Unit	No	Question	Count
1	1	Explain View with example **OR** What is view? How can we create a view? Which are the advantages of view. **OR** What is view? Write advantages of view. Which are the restrictions on view.	5
	2	Write a short note on: DCL commands **OR** Explain DCL commands **OR** Explain GRANT, REVOKE COMMAND	5
	3	What is sequence? How can we create a sequence? Explain with example **OR** Define Sequence. Explain how to create and destroy sequence with example	4
	4	What is a synonym? Write syntax for creating and destroying synonyms **OR** Write short note on synonym	4
	5	Explain transaction control commands **OR** Explain COMMIT, ROLLBACK, SAVEPOINT COMMAND	4
	6	What is Index? Explain different types of index with example. **OR** Explain UNIQUE index with example	3
2	7	Give advantages of PL/SQL	4
	8	Write short note on User Defined Exceptions **OR** Explain user defined exception handling with example. **OR** What is user defined exception? Why it is used?	4
	9	Explain structure of package **OR** Explain Package with example	4
	10	List out types of Triggers and explain BEFORE trigger with example **OR** Explain different types of triggers with example	4
	11	Explain WHILE loop with syntax and example	3
3	12	Explain Loosy join decomposition with suitable example **OR** Explain lossy and non-loss decomposition with example	5
	13	Explain any six rules of Armstrong's Axioms for Functional Dependencies **OR** Explain Armstrong's Axioms for functional dependency OR List four Armstrong's Axioms for Functional dependencies	5
	14	Give difference between Trivial dependency and Non Trivial dependency **OR** Define and explain with example: FFD, trivial FD, non-trivial FD	5
	15	What is Closure? Explain Closures of a set of Functional Dependencies	4
	16	What is dependency preserving decomposition? **OR** Explain Dependency-Preserving Decomposition with example	3
	17	What is Functional dependency? Explain FD diagram with example	3
4	18	What is Normalization? Explain 1NF and 2NF with example **OR** What is normalization? Which are the advantages of normalization **OR** Define Normalization	5
	19	Explain Third Normal Form using Example	3

5	20	Explain ACID properties of Transaction Processing **OR** What is transaction? Explain ACID property of transaction.	5
	21	What is deadlock? How to control deadlock **OR** Explain deadlock detection and prevention. **OR** What is Deadlock ? How it occurs ?	4
	22	List problems of Concurrency Control and explain Lost Update problem with example **OR** Write down three problems of concurrency control. Explain any one of them in detail	3
	23	Define Transaction Log. **OR** What is the purpose of transaction log.	3
	24	Explain transaction control with suitable example **OR** Draw state transition diagram of transaction **OR** Draw and explain State transition diagram	3

Unit	No	Question	Count
1	1	Explain bus, star, ring, mesh, tree, and hybrid topologies in detail with advantages and disadvantages.	6
	2	What is server? Explain types of server in detail.	6
	3	Explain transmission modes with examples. **OR** Differentiate half duplex and full duplex transmission mode.	6
	4	Explain LAN, WAN, MAN in details **OR** Differentiate LAN, MAN and WAN.	4
	5	What is computer network? Explain the advantages, disadvantages, and applications of computer network.	4
	6	Explain peer to peer and client-server network. **OR** Give the difference between peer to peer and client server network.	3
2	7	Explain the OSI reference model with function of each layer in detail.	6
	8	Differentiate between Connection less and Connection oriented approach. **OR** Write short note: Connection Oriented approach and Connection Less approach.	5
	9	Explain TCP/IP model in detail.	4
	10	Explain different switching techniques. **OR** Explain packet switched networks and circuit switched networks.	4
3	11	Explain co-axial cable in detail.	5
	12	Explain fiber optic cable in detail. **OR** Explain fastest guided media in detail.	5
	13	Explain unguided transmission media in detail. (Radio waves, micro waves and infrared waves)	5
	14	Explain twisted pair cable in detail.	4
	15	Explain different types of propagation modes in detail.	4
4	16	Explain gateway in detail.	4
	17	Explain router in detail. **OR** On which layer of OSI, router works? Explain routers in detail.	4
	18	Explain network management software.	3
	19	Differentiate Layer 2 and Layer 3 switches. **OR** List any two advantages of Layer-3 switch. **OR** Explain layer-3 switch.	3
	20	What is HUB? Explain different types of HUB used in network in brief.	3
	21	Explain repeater in detail.	3

5	22	Explain classfull addressing scheme. **OR** Identify the class of following IP addresses (i) 121.23.19.222 (ii) 11000001 00001011 00001011 11101110 11000001 (iii) 10000011 00011011 11111111 (iv) 11110011 10011011 11111011 00001111 **OR** Find the class of following IP addresses (i) 237.14.2.1 (ii) 114.34.2.8 (iii) 227.12.14.87 (iv) 14.23.120.8	5
	23	Draw and explain IPV4 header format.	4
	24	What is firewall? Explain with its types and write down applications of firewall.	4
	25	What is subnetting? Explain subnet masking in detail with examples.	3
	26	Compare IPv4 and IPv6. List out features of IPv6.	3
	27	What is SMTP? Explain various components of mail delivery system.	2
	28	Explain DNS with different categories.	2

Unit	No	Question	Count
1	1	Explain Prototype Model. **OR** Describe Prototyping Model and list out its disadvantages. **OR** When Prototype Model is used.	5
	2	What is Software Engineering? Explain Layer Technology approach with neat Figure. **OR** Why Software Engineering is known as Layer Technology. **OR** Define software engineering.	4
	3	Explain RAD Model **OR** List out the phases of RAD model	4
	4	Explain Spiral Model with Diagram.	4
	5	Describe Incremental Model for Software Development with diagram. **OR** write a Short note on Incremental Model.	3
	6	What is Umbrella Activities?	3
2	7	What is SRS? Write characteristics of good SRS document in brief. **OR** List out the characteristics and explain the importance of SRS document.	4
	8	What is DFD? Explain its symbol with one suitable example. **OR** Explain primitive symbols of DFD and identify its important shortcomings. **OR** What is the significance of DFD in software engineering? Explain in brief. **OR** Draw context level diagram for library management system.	5
	9	List UML diagram. Explain Use Case Diagram. **OR** What is Use Case diagram. **OR** Draw a use case diagram for online shopping web application	4
	10	Explain Functional Requirement and non-functional requirement **OR** List out requirements for student information management system for diploma institute **OR** List out requirements for online movie ticket booking system for multiplex. **OR** List Four Functional requirements for ATM banking systems.	4
	11	Explain Client Server Architecture with Diagram.	3
	12	Explain Cohesion & Coupling in Software Engineering. **OR** Explain Cohesion with its classification. **OR** List out various cohesion . Explain any one cohesion with suitable example.	3
	13	What is activity diagram? Explain activity diagram with suitable example. **OR** What is the significance of Activity diagram in software engineering? Explain in brief.	3
3	14	Define Risk. **OR** Discuss Different types of risks involved in software development **OR** Explain important categories of risks that can affect a software development	4
	15	Explain Empirical Estimation Techniques.	4
	16	Explain Line of Code (LOC) and Function Point Technique. **OR** Explain line of code in size estimation metric.	3
	17	Explain Heuristic Estimation Technique. **OR** Describe Heuristic Technique for Project Estimation.	2
	18	Explain : (a) Work breakdown structure (b) Gantt Chart	3

4	19	Explain: (a) Unit Testing (b) test documentation OR Explain test documentation.	5
	20	Explain Black Box Testing and Explain White Box testing method in brief. **OR** Compare Black box and White box testing	4
	21	Define Software Documentation. **OR** Explain Internal Documentation. .	4
	22	Differentiate between verification and validation.	4
	23	Explain : (a) Code walk through (b) Code inspection	3

Unit	No	Question	Count
1	1	Define Array and Explain multidimensional array, Dynamic Array, Jagged Array	6
	2	Draw architecture of .Net framework. Explain CLR in detail	6
	3	Briefly explain : (i) Conditional Structure (ii) Loops	4
	4	Describe various parts of VB.Net IDE.	3
	5	List and Explain out the various operators	3
	6	Difference between Managed and Unmanaged Code.	2
2	7	Differentiate between Radio button and Checkbox.	6
	8	Describe InputBox and message box with example.	4
	9	Differentiate between procedure oriented, Object oriented and Event driven programming.	3
	10	Explain Button, Label and Textbox control with example.	3
	11	List and explain properties and event of Form control.	2
3	12	Explain Text and Value Properties : (1) DateTime Picker Control (ii) ListBox control (iii) Richtext Box Control (iv) Masked TextBox (IMP) (v) Scroll Bar (vi) Progress Bar with Example	4
	13	Write step to create MENUS in vb.net. Also Explain POP up Menu in Details	4
	14	Explain Selected index changed event of Combobox with suitable example.	3
	15	Differentiate between (1) ListBox and ComboBox (2) TextBox and RichText Box	2
	16	Explain Timer Control with Example.	2
4	17	List and Explain DialogBox. (Color, font, open file,, save file, print)	4
	18	Explain procedure and Function in detail	4
	19	What is Exception handling? Explain structured and Unstructured exception handling in detail.	3
	20	Explain Get Focus Event.	3
	21	Describe MDI with Example	2
5	22	Describe DataConnection Object, Command Object, Data adapter Object, Data reader Object, Dataset Object (data table) with suitable example.	6
	23	List and Explain the various String and Math's functions.	5
	24	Draw and explain ADO.Net Architecture.	4
	25	Compare ADO and ADO.Net	2

Unit	No	Question	Count
1	1	Draw a figure of 4 bit binary adder-subtractor. **OR** Draw block diagram of 4-bit binary adder.	5
	2	List Logic Micro operations and explain any one in detail. **OR** Explain any three logical micro-operation with example. **OR** Perform selective set and selective clear for register A =1010 and register B=1100. **OR** List the basic logic micro operations and Draw & Explain single bit Logic unit.	3
	3	Explain circular shift, arithmetic shift and logical shift micro operations with example.	3
	4	Draw and Explain one stage of arithmetic circuit. **OR** Draw and explain 4-bit arithmetic circuit.	2
	5	Explain arithmetic micro operation with example.	1
	6	Explain Bus Transfer. **OR** Explain BUS Transfer using Multiplexer (4 Register).	1
2	7	Draw a flow chart of Control unit of basic computer. **OR** Draw and Explain Control Unit of basic Computer.	5
	8	Draw a flow chart of Interrupt cycle.	4
	9	Draw a timing diagram for the statement $D_1T_1: SC \leftarrow 0$.	3
	10	Draw Flowchart for instruction cycle.	3
	11	Write Short note on Memory Transfer Instructions. OR Explain execution of BSA instruction. **OR** Draw flowchart for memory reference instruction. **OR** Write micro operations for (1) ADD to AC (2) Load to AC OR Explain functions of BUN, BSA and ISZ instructions for basic computer.	2
3	12	List and explain different addressing modes with example.	6
	13	Explain Instruction format with example. **OR** Explain and compare different instruction formats by solving following arithmetic statement: X = (A + B) * (C - D).	4
	14	Convert the expression 8-6*2+9 into postfix notation and then evaluate it using stack. **OR** Convert the infix notation statement in to postfix notation: (A * B) – [(C+D) **3 – (A/D)] Also implement it with stack organization CPU. **OR** Draw trace of stack operations to evaluate 3*4+5*6. **OR** Convert the infix notation statement in to postfix notation: (A ** B + C) – [(C/D) * 3 – (A/D)]. Also implement it with stack organization CPU. **OR** Explain stack operation to evaluate 3*4+5*6.	4
	15	Explain parallel processing.	3
	16	List registers for the basic computer along with its name, size and function. **OR** Explain functions of AC, PC and SC registers for basic computer.	3

	17	Explain 0 address, 1 address, 2 address and 3 address instruction with example. **OR** Explain three, two, one, zero address instruction. **OR** Explain the scheme used to differentiate the three different types of instructions in basic computer.	3
	18	Write characteristics of RISC and CISC.	3
	19	What is control word? Explain with example.	2
4	20	Explain in detail cache memory.	5
	21	Explain RAM, ROM, PROM and EPROM.	5
	22	Write short note on magnetic disks.	3
	23	Explain Associative memory.	3
5	24	Explain various modes of data transfer. **OR** Explain various modes of data transfer between central computer and peripherals.	4
	25	Draw a flow chart of CPU-IOP Communication.	4
	26	Give the differences of Synchronous & Asynchronous data transfer.	3