

SLO Based MCQs of Chapter No. 01 Computer Science Class XI

Q. No	Description	A	B	C	D	Correct
1	The computer system primarily consists of:	Hardware	Software	Peripheral devices	Hardware and software	Hardware and software
2	Which component of CPU performs arithmetic and logical operations?	Memory Unit	Control Unit	Arithmetic and Logic Unit	Output Unit	Arithmetic and Logic Unit
3	Which component of a computer system presents the processed results to the user?	Input devices	Output devices	CPU	Memory	Output devices
4	Which component of a computer system receives data from the user?	Input devices	Output devices	CPU	Memory	Input devices
5	The main function of CPU in a computer system is to:	Store data permanently	Perform calculations	Display output	Access Internet	Perform calculations
6	How many states does an electronic switch have?	One	Two	Three	Four	Two
7	The binary system uses two digits _____ to represent information:	1 and 2	0 and 2	0 and 1	1 and 10	0 and 1
8	The binary digits 0 and 1 in a computer represent:	Two states of a disk	Two states of a switch	Two levels of voltage	Two values of a register	Two states of a switch
9	A binary digit, 0 or 1 is referred to as:	Byte	Megabyte	Kilobyte	Bit	Bit
10	Which of the following is an example of binary code representing data?	100100	9876	ABCD	Base digit	100100
11	BIT stands for:	Binary digit	Byte digit	Bit element	Signal	Binary digit

12	How many bits are in one byte?	1	4	8	16	8
13	ASCII stands for:	American Standard Code for Information Interchange	American Standard Communication Interface	Automatic Standard Code for International Information	Advanced System for Automatic Communication	American Standard Code for information Interchange
14	How many characters ASCII 7-bit code can represent?	64	128	512	1024	128
15	Circuits that process binary signals are called:	Analog circuits	Digital logic circuits	Power supply circuits	Control circuits	Digital logic circuits
16	An electrical signal that can vary over a range of values is called:	Analog signal	Discrete signal	Digital signal	Power signal	Analog circuits
17	What type of waveform represents an analog signal?	Discrete waveform	Digital waveform	Continuous waveform	Square waveform	Continuous waveform
18	Binary signals represent information using a series of discrete values, typically 0 and 1. These signals are called:	Digital signals	Continuous signals	Logic signals	Variable states	Digital signals
19	The building blocks of digital circuits are:	Logic gates	Microprocessors	Transformers	Diodes	Logic gates
20	How many basic logic gates are there in digital circuits?	2	3	4	5	3
21	Which of the following is NOT a basic logic gate?	AND gate	OR gate	NOT gate	IF gate	IF gate
22	What is the number of possible input combinations for a 2-input AND gate?	2	4	8	16	4
23	What is the number of possible input combinations for a 3-input AND gate?	2	4	8	16	8

24	The gate produces LOW output when at least one input is HIGH:	AND	NAND	OR	NOR	NOR
25	The gate that reverses the input is called:	AND	NAND	XOR	NOT	NOT
26	The gate produces HIGH output when at least one input is LOW:	AND	NAND	OR	XOR	NAND
27	The gate produces HIGH output when either one of the inputs is HIGH:	NAND	AND	OR	XOR	OR
28	The NOT gate is also known as:	Inverter	Doubler	Analyzer	Repeater	Inverter
29	When the input to an inverter is HIGH (1), the output is:	HIGH or 1	LOW or 0	LOW or 0	HIGH or 0	LOW or 0
30	Which Boolean expression best represents the operation of an inverter with input A?	$X = A$	$X = 0$	$X = A?$	$A + X = A$	$X = A?$
31	The maximum number of inputs for an inverter is:	1	2	3	4	1
32	The gate produces HIGH output if and only if all its inputs are HIGH:	AND	OR	XOR	NAND	AND
33	In Boolean algebra, there are ____ possible variable values:	1	2	3	4	2
34	Boolean values can be:	TRUE	FALSE	True or False	1 or 2	True or False
35	The Boolean expression for $X=ABC$ represents:	3-input AND gate	3-input OR gate	4-input OR gate	4-input AND gate	3-input AND gate

36	In the Boolean expression $X=AB$, the term AB is generally read as:	Multiplied A by B	A AND B	A OR B	Logic 0 or 1	Multiplied A by B
37	In the Boolean expression $X=A+B$, the term $A+B$ is generally read as:	A AND B	A added to B	A plus B	A OR B	A OR B
38	_____ is a graphical method to simplify Boolean Expressions.	X axis	Y axis	K-Map	Boolean	K-Map
39	_____ are basic rules and properties used to simplify and manipulate expression of Boolean Algebra.	AND gate	OR gate	Boolean Identities	Boolean and Boolean	Boolean Identities
40	The gate produces LOW output if and only if all its inputs are HIGH.	NAND	XNOR	NOR	AND	NAND
41	$A+0=A$ is equal to identity type?	Identity Law (AND)	Identity law(OR)	Associative law	Distributive Law	Identity law(OR)
42	The output of a gate is HIGH if and only if its inputs are LOW.	NOR	XOR	XNOR	NAND	NOR
43	In dual principle AND operator with OR and 1 with _____?	2	3	0	5	0
44	The output of which 2-input gate is 1 if and only if its inputs are different?	OR	XOR	XNOR	NOR	XOR
45	_____ is a digital circuit that stores binary data.	ALU	MU	Flip-flop	Clock	Flip-flop

46	The output of which 2-input gate is 0 if and only if its inputs are same?	AND	XOR	OR	NOR	XOR
47	NOR gate operates as an OR gate followed by:	AND gate	NAND gate	Inverter	OR gate	Inverter
48	_____ shows all possible input values and corresponding output values of a logic circuit.	Truth table	Flowchart	Circuit diagram	Algorithm	Truth table
49	What do the symbols 'T' and 'F' represent in a truth table?	True and False	True all and First	Table and Formula	Tricky and False	True and False
50	In truth tables, a LOW output for a logic gate is represented by:	0	1	X	Y	0
51	In truth tables, a HIGH output for a logic gate is represented by:	0	1	X	Y	1
52	Which column in a truth table represents the output of a logic circuit for different output input combinations?	Leftmost column	Middle column	Rightmost column	All columns	Rightmost column
53	How many possible input combinations are there for the three inputs in the truth table?	4	8	16	64	8
54	In a truth table, what does the column on the left typically represent:	Output of the gate	Names of the logic gates	Inputs to the gate	Description of the operation	Inputs to the gate
55	The purpose of Boolean identities in Boolean algebra is:	Generate random values	Simplify Boolean expressions	Describe analog signals	Create new Boolean variables	Simplify Boolean expressions

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56	Boolean identities involve operations on:	Decimal numbers	Real numbers	Binary value (0 and 1)	Letters of the alphabet	Binary value (0 and 1)
57	Which Boolean identity states that $A*(B+C)=AB+AC$?	Involution Law	Distributive Law	Complement Law	Idempotent Law	Distributive Law
58	Which Boolean identity ensures that $A+0=A$?	Identity Law	Complement Law	Distributive Law	Idempotent Law	Identity Law
59	Which Boolean identity guarantees that $A+AB=A$?	Absorption Law	Complement Law	Distributive Law	Involution Law	Absorption Law
60	$(A.B).C = A.(B.C)$ is a representation of the:	Associative Law	Conductive Law	Commutative Law	Distributive Law	Associative Law
61	The expression $A.(B+C)$ is equal to:	$A+(B.C)$	$(A.B)+(A.C)$	$A+(B+C)$	$A.(B.C)$	$(A.B)+(A.C)$
62	$A.(B+C)=(A.B)+(A.C)$ is a representation of the:	Associative Law	Conductive Law	Commutative Law	Distributive Law	Distributive Law
63	Who introduced the Karnaugh Map (K-Map) in 1953?	George Boole	Alan Turing	Maurice Karnaugh	Claude Shannon	Maurice Karnaugh
64	Which of the following provides a simple method to minimize Boolean function?	K-map	B-map	C-map	D-map	K-map
65	In a Karnaugh Map (K-map), each cell represents a:	Specific Boolean equation	Unique Logic gate	Specific input combination	Specific output value	Specific input combination
66	How many cells does a two-variable Karnaugh Map (K-map) contain?	2	4	6	8	4
67	How many cells does a three-variable Karnaugh Map (K-map) contain?	2	4	6	8	8
68	_____ is a digital electronic circuit that stores a single bit of binary information (0 or 1).	Capacitor	Transistor	Flip-flop	Resistor	Flip-flop

69	Flip-flops are widely used in which of the following to store binary information?	Sequential circuits	Combinational circuits	Analog circuits	Oscillatory circuits	Sequential circuits
70	In digital signal processing (DSP) circuits, logic gates are used for which of the following purposes?	Clock Synchronization	Filtering, modulation and demodulation	Engine control	Home Automation	Filtering, modulation and demodulation
71	In automotive electronics, logic gates are used for which of the following purposes?	Airbag Deployment and ABS	Filtering and Modulation	Encoding and Decoding Data	Home Automation	Airbag Deployment and ABS
72	When was the term "life cycle" first used in IT to describe the stages in developing a new computer system?	1930s	1950s	1970s	1990s	1950s
73	SDLC stands for:	Software Data Link Control	System Design Life Cycle	Software Development Life Cycle	Secure Data Life Cycle	Software Development Life Cycle
74	Which activity is NOT part of the SDLC?	Planning software	Writing software	Modifying software	Hardware repair	Hardware repair
75	Which type of the following is not a type of feasibility study?	Economic	Marketing	Financial	Technical	Marketing
76	Which type of feasibility study evaluates whether the proposed system can be developed with available technology?	Technical feasibility	Economic feasibility	Legal feasibility	Operational feasibility	Technical feasibility
77	Which type of feasibility study assesses whether the proposed system is financially viable and beneficial?	Technical feasibility	Economic feasibility	Legal feasibility	Operational feasibility	Economic feasibility

78	Which type of feasibility study involves assessing whether the system can be completed within a specified timeframe?	Economic feasibility	Legal feasibility	Schedule feasibility	Operational feasibility	Schedule feasibility
79	Schedule feasibility is concerned with:	Financial cost and benefits	Legal compliance	Project timeline	Technological resources	Project timeline
80	What type of feasibility study ensures that the proposed system complies with all relevant laws and regulation	Technical feasibility	Economic feasibility	Legal feasibility	Operational feasibility	Legal feasibility
81	___ is the process of studying the current system and proposing an alternative replacement system.	Project initiation and planning	Analysis	Logical Design	Physical Design	Analysis
82	In ___ phase the project team determines the end-user requirements.	Analysis	Design	Coding	Implementation	Analysis
83	What comes after the design phase in SDLC?	Implementation	Analysis	Coding	Support	Coding
84	An___ is a specific step by step procedure for carrying out the solution problem.	Data structure	Abstraction	Algorithm	Structure chart	Algorithm
85	An algorithm must terminate after___ number of steps.	Infinite	Five	Two	Finite	Finite
86	The graphical representation of steps to solve a problem is known as:	Flowchart	Pseudocode	Decision Table	Data Flow Diagram	Flowchart
87	Flowchart is a___ representation of steps to solve a problem.	Graphical	Historical	Numerical	Textual	Graphical

88	The symbol used at the beginning and end of an flowchart is:	Oval	Rectangle	Diamond	Parallelogram	Oval
89	The symbol in flow chart that indicates input/output is:	Parallelogram	Rectangle	Diamond	Oval	Parallelogram
90	_____symbols are used to connect one symbol of flowchart to another.	Rectangle	Flow Line	Diamond	Oval	Flow lines
91	_____symbol is used in flowchart for.	Beginning	Ending	Finishing	Beginning and ending	Beginning and ending
92	The decision symbol in flowchart indicates:	Progress	Condition	Output	Input	Condition
93	The rectangle symbol in flowchart indicates:	Process	Condition	Input	Output	Process
94	The _____ symbol in flowchart indicates:	Process	Input/Output	Start	Ending	Input/Output
95	In _____ phase, developers start to build the entire system by writing code using the selected programming language	Coding	Testing	Implementation	Design	Coding
96	_____ is the process of writing the instructions that a computer will follow to perform task.	Project design	Installation	System analysis	Programming	Programming
97	Coding also called.	Evaluating	Programming	Installing	Testing	Programming
98	Translating the algorithm into a programming language occurs in _____ phase in SDLC.	Debugging	Coding	Testing and Documentation	Algorithm Development	Coding

99	The process of removing errors from the system is called:	Patching	Coding	Debugging	Fixing	Debugging
100	Which type of testing focuses on the external functionality of an application from a user's perspective?	White Box Testing	Black Box Testing	Unit Testing	Integration Testing	Black Box Testing
101	Which of the following is NOT typically evaluated in Black Box Testing?	System outputs based on inputs	User requirements	Functional requirements	Internal code structure	Internal code structure
102	Which type of testing focuses on testing internal structures or workings of an application?	Black Box Testing	Integration Testing	White Box Testing	Regression Testing	White Box Testing
103	The _____ phase occurs when the testing phase is completed and the new system is ready to replace the old one.	Development	Design	Maintenance	Implementation	Implementation
104	The process of training personnel to use the new systems is done during:	Development	Systems design	System implementation	System development	System implementation
105	The type of conversion in which some users migrate to the new system while others continue to use old one until the new system starts working correctly is called:	Pilot conversion	Phased conversion	Parallel conversion	Direct conversion	Pilot conversion
106	The type of conversion in which individual components of the new system are used one by one is called:	Direct conversion	Pilot conversion	Phased conversion	Parallel conversion	Phased conversion

107	The type of conversion in which both new and old systems operate together for a period of time is called:	Direct conversion	Pilot conversion	Parallel conversion	Phased conversion	Parallel conversion
108	In which type of system conversion, the old system is directly replaced by new system?	Direct	Phased	Parallel	Pilot	Direct
109	What is the final phase in the software development life cycle?	Design	Prototype	Implementation	Maintenance	Maintenance
110	The _____ phase involves monitoring, evaluating, repairing, and improving the system throughout the lifetime of the system.	Development	Investigation	Maintenance	Analysis	Maintenance
111	Software development models define:	Programming languages used in development	Structured framework for software projects	Hardware requirements for the software	The specific features of the software	Structured framework for software projects
112	The Waterfall model follows a:	Linear or sequential approach	Flexible and iterative approach	User-centered design approach	Rapid prototyping approach	Linear or sequential approach
113	Which model is well-suited for projects with well-defined requirements that are unlikely to change?	Agile	Waterfall	Prototyping	Spiral	Waterfall
114	Which model is a good choice for projects with constantly evolving requirements?	Waterfall Model	Agile Model	Prototyping Model	Spiral Model	Agile Model
115	Which model is known for its iterative and incremental	Agile Model	RAD Model	Waterfall Model	Spiral Model	Agile Model

	approach to software development?					
116	_____ is a systematic arrangement of computers and other devices in a network.	Network protocol	Network topology	Network address	Network security	Network topology
117	Which of the following is not a network topology?	Bus	Band	Star	Ring	Band
118	Which topology is most expensive to implement?	Star	Ring	Bus	Mesh	Mesh
119	In a network topology, what are the individual devices called?	Router	Connection	Nodes	Segments	Nodes
120	A network topology defines how devices are connected to:	Share data and resources	Access internet	Watch movies	Browse web	Share data and resources
121	The rules for communication between network devices are called?	Firewalls	Protocols	Packets	Domains	Protocols
122	Which topology uses single cable to connect devices?	Mesh	Bus	Star	Topology	Bus
123	The entire network goes down if backbone cable fails:	Mesh	Star	Bus	Band	Bus
124	In CSMA/CD, CD stands for	Collision Device	Collision Detection	Communication Detection	Collision Direction	Collision Detection
125	A common protocol used in ethernet to manage access to the shared communication medium by devices is:	TCP	CSMA/CD	UDP	HTTP	CSMA/CD
126	In which type of network is CSMA/CD most commonly used?	Wireless	Fiber optic	Satellite	Ethernet	Ethernet

127	Which topology uses central device to connect other devices?	Bus	Ring	Mesh	Star	Star
128	In which topology Hub or Switch is used?	Bus	Ring	Mesh	Star	Star
129	Which of the following is advantage of star topology?	Uses less cable	Easy to add new devices	Require no central device	Least expensive	Easy to add new devices
130	A hybrid topology may include:	Bus	Star	Ring	All	All
131	A network topology that combines different type of topologies is called:	Linear topology	Clustered topology	Distributed topology	Hybrid topology	Hybrid topology
132	In ring topology devices are connected in a :	Star shape	Linear chain	Circular loop	Mesh network	Circular loop
133	Which communication protocol is commonly used in Ring topology?	CSMA/CD	UDP	Ethernet	Token ring	Token ring
134	The message on _____ network topology takes any possible path from source to destination.	Ring	Bus	Star	Mesh	Mesh
135	_____ refers to an infrastructure that provides different computing services over internet.	AI	ML	Desktop computing	Cloud computing	Cloud computing
136	All of the following are cloud computing services except:	AWS	Microsoft Azure	Google Cloud Computing	Google chrome	Google chrome
137	Which of these is NOT a cloud service model?	IaaS	SaaS	HaaS	PaaS	HaaS
138	SaaS stands for _____	Security as a Service	Software as a Service	Storage as a Service	Server as a Service	Software as a Service

139	_____ involves the delivery of applications over the internet.	SaaS	PaaS	BaaS	IaaS	SaaS
140	_____ provides a programming environment to develop, test and deploy custom web applications.	SaaS	PaaS	BaaS	IaaS	PaaS
141	Which of the following is another term for cybersecurity?	Electronic Information Security	Information Technology Security	Hardware engineering	a & b	a & b
142	Cybersecurity aims to protect system and data from:	Software updates	Malicious attacks	Routine maintenance	Legal compliance	Malicious attacks
143	_____ is a practice of protecting computer system, network and data from unauthorized access:	User training	Network expansion	Cybersecurity	Software development	Cybersecurity
144	Which of the following is NOT a common target for cyberattacks:	Personal computer	Mobile devices	Servers	Printers	Printers
145	Who uses cybersecurity practices?	only large organizations	Only govt. agencies	Individuals and enterprises	Only IT professionals	Individuals and enterprises
146	Which of the following is NOT typically protected by cybersecurity measures?	Data centers	Electronic systems	Personal computers	Physical documents	Physical documents
147	Cybersecurity threats aim to:	Improve computer speed	Gain unauthorized access	Automate user tasks	Clean the systems	Gain unauthorized access
148	Who typically performs cybersecurity threats?	IT support teams	Individuals or groups with destructive intent	Software developers	Network administrators	Individuals or groups with destructive intent

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149	Which of the following actions is NOT an example of a cybersecurity threat?	Unauthorized access to computers	Stealing sensitive data	Damaging or disrupting IT systems	Performing regular system updates	Performing regular system updates
150	Malicious software is known as:	Illegalware	Badware	Malware	Maliciousware	Malware
151	Malware is software designed with the intent to:	Improve computer speed	Harm or exploit computer systems	Organize digital files	Secure online transactions	Harm or exploit computer systems
152	Which of the following is NOT a type of malicious software?	Virus	Trojan horse	Spyware	Text editor	Text editor
153	A computer virus is a:	Disease	Program	Type of bacteria	Hardware device	Program
154	Which type of malware attaches itself to legitimate programs and spreads when executed?	Worm	Adware	Viruses	Spyware	Viruses
155	A program that can propagate without human intervention is a:	Virus	Worm	Trojan horse	None	Worm
156	A _____ appears to be a legitimate program but is actually malicious.	Cookie	Worm	Trojans horse	Viruses	Trojans horse
157	_____ is a social engineering attack to deceive users to reveal sensitive information such as login and credit card details.	Cyberstalking	Cyberbullying	Phishing	Licensing	Phishing
158	Which type of phishing is directed at specific individuals or organizations using personalized information?	General Phishing	Spear Phishing	Mass Phishing	Phone Phishing	Spear Phishing

159	What do cybercriminals usually ask the recipients to do in email phishing attacks?	Visit legitimate websites	Click on malicious links	Download infected attachments	B or C	B or C
160	Which type of attack attempts to overload the system with requests and deny legitimate users access?	Denial of service (DoS)	ip spoofing	Phishing	Key logging	Denial of service (DoS)
161	DoS stands for:	Disk object system	Disk off System	Denial-of-service	Disk on service	Denial-of-service
162	_____ is a program to collect information about user activities without his knowledge.	Adware	Ghostware	Shareware	Spyware	Spyware
163	Which type of malware encrypts files and demands a payment to decrypt them?	Adware	Ransomware	Spyware	Worm	Ransomware
164	Which of the following is a secret combination of characters used to protect against unauthorized access?	Password	Username	Firewall	Biometric Authentication	Password
165	Which of the following is true about strong password?	Short length with common words	Using only lowercase letters	Word related to a job or hobby	Combination of letters, numbers and symbols	Combination of letters, numbers and symbols
166	Which of the following is an example of a strong password?	password123	abc123	P@ssw0rd\$Secur3l	myname123	P@ssw0rd\$Secur3l
167	Why is it important to keep software up to date in cybersecurity?	To ensure compatibility	To introduce new bugs	To patch known vulnerabilities	To avoid system restarts	To patch known vulnerabilities
168	What does 2FA stand for?	Two-Factor Authentication	Two-Factor Authorization	Two-Factor Accessibility	Two-Factor Accounting	Two-Factor Authentication

169	What does Two-Factor Authentication (2FA) require for user access?	Two email addresses	Two different devices	Two forms of verification	Two usernames	Two forms of verification
170	Which of the following is used to control and filter network traffic?	Firewall	Safety wall	Barrier device	Modem	Firewall
171	Which type of software provides real-time protection against malware?	Text Editor	Antivirus Software	Media Player	Web browser	Antivirus Software
172	Which method is used to secure information by transforming it into unreadable form?	Cryptography	Stenography	Steganography	Cryptosystem	Cryptography
173	Which of the following aspects of data security does cryptography address?	Confidentiality	Integrity	Authentication	All	All
174	The process of converting plain text into an unreadable format is called:	Compression	Encoding	Encryption	Decryption	Encryption
175	_____ refers to unencrypted text:	Cipher Text	Plain Text	Hash	Key	Plain Text
176	_____ refers to encrypted text:	Cipher Text	Plain Text	Algorithm	Key	Cipher Text
177	Which of the following is essential to convert encrypted data back into its original form?	Password	Decryption key	Email address	Username	Decryption key
178	Which of the following is most crucial for restoring data after a cyberattack?	Intrusion detection system (IDS)	Firewalls	Disaster recovery plan	Anti-malware software	Disaster recovery plan

179	A type of encryption in which different keys are used for encryption and decryption is called:	Symmetric encryption	Asymmetric encryption	Public key encryption	Private key encryption	Asymmetric encryption
180	What are the two keys used in asymmetric encryption?	Primary key and secondary key	Red key and blue key	Public key and private key	Encryption key and decryption key	Public key and private key
181	Which key is used to encrypt data in asymmetric encryption?	Private key	Public key	Shared key	User authentication key	Public key
182	Which key is used to decrypt data in asymmetric encryption?	Public key	Private key	Symmetric key	Shared key	Private key
183	What type of encryption utilizes a single key for both encrypting and decrypting data?	Symmetric encryption	Asymmetric encryption	Public key encryption	Hybrid encryption	Symmetric encryption
184	Which characteristic distinguishes symmetric encryption from asymmetric encryption?	Uses a single key	Involves a public key	Slower encryption speed	Requires two keys	Uses a single key
185	A ____ is another type of digital circuit as compare to Flip flop used to store binary data.	Logic	Synchronization	Latch	Flop and Flop	Latch