Code No: R19ES1112 **R19** SET - 1

I B. Tech I Semester Regular Examinations, January - 2020
FUNDAMENTALS OF COMPUTER SCIENCE
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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1.	a)	Illustrate the functions of various parts of a computer with a neat diagram.	(8M)
	b)	What are the input and output devices necessary for a computer to operate? Explain in detail with suitable examples.	(7M)
		Or	
2.	a)	Why is C language called as middle level language? Justify.	(8M)
	b)	Why to use computer? Brief its benefits. Also focus on its limitations.	(7M)
3.		Design an algorithm as well as flowchart for finding out largest number out of three given numbers.	(15M)
		Or	
4.		What is a program? How is it different from software? Explain different types of programming languages.	(15M)
5.	a)	What is an operating system? Explain various types of operating systems.	(8M)
	b)	Briefly explain the features of Mesh and Hybrid network topologies along with their merits and demerits.	(7M)
		Or	
6.	a)	Compare the features of Microsoft DOS with Microsoft Windows Operating systems.	(8M)
	b)	How personal area networks and corporate area networks are different from LAN? Explain.	(7M)
7.	a)	Discuss the purpose of internal level, conceptual level and external level in the data base architecture.	(8M)
	b)	Describe the major tasks performed during the implementation phase?	(7M)
		Or	
8.	a)	Explain the role of different categories of users in a database system.	(8M)
	b)	What is the need of documentation in software development? Explain.	(7M)
9.	a)	What are Bluetooth piconets? How are they different from other network?	(8M)
	b)	Explain the areas where cloud computing can be adopted.	(7M)
		Or	
10.	a)	Explain the layered architecture of grid with a neat diagram	(8M)
	b)	How wireless networks are different from wired networks? Give the classification of wireless networks.	(7M)

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Code No: R19ES1112 **R19** SET - 2

I B. Tech I Semester Regular Examinations, January - 2020
FUNDAMENTALS OF COMPUTER SCIENCE
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Time: 3 hours Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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1.	a)	Define a computer. Give its characteristics.	(7M)
	b)	What are the types of memories available in the computer system? How are they organized in a hierarchy?	(8M)
		Or	
2.	a)	Explain different types of printers. Make a clear difference between them in terms of speed, cost and method of operations.	(8M)
	b)	Discuss various factors that need to be considered while selecting the output devices?	(7M)
3.	a)	Write and explain various steps involved in development of the program.	(8M)
	b)	What are the advantages and disadvantages of high level languages over machine language?	(7M)
		Or	
4.	a)	What are problem solving strategies? Discuss significance of each.	(8M)
	b)	Define a flowchart. List some important reasons for using flowcharts. Give an example.	(7M)
5.	a)	Briefly explain the LAN, MAN and WAN transmission technologies.	(8M)
	b)	Define a process. Diagrammatically explain the life cycle of a process.	(7M)
		Or	
6.	a)	What is the need of scheduling while executing the processes by an operating system? Explain.	(7M)
	b)	Give an overview on the layers of Open System Inter Connection model.	(8M)
7.	a)	How is the two-tier client- server architecture of data base is different from the three-tier client- server architecture? Explain.	(8M)
	b)	What are the activities that are performed during the design phase of software development?	(7M)
		Or	
8.		What is Structured Query Language? Discuss various command used for retrieving data through queries with suitable examples.	(15M)
9.	a)	Explain about the two major states in the operation of a Bluetooth. How it handles interferences?	(7M)
	b)	How the applications are managed in cloud? Illustrate with an example.	(8M)
		Or	
10.	a)	Explain the security issues of Wireless Network that are different from Wired Network.	(7M)
	b)	What are the areas in which per-to-peer computing can be used? Give the categorization of peer-to-peer computing.	(8M)
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Code No: R19ES1112 **R19** SET - 3

I B. Tech I Semester Regular Examinations, January - 2020
FUNDAMENTALS OF COMPUTER SCIENCE
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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1.	a)	Describe about the basic components of computers with a neat block diagram	(8M)
	b)	Explain different memories available in the computer in order of their hierarchy with respect to CPU.	(7M)
		Or	
2.	a)	What is Central Processing Unit (CPU) in a computer? Explain about various components and their functions of CPU.	(8M)
	b)	Describe various factors that need to be considered while selecting the input devices?	(7M)
3.	a)	Define an algorithm. List the characteristics of a good algorithm with an example.	(7M)
	b)	What is Structured programming approach? Highlight the advantages and disadvantages of structured programming.	(8M)
		Or	
4.	a)	What is meant by high level language? Give its characteristics, merits and demerits.	(5M)
	b)	Differentiate the language translators assembler, compiler and interpreter.	(10M)
5.	a)	Describe the functionalities of an operating system.	(7M)
	b)	Give the features of networks classified on the basis of their size.	(8M)
		Or	
6.	a)	Briefly explain the activities handled by process management function of operating system.	(7M)
	b)	List the advantages and disadvantages of each of the following network topologies: Bus, Star and Ring.	(8M)
7.	a)	Compare the features of hierarchical, network and relational data models.	(7M)
	b)	Describe the need for analysis and design phases in general software development.	(8M)
		Or	
8.	a)	What is a Data Base Management System? Explain various components of it.	(7M)
	b)	Why is requirement analysis said to be most important phase of software development?	(8M)
9.	a)	What is the infrastructure needed for cloud? What are the risks of storing data in the Cloud?	(8M)
	b)	What are the advantages and disadvantages of using a wireless transmission as compared to a fibre or wire transmission?	(7M)
		Or	
10.	a)	How does a new blue tooth device discover a Bluetooth network? Explain Bluetooth piconets.	(7M)
	b)	What is peer- to –peer computing? How is it different from distributed computing?	(8M)
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Code No: R19ES1112 **R19** SET - 4

I B. Tech I Semester Regular Examinations, January - 2020
FUNDAMENTALS OF COMPUTER SCIENCE
(Com. to CSE, IT)

Time: 3 hours Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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1.	a)	Discuss the basic organization of a computer system and explain the functions of various units of a computer system.	(8M)
	b)	What are the differences between primary and secondary memories?	(7M)
		Or	
2.	a)	How the communication between the CPU and Input /output devices be handled? Explain.	(8M)
	b)	Compare and contrast hardware with software.	(7M)
3.	a)	Describe the program development cycle with the help of a block diagram.	(8M)
	b)	Define a pseudo code. Give the advantages and disadvantages of using a pseudo code. Write the pseudo code for integers arithmetic operations.	(7M)
		Or	
4.		Describe the classification of programming languages. Focus on the features of a good programming language.	(15M)
5.	a)	What do you mean by a computer network? Give an overview of various types of computer networks.	(7M)
	b)	Describe the evolution of operating systems with respect to their functionality.	(8M)
		Or	
6.		With the help of a diagram, explain various network topologies used to connect computers in a network.	(15M)
7.	a)	List and describe the benefits of database systems in comparison with file oriented systems.	(8M)
	b)	What is the purpose of analysis phase? Discuss the activities done in it.	(7M)
		Or	
8.	a)	Is relational data model better than the earlier data models? Give reasons.	(7M)
	b)	Describe various phases in the development of software that operate on a computer system.	(8M)
9.	a)	What is grid computing? Give various applications of a grid.	(7M)
	b)	How to enforce security in Bluetooth networks? Explain.	(8M)
		Or	
10.		What is cloud computing? Enlist and explain three service models, and four deployment models of cloud computing.	(15M)

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