make 1000 belts per day. The supply of leather is sufficient for only 800 belts per day (Both A and B combined). Belt A requires a fancy buckle and only 400 buckles per day are available. There are only 700 buckles a day available for belt B.

Determine the optimal product mix.

Or

- (b) Use simplex method to solve the following LPP.

$$\text{Maximize } Z = 4x_1 + 10x_2$$

Subject to the constraints

$$2x_1 + x_2 \leq 50$$

$$2x_1 + 5x_2 \leq 100$$

$$2x_1 + 3x_2 \leq 90 \text{ where } x_1 \geq 0 \text{ and } x_2 \geq 0$$

13. (a) Formulate the dual of the following Linear programming problem:

$$\text{Maximize } Z = 5x_1 + 3x_2$$

Subject to the constraints

$$3x_1 + 5x_2 \leq 15$$

$$5x_1 + 2x_2 \leq 10 \text{ where } x_1 \geq 0 \text{ and } x_2 \geq 0$$

Or

- (b) Use Dual simplex method to solve the following L.P.P

$$\text{Minimize } Z = 3x_1 + x_2$$

Subject to the constraints

$$x_1 + x_2 \geq 1$$

$$2x_1 + 3x_2 \geq 2 \text{ where } x_1, x_2 \geq 0.$$

14. (a) A Pharmaceutical company is producing a single product and is selling it through five agencies located in different cities. All of a sudden, there is a demand for the product in another five cities not having any agency of the company. The company is faced with the problem of deciding on how to assign the existing agencies to despatch the product to needy cities in such a way that the travelling distance is minimized. The distance between the surplus and deficit cities (in km) is given in the following table:

	a	b	c	d	E
A	85	75	65	125	74
B	90	78	66	132	78
C	75	66	57	114	69
D	80	72	60	120	72
E	76	64	26	112	68

Or

- (b) A machine operator processes five types of items on his machines each week, and must choose a sequence for them. The set-up cost per change depends on the item presently on the machine and the set-up to be made according to the following table:

From Item	To Item				
	A	B	C	D	E
A	$\infty$	4	7	3	4
B	4	$\infty$	6	3	4
C	7	6	$\infty$	7	5
D	3	3	7	$\infty$	7
E	4	4	5	7	$\infty$

If the processes each type of item once and only once each week, how should he sequence the items on his machine in order to minimize the total set up cost?

15. (a) Obtain an initial basic feasible solution to the following Transportation Problem using the matrix minima method:

	D1	D2	D3	D4	Capacity
O1	1	2	3	4	6
O2	4	3	2	0	8
O3	0	2	2	1	10
Demand	4	6	8	6	

Or

- (b) Use Vogel's approximation method to obtain an initial basic feasible solution of the transportation problem

	D	E	F	G	Available
A	11	13	17	14	250
B	16	18	14	10	300
C	21	24	13	10	400
Demand	200	225	275	250	

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Elucidate the following  
(a) OR Techniques  
(b) OR Features
17. Use Big M method to  
Maximize  $Z = 2x_1 + x_2 + 3x_3$   
Subject to the constraints  
 $x_1 + x_2 + 2x_3 \leq 5$ ,  
 $2x_1 + 3x_2 + 4x_3 = 12$  where  $x_1, x_2, x_3 \geq 0$ .
18. Use branch and bound method to solve the following L.P.P.  
Maximize  $Z = 7x_1 + 9x_2$   
Subject to the constraints  
 $-x_1 + 3x_2 \leq 6$ ,  
 $7x_1 + x_2 \leq 35$ .  
 $x_2 \leq 7$  where  $x_1, x_2 \geq 0$  and are integers.
19. Consider the problem of assigning five jobs to five persons. The assignment costs are given as follows:

		Jobs				
		I	II	III	IV	V
Men	A	2	9	2	7	1
	B	6	8	7	6	1
	C	4	6	5	3	1
	D	4	2	7	3	1
	E	5	3	9	5	1

20. Find the optimum solution in the following transportation problem by Vogel's approximation method. Also obtain the optimal solution.

	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	Supply
S <sub>1</sub>	3	7	6	4	5
S <sub>2</sub>	2	4	3	2	2
S <sub>3</sub>	4	3	8	5	3
Demand	3	3	2	2	

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**F-4954**

**Sub. Code**

**7BIT1C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary / Improvement / Arrear Examinations**

**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.

1. What is an Information Technology?
2. State the reasons to follow ethics in Information Technology.
3. Define Software.
4. Name any two communication software.
5. What is Information Superhighway?
6. Define microcomputer.
7. State the features of Optical disk.
8. What is Database Management System?
9. What is MIS?
10. State any two features of Visual Programming.

**Part B**

(5 × 5 = 25)

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

11. (a) Describe the recent developments in Communication Technology.

Or

- (b) Elaborate the ethics of Information Technology.

12. (a) What is Intellectual Property Rights in Information Technology? Explain.

Or

- (b) What is presentation graphics software? Explain with two examples.

13. (a) How does telephone communication work? Illustrate its functions.

Or

- (b) Give a brief note on Virtual Office.

14. (a) Illustrate any two different storage devices.

Or

- (b) What are different types of database? Explain them.

15. (a) What is the role of software in information technology? Give explanation.

Or

- (b) Write a short note on programming languages.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the recent developments in Computer and Communication Technologies.
  17. Give a brief account on specialized software.
  18. Elaborate the concepts of Workgroup Computing.
  19. Illustrate the features of data management system.
  20. Discuss the features of Object Oriented Programming.
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**F-4955**

**Sub. Code**

**7BIT2C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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** the questions.

1. What are variables in C?
2. List down the various relational operators in C.
3. How to declare the pointers in C?
4. Write the advantages of dynamic memory allocation.
5. Write the differences between Structure and Union.
6. How do you passing structures to functions?
7. What is Queue?
8. Mention the uses of infix to postfix conversion.
9. Define binary tree.
10. How to represent the lists?

**Part B**

(5 × 5 = 25)

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

11. (a) Describe about static and global variables in C.

Or

- (b) Discuss the various types of operators in C.

12. (a) How do you define and processing an array?

Or

- (b) Write a C program to count the number of words in a given string.

13. (a) How to pass structures to a function? Give an example.

Or

- (b) Write a C program to create a data file.

14. (a) Write the procedures to implement the Infix, Postfix and Prefix using Stack.

Or

- (b) Write a short note on linked lists.

15. (a) Write brief note on the applications of a Tree.

Or

- (b) Draw a binary tree for the expression:

$M - P/A + G * T ** K / S.$

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write a C program to find the biggest of three numbers using nested IF statement.
17. What are the operations that can be performed on pointers? Narrate them.
18. Write a C program to print the student mark sheet using sequential files.
19. Explain the basic operations on stack.
20. What is Binary Tree? Write the applications of Binary Tree.

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**F-4956**

**Sub. Code**

**7BIT3C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary / Improvement / Arrear Examinations**

**Third Semester**

**Information Technology**

**JAVA PROGRAMMING**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Write any two benefits of OOP.
2. What are steps involved to implement a Java program?
3. Mention any two mathematical functions.
4. Write any four Bitwise operator.
5. Define array.
6. Define vector.
7. What are the types of errors?
8. What is Naming conversion?
9. What are the major sections of a web page?
10. What is an applet?

**Part B**

(5 × 5 = 25)

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

11. (a) What are the Applications of OOP?

Or

- (b) Write a note on Data Types in Java.

12. (a) Write a Java program to find the biggest among three numbers.

Or

- (b) Write a note on arithmetic and relational operators and with suitable example.

13. (a) Write a note on Method overloading.

Or

- (b) Explain two dimensional arrays with suitable examples.

14. (a) Explain the concept of hiding classes.

Or

- (b) Write a note on synchronization.

15. (a) What are the differences between applets and other applications in Java?

Or

- (b) Elucidate the core concept of graphics class.



**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain (a) Features of Java (b) Java and Internet.
  17. Describe various decision making and looping statements.
  18. Explain different forms of inheritance with suitable example.
  19. Explicate life cycle of a thread.
  20. Explain the concept of Applet Life Cycle.
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**F-4957**

**Sub. Code**

**7BIT4C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**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. What command and symbols are used while writing permissions in LINUX?
2. What is the maximum length for any file name under LINUX?
3. Write the two functions of sequence in MYSQL.
4. What are basic clauses of select statement.
5. Which tag is used to define PHP code?
6. Give difference between echo() and printO.
7. What are classes and objects in Python?
8. Write about the indentation in python.

9. How to write a variable name in PERL?
10. Define parser.

**Part B** (5 × 5 = 25)

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

11. (a) Explain the responsibility of LINUX administrator.  

Or

(b) List and explain the types of shells in LINUX.
12. (a) Differentiate client-side scripting and server-side scripting.  

Or

(b) Write a brief note on metadata along with its types in MYSQL.
13. (a) How to validate user input in PHP? Explain in detail.  

Or

(b) Explain difference between \$\_GET & \$\_POST.
14. (a) Illustrate the use of range() in python with an example.  

Or

(b) How to create a dictionary in python.
15. (a) Write a note on three basic file handles in PERL.  

Or

(b) Explain PERL manipulation in detail.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain the booting process of Linux operating system in detail.
17. Write the procedure to create a student database with attributes stud-ID, stud-name, DOB in MYSQL and create the form using PHP and explain how to establish connection from PHP to MYSQL.
18. Explain different methods of creating arrays in PHP.
19. Write a Python program to find the sum of natural numbers up to  $n$  where  $n$  is provided by user.
20. Elaborate the loop control statements in PERL with an example.

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**F-4958**

**Sub. Code**

**7BIT5C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations  
Fifth Semester  
Information Technology  
DATABASE MANAGEMENT SYSTEMS**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

1. What is DBMS?
2. What are constraints in ER diagram?
3. Define relational database design.
4. List out the 3NF in DBMS.
5. Define client/server system in DBMS.
6. What is heterogeneous distributed database?
7. Define data integrity.
8. Define view.
9. What is PL SQL in DBMS?
10. List out any two DBMS packages.

**Part B**

(5 × 5 = 25)

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

11. (a) Illustrate the concepts of Relational database.

Or

- (b) What is an ER diagram? Elaborate its components with an example.

12. (a) Describe the key features of Relational database.

Or

- (b) How to model the temporal data? Explain.

13. (a) Explicate the concepts of parallel system.

Or

- (b) Give a brief account on Distributed databases.

14. (a) How to create and maintain the tables in SQL? Give examples.

Or

- (b) What is schema object synonym? Illustrate its mechanisms.

15. (a) What are the different types of triggers? How to create them.

Or

- (b) Write a short note on SQL database transactions.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the object based and semi structured databases.
  17. Give a brief notes on Normalization.
  18. Differentiate homogeneous and heterogeneous database systems.
  19. Briefly explain the concept of data integrity and indexes.
  20. Describe the stored procedures in SQL with an example.
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**F-4959**

**Sub. Code**

**7BIT5C2**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary / Improvement / Arrear Examinations**

**Fifth Semester**

**Information Technology**

**VISUAL PROGRAMMING**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is Visual Programming?
2. Expand CLR.
3. Define classes.
4. What is polymorphism?
5. Define Timer control.
6. What is link labels?
7. Define ASP.
8. Define ASP.NET web pages.
9. What is ADO.NET?
10. List out any two features of ADO.NET.



**Part B**

(5 × 5 = 25)

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

11. (a) Illustrate the features of CLR.

Or

- (b) What is an .NET framework? Elaborate its libraries.

12. (a) Describe the key features of Exceptions.

Or

- (b) How to use the inheritance? Explain with example.

13. (a) Explicate the concepts of Rich text boxes.

Or

- (b) Give a brief account on Handling Panels and Group boxes.

14. (a) How to validate the server control? Give examples.

Or

- (b) How do you build the forms with web server controls? Explain.

15. (a) Explicate the features of ADO.NET.

Or

- (b) Write a short note on data management with ADO.NET.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the benefits of .NET.
  17. Give a brief notes on branching statements.
  18. Give a brief account on Handling Menus.
  19. Briefly explain the concepts of custom controls.
  20. How do you use the SQL server with ASP.NET with an example?
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**F-4960**

**Sub. Code**

**7BITE1B**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**Fifth Semester**

**Information Technology**

**Elective – COMPUTER GRAPHICS**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Write a note on presentation graphics.
2. List out some applications for large-screen displays.
3. What are the basic attributes of Line?
4. Define translation parameter.
5. What is meant by viewing transformation?
6. List out the various logical classification of input of graphical devices.
7. Define surface rendering.
8. Write any two three dimensional transformation commands.

9. Define front plane and back plane.
10. List out the differences between object-space methods and image-space methods.

**Part B** (5 × 5 = 25)

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

11. (a) Write short note on the devices digitizers and data glove.

Or

- (b) Describe about Color CRT monitor.

12. (a) Write a short note on various transformation functions.

Or

- (b) Discuss the following terms:

- (i) Rotation
- (ii) Reflection.

13. (a) What are the attributes of segment files? Discuss it.

Or

- (b) Describe in detail the interactive pictures.

14. (a) Write short note on three-dimensional graphics packages.

Or

- (b) Discuss in detail the general Three-Dimensional Rotations.

15. (a) Write a short note on viewing pipeline.

Or

(b) Write short note on parallel projections.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail the Midpoint Circle generating Algorithm with an example.
17. Discuss the composite transformations with a diagram.
18. Describe about various input functions used in graphics.
19. Write a brief note on rotation in three dimensional transformation.
20. Discuss in detail the back-face detection and depth-buffer algorithms with neat diagram.

**F-4961**

**Sub. Code**

**7BITE2A**

**B.Sc. DEGREE EXAMINATION, APRIL 2021 &  
Supplementary/Improvement/Arrear Examinations**

**Fifth Semester**

**Information technology**

**Elective: COMPUTER NETWORKS**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all the** questions.

1. Define computer networks.
2. Expand the term ISDN.
3. List out the uses 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. Write the need for network security.
10. What is WWW?

**Part B**

(5 × 5 = 25)

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

11. (a) Write short note on the uses of computer networks.

Or

- (b) Explicate briefly on communication satellites.

12. (a) illustrate the concept of Error Detection and correction.

Or

- (b) Describe about collision free protocols.

13. (a) Write short note on subnets.

Or

- (b) Give an account on routing algorithms.

14. (a) What are the performance issues involved in transport layer?

Or

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

15. (a) Write short note about JPEG and MPEG

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 Fragmentation and tunnelling in detail.
  19. Discuss in detail about TCP and UDP.
  20. Enumerate the private and public key algorithms.
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