Question Bank

Computer Science (1st Year)

Chapter No	Question No	Short Questions	Question No	Long Questions
1	**Basics of Information Technology**		**Basics of Information Technology**	
	1	Explain Global Village.	**1**	Explain Pointing devices.
	2	Define and explain IT.	**2**	Explain Scanning devices.
	3	Draw Computing Environment Diagram.	**3**	Explain Printers of all types.
	4	Describe Hardware Devices.	**4**	Explain CRT and its working with the help of a diagram.
	5	Describe Software Classification.	**5**	Define SDLC, draw diagram and explain Initial TWO stages in detail.
	6	Differentiate between Hardware & Software.	**6**	Define SDLC, draw diagram and explain any TWO stages in detail.
	7	Describe Input, Output & I/O Devices.	**7**	Explain Design, Coding and Testing stages of SDLC in detail.
	8	Describe Keyboard.		
	9	Describe Pointing Devices.		

10	How Mouse works?
11	How Track Ball works?
12	Describe Pointing Stick.
13	Explain Touch Pad.
14	Explain Touch Screen.
15	Describe Light Pen.
16	Describe Digitizing / Graphic Tablet.
17	Describe Pen Based Systems.
18	Source Data Entry Devices.
19	Bar-Code Reader.
20	What is MICR ?
21	What is OMR ?
22	Explain OCR.
23	Describe Magnetic Strip Cards.
24	Describe Smart Cards.
25	Explain Fax Machine.
26	Describe Imaging System.
27	Audio / Video Input Devices.
28	Digital Camera.
29	Differentiate between Hardcopy and Softcopy.
30	Explain Display Screen, its size, color and resolution.
31	Explain VGA.
32	Explain SVGA.
33	Explain XGA.
34	Describe Coding Stage of SDLC ?
35	CRT Diagram and Functioning.
36	Explain Flat-Pannel Displays.
37	Describe three types of Flat-Pannel Displays.

	38	Explain Impact Printers.		
	39	Explain Non-Impact Printers.		
	40	Explain Plotters.		
	41	Explain Bit, Byte and Word.		
	42	Convert 3 TB into Bits (without calculator).		
	43	How many bits are there in an MB ? Justify.		
	44	Draw SDLC Diagram.		
	45	How would you carry out Needs Analysis of a user ?		
	46	Explain Preliminary Investigation.		
	47	Explain Data Gathering.		
	48	What is the significance of Questionairs in SDLC ?		
	49	Explain Computer Word with reference to various Computer Era.		
	50	How will you elaborate your Preliminary Plan in SDLC ?		
	51	Explain Design Phase of SDLC.		
	52	Explain Coding Phase of SDLC.		
	53	Explain Testing Phase of SDLC.		
	54	Explain Implementation Phase of SDLC.		
	55	Explain Maintenance Phase of SDLC.		
2	**Information Networks**		**Information Networks**	
	1	Differentiate LAN and WAN.	**1**	Explain Email and its benefits over other

			communication methods.
2	Explain Workgroup Computing.	**2**	Explain useful components of Internet.
3	Explain Email with its benefits.	**3**	Explain LAN's Protocols.
4	Explain Internet.	**4**	Define Networking Concepts, Uses of Networks and Network Models.
5	Briefly describe early history of evolution of Internet.	**5**	Explain Network Topologies.
6	Describe www.	**6**	Define OSI Model and explain upper layers.
7	What is Telnet ?	**7**	Define OSI Model and explain lower layers.
8	FTP.	**8**	Define OSI Model and explain any THREE layers.
9	Gopher.		
10	What is ITU-T ?		
11	Differentiate between a Intranet and Extranet.		
12	Describe NIC.		
13	Differentiate between a Bridge and Gateway.		
14	Router.		
15	Ethernet.		
16	CSMA/CD.		
17	Token Ring.		
18	ARCnet.		
19	Explain TCP/IP.		
20	ISDN.		
21	DSL.		
22	Terminal Emulation Software.		
23	Differentiate between WAN &		

	MAN.
24	Explain Network.
25	Describe Uses of Networks.
26	What is the difference between Client / Server and Peer-To-Peer network ?
27	Differentiate between a De Facto and De Jure standard.
28	Explain Hybrid network.
29	How Uploading and Downloading are related ?
30	Explain Bus Network Topology with Diagram.
31	Explain Ring Network Topology with Diagram.
32	Explain Star Network Topology with Diagram.
33	Explain Tree Network Topology with Diagram.
34	Explain Mesh Network Topology with Diagram.
35	Describe OSI Model.
36	Explain Application Layer of OSI Model
37	Explain Presentation Layer of OSI Model
38	Explain Session Layer of OSI Model
39	Explain Transport Layer of OSI Model
40	Explain Network Layer of OSI Model
41	Explain Data Link Layer of OSI Model
42	Explain Physical Layer of OSI Model

3	**Data Communication**		**Data Communication**	
	1	Define Data Communication.	**1**	Define communication system, draw diagram and explain its components.
	2	What is Communication Channel ?	**2**	Define data encoding and explain FOUR data encoding schemes.
	3	Describe Components of Communication with Diagram.	**3**	Explain modes of data communication in detail with diagrams.
	4	Differentiate between Encoder and Decoder.	**4**	Explain types of data transmission in detail with diagrams.
	5	Explain Types of Signal with Diagram.	**5**	Explain communication media, guided and unguided in detail.
	6	Describe Types of Data.	**6**	Define MODEM, Transmission Rate, Speed, explain types of MODEM.
	7	Define Data Representation and Explain Encoding Scheme BCD Code.		
	8	Define Data Representation and Explain Encoding Scheme EBCDIC Code.		
	9	Define Data Representation and Explain Encoding Scheme ASCII Code.		
	10	Define Data Representation and Explain Encoding Scheme Unicode Code.		

		11	Explain Simplex Mode of Communication.	
		12	Explain Half Duplex Mode of Communication.	
		13	Explain Full Duplex Mode of Communication.	
		14	Explain Parallel Data Transmission.	
		15	Explain Serial Data Transmission.	
		16	Explain Asynchronous Data Transmission.	
		17	Explain Synchronous Data Transmission.	
		18	Describe Bandwidth, Baseband and Broadband.	
		19	Define Guided Media and Twisted Pair Wire.	
		20	Describe Coaxial Cable.	
		21	Describe Fiber-Optic Cable.	
		22	Describe Microwave as a communication medium.	
		23	Describe Satellite as a communication medium.	
		24	Describe Modem, Transmission Rate & Speed.	
		25	Differentiate between External & Internal Modem.	
		26	Explain Wireless Modem.	
4	**Applications And Uses of Computers**			**Applications And Uses of Computers**
		1	Describe use of computers in Marketing.	**1** Explain use of computers in various fields of

			business.
2	Describe use of computers in Stock Exchange.	**2**	Explain E-Commerce in detail.
3	Describe use of computers in Banks.	**3**	Explain industrial robots, CAL and CAM.
4	Describe use of computers in Departmental Stores.		
5	Define Document Management System (DMS).		
6	Describe E-Commerce.		
7	What are Industrial Robots ?		
8	Differentiate between CAD and CAM.		
9	What is Computer Simulation ?		
10	How do we use computers for Patient Monitoring ?		
11	How do we use computers for Patient Records ?		
12	How do we use computers for Medical Diagnosis ?		
13	How do we use computers in Airline System ?		
14	Describe CAL.		
15	Describe CBT.		
16	Describe use of computers in Weather Forecasting & role of SPARCO.		
17	Describe use of computers at home.		
18	Explain Computer Assistance simplifying our work practices.		
19	Describe four benefits of computers for us.		
20	How is Reliability achieved by using computers ?		

5 **Computer Architecture**

1	Define CPU.
2	Define CU.
3	Define ALU.
4	Describe Main Memory.
5	Describe Volatile Memory.
6	Define RAM & ROM.
7	Explain various types of RAM.
8	Explain various types of ROM.
9	Describe Bus Interconnection with Diagram.
10	What are CPU Registers ?
11	What is DMA ?
12	What are I/O Instructions ?
13	What are Control Transfer Instructions ?

Computer Architecture

1	Explain RAM, ROM and all their types.
2	Explain Bus Interconnection with diagram and CPU commands.
3	Explain I/O Unit, Interrupts and DMA in detail.
4	Explain 13 CPU Registers.
5	Explain Computer Operations and Instruction Set.
6	Explain Instruction Format and its three types in detail.
7	Explain Fetch-Decode-Execute Cycle in detail with diagram.
8	Define Operating System and OS Functions in detail.
9	Explain Translator, Interpreter, Assembler and Compiler in detail.

14	Describe Instruction Set.
15	Explain CPU Command MEMORY WRITE.
16	Explain CPU Command I/O READ.
17	Explain CPU Command BUS GRANT.
18	Explain CPU Command I/O WRITE.
19	Explain Control Bus.
20	Explain Data Bus.
21	Explain Address Bus.
22	Explain I/O Unit with Diagram.
23	Differentiate between Interrupt & DMA, the two ways to transfer data.
24	Describe Commonly Used CPU Registers.
25	Describe General Purpose CPU Registers.
26	Describe Address or Segment CPU Registers.
27	Describe Data Transfer Instructions.
28	Describe Arithmetic & Logical Instructions.
29	Describe I/O Instructions.
30	Describe Control Transfer Instructions.
31	Describe Instruction Set.
32	Explain Instruction Format with Diagram.
33	Explain ZERO-ADDRESS Instruction.
34	Explain ONE-ADDRESS

		Instruction.
	35	Explain TWO-ADDRESS Instruction.
	36	Explain THREE-ADDRESS Instruction.
	37	Describe OS.
	38	Describe Operating System Tasks.
	39	Describe Functions of Operating System.
	40	Describe Translator or Interpreter.
	41	Describe Compiler.
	42	Describe Assembler.

6	**Security, Copyright and The Law**		**Security, Copyright and The Law**	
	1	Describe FOUR approaches for authentication of authorized user.	**1**	What are Security Threats to data and Explain Privacy Issues.
	2	Explain Virus.	**2**	Explain any FOUR Privacy Acts.
	3	Explain any TWO of FOUR Causes of Virus.		
	4	Explain Boot Sector Virus.		
	5	Explain Logic Bomb Virus.		
	6	Explain Chernobyl Virus.	**1**	Explain 13 CPU Registers.
	7	Explain Trojan Horse.		
	8	How Redlof Virus causes damage ?		
	9	How to safeguard against viruses ?		

	10	Explain Data Security.
	11	Explain Security Violation giving TWO of FIVE examples.
	12	Explain main threats to Data Security.
	13	Explain Data Protection.
	14	What are FOUR Privacy issues ?
	15	What should we consider to ensure Individual's Privacy ?
	16	What are the principles of Data Protection Acts ?
	17	Explain Computer Misuse Act of 1990.
	18	Explain 1980 Privacy Protection Act.
	19	Explain 1984 Cable Communication Policy Act.
	20	Explain 1987 Computer Security Act.
	21	Explain Video Privacy Protection Act of 1988.
	22	Explain 1998 Data Protection Act.
	23	What is Copyright Act ? How does it help to stop software piracy ?
7	**Windows Operating System**	
	1	Differentiate between GUI and Command Line based OS.
	2	Explain two basic purposes of OS.

	3	Explain any TWO Objects of Windows Operating System.
	4	Explain Mouse Events in MS Windows.
	5	Explain Main Features of MS Windows.
	6	Explain Disk Management.
	7	Explain File Management.
	8	How do we control printing jobs ?
8	**Microsoft Word**	
	1	What is a Word Processor ?
	2	Explain a simple word processor (text editor).
	3	Explain WYSIWYG.
	4	How will you print an MS Word document ?
	5	What is Clipboard in MS Word ?
	6	Differentiate between Insert Mode and Over Write Mode in MS Word.
	7	What are Tables in MS Word ?
	8	What choices do you have for alignment in MS Word ?
	9	Explain Font Size, Font Style and Font Color in MS Word.
	10	Explain Word Art in MS Word.
9	**Spreadsheet Software**	
	1	Describe Features of Spreadsheet.

	2	Explain Labels and Values in MS Excel.
	3	What are Named Ranges ?
	4	How do we enter a formula in MS Excel ?
	5	Explain Function SUM with complete detail of parameters.
	6	How will you format a cell ?
	7	Explain Merge Cell and Wrap Text.
	8	Explain Page Header and Footer.
	9	How Chart Wizard works ?
	10	Write a Formula to calculate average of 10 cells above in MS Excel.

10	**Fundamentals of Internet**	
	1	How Internet Works ?
	2	What is URL ?
	3	Explain any TWO Limitations on Email.
	4	Explain Newsgroups.
	5	Differentiate between IP Addressing and DNS Addressing.
	6	Explain WWW in detail.
	7	How Search Engine works ?
	8	Explain Email addressing.