

Class : 10

Time: 2 Hour

Full Marks:50

Unit	Type of Questions	Q. No.	Area	No. of Questions	Marks
1.	Short Questions	Group A (Short questions and Objective)10 Marks			
		1.a.	Computer Fundaments	2 × 1	2
		1.b			
		1.c	Database Management System	2× 1	2
		1.d			
		1.e	Modular Programming in QBASIC	1 ×1	1
		1.f.	C-Language	1 ×1	1
	Objective s	2	Technical terms	2× 1	2
3		Full Forms (Both from Computer Fundaments)	2× 1	2	
2.	Subjectiv e	Group B (Question Answer & Programs)-24 Marks			
		4.a	Networking and Tele communication	1× 2	2
		4.b	Ethical and Social Issues in ICT	1× 2	2
		4.c	Computer Security	1× 2	2
		4.d	E-commerce	1× 2	2
		4.e	Contemporary Technology	1× 2	2
		4.f	DBMS-Introduction	2×2	4
		4.g	Creating database Entering and Editing data		
		4.h	Querying database	2×2	4
		4.i	Creating and using forms Creating and printing reports		
		5	Output(Dry run) of the given program	1×2	2
		6	code	1×2	2
7	Debug a program Analytical Question [Q.i,ii] (based on the given program code)	2× 1	2		
3.	Subjectiv e	Group C (Modular Programming in QBASIC & Programming in C)-16 Marks			
		8	Number System i.ii. Conversion iii.iv. Binary Calculation	4X1	4
		9. a,b,	Write QBASIC program (two question from the 2 section;) i. Creating user-define function Creating Sub program ii. Sequential data file handling	2× 4	8
		10	Write a C-Program -Using IF statement -Using a looping statement (Any one out of two questions)	1 × 4	4
			Total	30	50

Unit	Group/Area	Topics	No of Questions	Marks
2	MS-Access (8 marks)	Structure of table and data entry	1×2	2
		Query	2×2	4
		Form/Report	1×2	2
3	Modular Programming in QBASIC (11 Marks)	Create a user defined function	1×3	3
		Create a sub program	1×3	3
		File Handling	2× 2.5	5
4	Introduction to C language (6 marks)	if Statement	1×3	3
		Looping Statement	1×3	3
		Total	10	25

INTERNAL PRACTICAL ASSESSMENT

Full Marks:25

Unit	Group/Area	Topics	No of Questions	Marks
2	MS-Access	Project Work		5
		Practical Exam: Create table/query/forms/report	2×2	4
3	Modular Programming in QBASIC	Project Work		10
4	Introduction to C language (6 marks)	Practical exam: if Statement/ Looping Statement	2 ×3	6
		Total	10	25

THEORETICAL EVALUATION

Subject: Computer Science

Full Marks:50

Questions Planning and Mark Weight age Distribution

Unit	Area/Unit	Weight age	Knowledge			Understanding			Application			High Ability			Marks Weight age		
			V	S	L	V	S	L	V	S	L	V	S	L	V	S	L
1.	Computer Fundamental	34	3	3		1			2	2	1				6	5	1
2.	Database management System	42	2	2						2					2	4	
3.	Programming in QBASIC	61	1				2		2					2	3	2	2
4.	Introducing to C Language	29	1											1	1		1
	Total	170	7	5		1	2		4	5	1			3	12	11	4

TYPES OF QUESTIONS

Types of Questions	Asked No.	Time Division	Full Marks
Very Short Questions	12	25 minutes	12
Short Questions	11	35 minutes	22
Long Short Questions	4	30 minutes	16
Total	27	1 hour 30 minutes	50

FIRST TERM (61 Days)

S.No	Topics	Periods	Teaching Methods	Teaching Materials	Evaluation Techniques & Tools	Remarks
1	Computer Network and Communication <ul style="list-style-type: none"> - Define telecommunication and common terminology. - Describe wire and wireless communication media and channels. - Demonstrate CAT and optical fiber connectors. - Explain networking devices and their features. - Describe Network topologies (Bus, Star, Ring, Hybrid) - Describe types of networks. - Describe types of network architecture. - Concept of IP addressing (IPv4 and IPv6) - Differentiate between the internet, intranet, and extranet. 	22	Explanation, Discussion, Drawing, Slides	References books pictures Multimedia devices	Homework unit test viva drawings	
2	Programming in Python <ul style="list-style-type: none"> - Describe the revision python working environment and basic concept. - Design and demonstrate user define function in python program - Describe the concept of library and packages in python - Draw graphics using turtle functions - Describe the concept of error handling in python 	30	Explanation, Discussion, Drawing, slides, practical lab	References books pictures Multimedia devices	Homework Unit test viva, practical file, practical test.	
3	Revision	9	Discussion	Question collection	viva	
	Total	61				

For Practical exam

Time: 1hrs

F.M =25

P.M=10

S.No	Group/Area	Topic	No of questions	Marks
1	Programming in Python	<ul style="list-style-type: none"> - Demonstrate the structure of user defined functions. - Install and use of packages and libraries (e.g. Pandas, Turtle, matplotlib). - Draw various shapes (circle, rectangle, polygons etc) and fill the colors using turtle. 	1+1+1	5x3
2	Computer Network and Communication	<ul style="list-style-type: none"> - Demonstrate and identify devices and cables - Check IP address, and default Gateway. - Demonstrate the use of following command: ping, ipconfig, tracert, nslookup - Demonstrate RJ45 and Fiber connectors. 	1+1	10
		Total	5	25

SYLLABUS-2083
MID TERM (59 Days)

Opt II Computer Science

Grade: 10

S.No	Topics	Periods	Teaching Methods	Teaching Materials	Evaluation Techniques & Tools	Remarks
1	Database Management System - Define concept of database. - Differentiate data, database and DBMS. - Describe different data types used in DBMS - Explain concept of fields, records and keys in DBMS - Illustrate the types of relationships - Operate MySQL or similar open sources DBMS software - Apply DDL and DML statement in SQL.	28	Explanation, Discussion, Drawing, slides, practical lab	Explanation, Discussion, Drawing, slides, practical lab	Explanation, Discussion, Drawing, slides, practical lab	
2	Multimedia - Define the concept of multimedia. - Explain the major components of multimedia. - Demonstrate the graphical file format and manipulate the image. - Demonstrate the audio file format and edit the audio file. - Demonstrate the video file format and edit the video file. - Animation concept: 2D & 3D.	15	Explanation, Discussion, Drawing, slides, practical lab	References books pictures Multimedia devices	Homework Unit test viva, practical file, practical test.	
3	Programming in Python - Describe the concept file handling using panda library in python	8	Explanation, Discussion, Drawing, slides, practical lab	References books pictures Multimedia devices	Homework Unit test viva, practical file, practical test.	
4	Revision	8	Discussion	Question collection	viva	
	Total	59				

PRACTICAL EXAM

Time: 1hrs

F.M =25

P.M=10

S.No	Group/Area	Topic	No of questions	Marks
1	Database Management System	- Create a database, create tables which include various attributes with appropriate data types, Implement Primary key in tables, define relationships between tables using foreign keys, modify table using alter command ,insert appropriate data in tables, display all the data using the select statement, display specified record using where clause and like (% , _), update and delete the records from the existing tables	1+1+1+1+1	15
	Multimedia	- Create and edit in graphics using tools such as Pixlr X or Adobe Photoshop and work with following: Layers, Text, Shapes, Image Placement, Selection, Exporting - Create and edit in audio using tools such as Audio mass or Audacity and work with following: Recording, Importing, Cutting, Effects, Exporting - Create and edit in video using tools such as Clip champ or CapCut and work with following: Importing, Timeline, Cutting, Transition, Effects, Text, Exporting.	1+1	10
				25

PRE QUALIFYING EXAMINATION (46 Days)

S.No	Topics	Periods	Teaching Methods	Teaching Materials	Evaluation Techniques & Tools	Remarks
1	AI and Contemporary Technologies - Describe the concept of AI and its application, learning techniques in machine. - Describe the concept of AI in robotics, simulation of simple robotics task. - Demonstrate generative AI tools and AI-integrated tools. - Define IoT and its application area. - Define XR - Define cloud computing and its application. - Explain e-commerce, e-government, and e-education	20	Explanation Discussion.	References books pictures devices	Home works, Unit test, Viva and drawings.	
2	Programming in Python - Plot line, pie and bar using matplotlib data visualization tool in python.	10	Explanation Discussion, Practical Lab	References books pictures devices	Home works, Unit test, Viva and drawings.	
3	Project work a) Students work on creating, editing, and finalising an image, audio, or video file using the basic features of image, audio, or video editing tools that are available or accessible in your computer lab. Demonstrate in class what they produce. b) Develop a simple project of your own using libraries, user defined functions and visualization tool. c) Prepare a simple report covering outlining the process you followed during the development time	10	Explanation Discussion and Practical Lab.	References books and Computer System.	Home works, Unit test, Viva and drawings. Rating Scale Demo Presentation	
4	Revision	6	Discussion	Question collection	viva	
	Total	46				

PRACTICAL EXAM

Time: 1hrs

F.M =25

P.M=10

S.No	Group/Area	Topic	No. of Questions	Marks
1	Programming Concept (python)	Demonstrate the read and write in CSV file using concept of file handling using panda packages. Draw and plot bar, line, pie using data visualization tools using matplotlib package	1+1+1	15
2	AI and Contemporary Technologies	Demo on AI based robotics simulations. Apply the use of generative AI tools such as ChatGPT, Copilot, Geminin in through learning process Surf virtual tour sites and XR practices	1+1	10