Hall Ticket Number :										

R-17

Code: 7G154

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Python Programming

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

UNIT–I

1. Write in detail about the data types in python. 14M

OR

2. a) Apply indexing and slicing on an array in python. 7M

   b) Write a python program to fine whether a given number is prime or not. 7M

UNIT–II

3. List the methods to process lists in python and illustrate them with the suitable example. 14M

OR

4. a) Write about the converting lists into dictionary 7M

   b) Justify the use of function decorators in python 7M

UNIT–III

5. Write in detail about the features of Object oriented programming system. 14M

OR

6. a) Define class and object. 6M

   b) Discuss about the type of methods in class 8M

UNIT–IV

7. Illustrate zipping and unzipping of files in python with suitable example. 14M

OR

8. a) Assess the usage of pickle in python 7M

   b) Support the use of the seek() and tell() methods 7M

UNIT–V

9. Discuss in detail about thread synchronization 14M

OR

10. Write a python program with good logic to avoid deadlocks 14M

***

Hall Ticket Number :										

R-17

Code: 7G155

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Software Engineering

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Mention about the Unique Nature of Web Apps?	7M	CO1	L2
	b)	Explain about the Software Engineering Layers?	7M	CO1	L2
		OR			
2.	a)	Discuss about the Spiral model?	7M	CO1	L2
	b)	What are the general principles of software engineering practice?	7M	CO1	L1
		UNIT–II			
3.	a)	Define the UML? What is the need of UML in Software development process?	7M	CO2	L4
	b)	How UML model Supplement the Use Case?	7M	CO2	L4
		OR			
4.	a)	How we can recognize the multiple view points from stakeholders?	7M	CO2	L4
	b)	Explain about the Scenario-Based Modeling?	7M	CO2	L2
		UNIT–III			
5.	a)	How the requirements model is translated into the design model?	7M	CO3	L4
	b)	Draw Use case Diagram for Library Management System?	7M	CO3	L6
		OR			
6.	a)	What is the reason for strive to create independent models by developers?	7M	CO3	L2
	b)	Explain the various dimensions of the design model?	7M	CO3	L2
		UNIT–IV			
7.	a)	Explain the importance of coding in SDLC?	7M	CO4	L2
	b)	Write Short notes on Beta Testing?	7M	CO4	L1
		OR			
8.	a)	Explain about the Golden rules in User Interface Design	7M	CO4	L2
	b)	Discuss about the Black Box Testing?	7M	CO4	L2
		UNIT–V			
9.		What is the need of Software Project Management in Software Engineering?	14M	CO5	L4
		OR			
10.	a)	What are the attributes for measuring the Quality of a software?	7M	CO5	L2
	b)	Write short notes on Software Reliability?	7M	CO5	L2

***

Hall Ticket Number :										

R-17

Code: 7G151

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Advanced Java Programming

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

			Marks	CO	Blooms Level
		UNIT–I			
1.		Explain the JavaFX application skeleton with suitable example program.	14M	1	2
		OR			
2.	a)	Explain the life cycle methods of JavaFX application.	7M	1	2
	b)	Discuss about stage and Scene.	7M	1	2
		UNIT–II			
3.	a)	Write a JavaFX application to display image on the Label.	7M	2	3
	b)	List out JavaFX controls. Explain any two.	7M	2	2
		OR			
4.		Demonstrate RadioButton component functionality with an example program.	14M	2	2
		UNIT–III			
5.		Explain a) DriverManager interface b) Connection interface c) ResultSet interface	14M	3	2
		OR			
6.	a)	List and explain the methods to make changes to ResultSet.	7M	3	2
	b)	Explain cursor movement methods in ResultSet.	7M	3	2
		UNIT–IV			
7.		List out and explain methods from ServletRequest interface and ServletResponse interfaces.	14M	4	2
		OR			
8.	a)	Differentiate between GenericServlet and HttpServlet.	4M	4	4
	b)	Develop a HttpServlet application to read parameters from HTML form	10M	4	3
		UNIT–V			
9.		How can you use jsp:include and jsp:forward action tags. Demonstrate with an example program	14M	5	2
		OR			
10.	a)	Develop a jsp application to forward a request from one jsp page to another jsp page.	8M	5	3
	b)	Differentiate between Servlet and JSP.	6M	5	3

***

Hall Ticket Number :										

R-17

Code: 7G152

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Compiler Design

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

			Marks	CO	BL
		UNIT–I			
1.	a)	Explain the different phases of the Compiler, showing the output of each phase using an example for the statement z = (a*20) + b – c?	10M	1	2
	b)	What is the difference between a pass and phase of a compiler?	4M	1	3
		OR			
2.	a)	Give the reasons for separating Lexical analysis and Syntax analysis into two Phases?	4M	1	4
	b)	Define Recursive Descent Parser? Construct Recursive Descent Parser for the following grammar. S → Ab / Ba A→ Ba / BB / ab B → ab / bb / b	10M	2	5
		UNIT–II			
3.	a)	Distinguish operator precedence and simple precedence parser?	7M	3	5
	b)	List LR(0) items for given grammar S→id(P), P→id, E→id(E) **/** id	7M	3	1
		OR			
4.	a)	Construct the LALR parsing table for the grammar. S →CC C →cC | d	10M	3	5
	b)	Explain ways to determine precedence relations between pair of terminals>	4M	3	2
		UNIT–III			
5.	a)	Discuss in detail about the Syntax Directed Definitions?	7M	3	2
	b)	Write the algorithm to test structural equivalence of two type expressions s and t?	7M	3	5
		OR			
6.	a)	Explain how an L-attribute grammar can be converted into a translation scheme.	7M	3	1
	b)	Write Syntax Direct Translation for converting infix expression to post fix form.	7M	3	5
		UNIT–IV			
7.		Write quadruple, triples and indirect triples for the following expression? (x+y)*(y+z)+(x+y+z)	14M	4	5
		OR			
8.	a)	Discuss about the Heap allocation strategy of runtime environment with an example?	8M	4	2
	b)	Compare three different Storage allocation strategies?	6M	4	5
		UNIT–V			
9.	a)	What is a Basic block? With a suitable example explain procedure for identifying basic blocks.	7M	5	3
	b)	Explain machine dependent and machine independent optimizations in detail?	7M	5	2
		OR			
10.	a)	With suitable examples, write about Live-variable analysis?	7M	5	5
	b)	Discuss the design issues of Code Generator?	7M	5	2

***

Hall Ticket Number :										

R-17

Code: 7G153

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Computer Networks

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

			Marks	CO	Blooms Level
		UNIT–I			
1.		What is a network? Explain the differences between Local Area Networks and Wide Area Networks with suitable diagrams.	14M	CO1	L2
		OR			
2.		Illustrate the functionality of various layers present in OSI model with a neat sketch	8M	CO1	L4
		UNIT–II			
3.	a)	Summarize Multiple Access Protocols	7M	CO2	L2
	b)	Explain various IEEE 802.X frame formats.	7M	CO2	L2
		OR			
4.	a)	Derive expression of throughput in ALOHA Protocol.	7M	CO2	L6
	b)	A bit stream 10011101 is transmitted using the standard CRC method described in the text. The generator polynomial is x3+1. Show the actual bit string transmitted. Demonstrate CRC algorithm in detail.	7M	CO2	L4
		UNIT–III			
5.	a)	Distinguish between adaptive and non-adaptive routing algorithms.	7M	CO3	L2
	b)	What is an IP address? Discuss the various IP address classes.	7M	CO3	L2
		OR			
6.	a)	Write about Internet protocol and types with their applications.	7M	CO3	L2
	b)	What is datagram network? Compare and contrast of virtual circuit and datagram networks	7M	CO3	L3
		UNIT–IV			
7.	a)	Give detailed description of performance issues in transport layer protocols.	7M	CO4	L2
	b)	Compare TCP and UDP Headers.	7M	CO4	L3
		OR			
8.	a)	What do you understand Tunnel Model and What Protocols fall Under The TCP/IP Internet Layer?	7M	CO4	L4
	b)	Generalize each field of the format of the TCP packet header. Specify the justification for having variable field lengths for the fields in the TCP header.	7M	CO4	L4
		UNIT–V			
9.		Describe in detail about the following in electronic mail. i. Message format ii. Message transfer iii. Mail reader	14M	CO5	L2
		OR			
10.	a)	State the difference between fully qualified and partially qualified domain name.	7M	CO5	L2
	b)	What is the significance of the Domain Naming System? Write a short note on DNS Name Space	7M	CO5	L2

***

Hall Ticket Number :										

R-17

Code: 7G356

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2022

Microprocessors and Interfacing

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

****

UNIT–I

1.		Draw and explain the block diagram and timing diagrams of 8086 in maximum mode.	14M	1	2
		OR			
2.	a)	Develop 8086 ALP to find the smallest word in an array of 100 words.	7M	1	6
	b)	Write an ALP to perform division of word in 8086.	7M	1	6

UNIT–II

3.		Explain stepper Motor function and Write a program for stepper motor forward and backward rotation.	14M	2	6
		OR			
4.	a)	Draw and explain the basic structure of SRAM and DRAM cells	10M	2	2
	b)	Justify latches and buffers used for interfacing	4M	2	5

UNIT–III

5.		Draw the architecture of 8257.Explain about it.	14M	2	2
		OR			
6.		Draw the interrupt vector table 0f 8086. Explain the maskable and non- maskable interrupts	14M	3	2

UNIT–IV

7.		Explain the architecture of 8251 with neat sketch	14M	2	2
		OR			
8.	a)	What is RS-232C device and discuss its application with TTL.	7M	2	2
	b)	Construct one sample program for serial data transmission.	7M	2	4

UNIT–V

9.		List the salient features of Pentium and Pentium pro processors.	14M	4	1
		OR			
10.		Define paging? Draw the block diagrammatic representation of complete 80386 paging mechanism.	14M	4	1

***