

**5500<sup>+</sup>**

Objective Solved  
Questions

**Volume-10**

Network Security  
Basics of Communication  
Web Development

# RSSB

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To reach heights one must start climbing and if the journey is difficult then perseverance is the key to success. As a teacher we have realized over past years that success in any competitive exam requires hard work and proper guidance. **Engineers Academy** with its unique teaching methodologies has always proved that we meet the expectations of thousands of students and parents to make their dreams come true. With changing patterns, we have adapted ourselves to deliver the best and ensure better results.

This book has been organized and executed with a lot of care, dedication and passion for lucidity. A conscious attempt has been made to simplify the concepts to facilitate better understanding of the subject.

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We would feel satisfied if the book meets the needs of the students for whom it is meant.

Lastly, we are thankful to all the engineers, authors whose work has been the source of enlightenment, inspiration and guidance in presenting this book.

It is hoped that the book in its new form will enjoy its ever increasing popularity.

Regards

Dr. Pankaj Goyal



# Preface

✍ This book has been written to meet the growing requirements of candidates appearing for Senior Computer Instructor and other competitive Examinations. Though every candidate has ability to succeed but competitive environment, in-depth knowledge, quality guidance, time management and good source of study is required to achieve goals.

This book includes Multiple Choice Questions (MCQ's) which works as a mock exam practice for the reader. Questions of all the subject have been organized in systematic, concepts oriented and error less manner so that it become easy and interesting for even a beginner to understand. It is a very convenient book and must be solved by candidate aiming for competitive exams.

After solving this booklet students can feel encouraged and develop confidence to attempt each and every type of numerical as well as theoretical problems. Each problems explains solving approach so that at the end, so the reader is well equipped to be able to apply any type of problem solving requirement and distinctly choose one strategy or type from the other.

We hope this book will be proved an important tool to succeed in Basic and Senior Computer Instructor and other competitive Examinations.

Even though, enough readings were given for correcting the error and printing mistakes, due to human tendency there could be some minor typos in the book. If any such typos found, they will be highly appreciated and in corporated in the next edition. Also, please provide your valuable suggestions at :[engineers.academy.india@gmail.com](mailto:engineers.academy.india@gmail.com)

Wish you all the best. Have a nice reading.

**Team of  
Engineers Academy Publications**

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## 1

# Network Security

## OBJECTIVE QUESTION

1. In the digital signature technique when the whole message is signed using an asymmetric key, the receiver of the message uses \_\_\_\_\_ to verify the signature.
  - (a) Her or his own public key
  - (b) Her or his own private key
  - (c) The sender's public key
  - (d) None of the choices are correct.
2. What is the ethics behind training how to hack a system?
  - (a) To think like hackers and know how to defend such attacks
  - (b) To hack a system without the permission
  - (c) To hack a network that is vulnerable
  - (d) To corrupt software or service using malware
3. The legal risks of ethical hacking include lawsuits due to \_\_\_\_\_ of personal data.
  - (a) Stealing
  - (b) Disclosure
  - (c) Deleting
  - (d) Hacking
4. After performing \_\_\_\_\_ the ethical hacker should never disclose client information to other parties.
  - (a) Hacking
  - (b) Cracking
  - (c) Penetration testing
  - (d) Exploiting
5. Which of the following usually observe each activity on the internet of the victim, gather all information in the background, and send it to someone else?
  - (a) Malware
  - (b) Spyware
  - (c) Adware
  - (d) All of the above
6. Which one of the following is a type of antivirus program?
  - (a) Quick heal
  - (b) McAfee
  - (c) Kaspersky
  - (d) All of the above
7. Which one of the following refers to the technique used for verifying the integrity of the message?
  - (a) Digital signature
  - (b) Decryption algorithm
  - (c) Protocol
  - (d) Message Digest
8. Which of the following port and IP address scanner famous among the users?
  - (a) Cain and Abel
  - (b) Angry IP Scanner
  - (c) Snort
  - (d) Ettercap
9. Which of the following is not a type of scanning?
  - (a) Xmas Tree Scan
  - (b) Cloud scan
  - (c) Null Scan
  - (d) SYN Stealth
10. Code Red is a type of \_\_\_\_\_.
  - (a) An Antivirus Program
  - (b) A photo editing software
  - (c) A computer virus
  - (d) A video editing software
11. What is the full form of LDAP?
  - (a) Light Weight Directory Access Provider
  - (b) Light Weight Directory Access Protocol
  - (c) Light Weight Directory Access Program
  - (d) Light Weight Directory Access Protection
12. What is called a single point of access for several networking services?
  - (a) Phishing
  - (b) Web service
  - (c) Directory service
  - (d) Worms
13. The type of encoding in which manipulation of bit streams without regard to what the bits mean is .....
  - (a) Destination encoding
  - (b) Entropy encoding
  - (c) Source encoding
  - (d) Differential encoding
14. The protocol used to provide security to e-mails?
  - (a) POP
  - (b) PGP
  - (c) SNMP
  - (d) HTTP
15. The length of the key in one time pad method is .....
  - (a) Random
  - (b) Fixed
  - (c) 64
  - (d) 56
16. The text that gets transformed using algorithm cipher is called?
  - (a) Complex text
  - (b) Transformed text
  - (c) Plain text
  - (d) Scalar text
17. Which of the following process is used for verifying the identity of a user?
  - (a) Authentication
  - (b) Identification
  - (c) Validation
  - (d) Verification

18. Which of these is a part of network identification?  
 (a) UserID (b) Password  
 (c) OTP (d) Fingerprint
19. The information that gets transformed in encryption is \_\_\_\_\_  
 (a) Plain text (b) Parallel text  
 (c) Encrypted text (d) Decrypted text
20. A \_\_\_\_\_ is a trusted third party that solves the problem of symmetric-key distribution.  
 (a) CA (b) KDC  
 (c) TLS (d) Firewall
21. In the \_\_\_\_\_ mode, the IPSec header is added between the IP header and the rest of the packet.  
 (a) Transport  
 (b) Tunnel  
 (c) Transition  
 (d) None of the choices are correct.
22. The information that gets transformed in encryption is \_\_\_\_\_  
 (a) Plain text (b) Parallel text  
 (c) Encrypted text (d) Decrypted text
23. An algorithm in encryption is called \_\_\_\_\_.  
 (a) Algorithm (b) Procedure  
 (c) Cipher (d) Module
24. Network security consists of:  
 (a) Protection (b) Detection  
 (c) Reaction (d) All of the above
25. Interaction between the client and server starts via the \_\_\_\_\_ message.  
 (a) client\_hi (b) client\_hello  
 (c) server\_hello (d) server\_hi
26. What is true about Email security in Network security methods?  
 (a) Phishing is one of the most common ways attackers gain access to a network.  
 (b) You should know what normal network behavior looks like so that you can spot anomalies or breaches as they happen.  
 (c) You need to employ hardware, software, and security processes to lock those apps down.  
 (d) All of the above
27. The text that gets transformed using algorithm cipher is called?  
 (a) Complex text (b) Transformed text  
 (c) Plain text (d) Scalar text
28. Which of these is a part of network identification?  
 (a) UserID (b) Password  
 (c) OTP (d) Fingerprint
29. You are working on a router that has established privilege levels that restrict access to certain functions. You discover that you are not able to execute the command `show running-configuration`. How can you view and confirm the access lists that have been applied to the Ethernet 0 interface on your router?  
 (a) Show access-lists  
 (b) Show interface Ethernet 0  
 (c) Show ip access-lists  
 (d) Show ip interface Ethernet 0
30. What router command allows you to determine whether an IP access list is enabled on a particular interface?  
 (a) Show ip port  
 (b) Show access-lists  
 (c) Show ip interface  
 (d) Show access-lists interface
31. WTLS stands for?  
 (a) Wireless Transport Security Layer  
 (b) Wireless Transfer System Layer  
 (c) Wireless Transfer Security Layer  
 (d) Wireless Transport System Layer
32. A small program that changes the way a computer operates.  
 (a) Worm (b) Trojan  
 (c) Bomb (d) Virus
33. An indirect form of surveillance.  
 (a) Honey pot (b) Logical  
 (c) Security (d) Intrusion
34. An attack in which the user receives unwanted amount of e-mails.  
 (a) Smurfing (b) Denial of service  
 (c) E-mail bombing (d) Ping storm
35. What is the standard IANA port number used for requesting web pages?  
 (a) 80 (b) 53  
 (c) 21 (d) 25
36. Which of the following process is used for verifying the identity of a user?  
 (a) Authentication (b) Identification  
 (c) Validation (d) Verification
37. Which of the following modes of operation in DES is used for operating?  
 (a) Cipher Feedback Mode (CFB)  
 (b) Cipher Block chaining (CBC)  
 (c) Electronic code book (ECB)  
 (d) Output Feedback Modes (OFB)
38. Using Rivest, Shamir, Adleman cryptosystem with  $p=7$  and  $q=9$ . Encrypt  $M=24$  to find ciphertext. The Ciphertext is:  
 (a) 42 (b) 93  
 (c) 114 (d) 103

39. In TCP, sending and receiving data is done as \_\_\_\_\_
- (a) Stream of bytes
  - (b) Sequence of characters
  - (c) Lines of data
  - (d) Packets
40. To achieve reliable transport in TCP, \_\_\_\_\_ is used to check the safe and sound arrival of data.
- (a) Packet
  - (b) Buffer
  - (c) Segment
  - (d) Acknowledgment
41. The value of acknowledgement field in a segment defines \_\_\_\_\_
- (a) Sequence number of the byte received previously
  - (b) Total number of bytes to receive
  - (c) Sequence number of the next byte to be received
  - (d) Sequence of zeros and ones
42. What is the ethics behind training how to hack a system?
- (a) To think like hackers and know how to defend such attacks
  - (b) To hack a system without the permission
  - (c) To hack a network that is vulnerable
  - (d) To corrupt software or service using malware
43. Performing a shoulder surfing in order to check other's password is \_\_\_\_\_ ethical practice.
- (a) A good
  - (b) Not so good
  - (c) Very good social engineering practice
  - (d) A bad
44. \_\_\_\_\_ has now evolved to be one of the most popular automated tools for unethical hacking.
- (a) Automated apps
  - (b) Database software
  - (c) Malware
  - (d) Worms
45. \_\_\_\_\_ is the technique used in business organizations and firms to protect IT assets.
- (a) Ethical hacking
  - (b) Unethical hacking
  - (c) Fixing bugs
  - (d) Internal data-breach
46. The legal risks of ethical hacking include lawsuits due to \_\_\_\_\_ of personal data.
- (a) Stealing
  - (b) Disclosure
  - (c) Deleting
  - (d) Hacking
47. Before performing any penetration test, through legal procedure, which key points listed below is not mandatory?
- (a) Know the nature of the organization
  - (b) Characteristics of work done in the firm
  - (c) System and network
  - (d) Type of broadband company used by the firm
48. After performing \_\_\_\_\_ the ethical hacker should never disclose client information to other parties.
- (a) Hacking
  - (b) Cracking
  - (c) Penetration testing
  - (d) Exploiting
49. \_\_\_\_\_ is the branch of cyber security that deals with morality and provides different theories and a principle regarding the view-points about what is right and wrong.
- (a) Social ethics
  - (b) Ethics in cyber-security
  - (c) Corporate ethics
  - (d) Ethics in black hat hacking
50. \_\_\_\_\_ helps to classify arguments and situations, better understand a cyber-crime and helps to determine appropriate actions.
- (a) Cyber-ethics
  - (b) Social ethics
  - (c) Cyber-bullying
  - (d) Corporate behavior
51. A penetration tester must identify and keep in mind the \_\_\_\_\_ requirements of a firm while evaluating the security postures.
- (a) privacy and security
  - (b) rules and regulations
  - (c) hacking techniques
  - (d) ethics to talk to seniors
52. Network layer firewall works as a \_\_\_\_\_
- (a) Frame filter
  - (b) Packet filter
  - (c) Content filter
  - (d) Virus filter
53. A firewall is installed at the point where the secure internal network and untrusted external network meet which is also known as \_\_\_\_\_
- (a) Chock point
  - (b) Meeting point
  - (c) Firewall point
  - (d) Secure point
54. A proxy firewall filters at \_\_\_\_\_
- (a) Physical layer
  - (b) Data link layer
  - (c) Network layer
  - (d) Application layer
55. A firewall needs to be \_\_\_\_\_ so that it can grow proportionally with the network that it protects.
- (a) Robust
  - (b) Expansive
  - (c) Fast
  - (d) Scalable
56. A stateful firewall maintains a \_\_\_\_\_ which is a list of active connections.
- (a) Routing table
  - (b) Bridging table
  - (c) State table
  - (d) Connection table
57. There are \_\_\_\_\_ types of computer virus.
- (a) 5
  - (b) 7
  - (c) 10
  - (d) 12
58. Which of the following is not a type of virus?
- (a) Boot sector
  - (b) Polymorphic
  - (c) Multipartite
  - (d) Trojans
59. A computer \_\_\_\_\_ is a malicious code which self-replicates by copying itself to other programs.
- (a) Program
  - (b) Virus
  - (c) Application
  - (d) Worm
60. Which of them is not an ideal way of spreading the virus?
- (a) Infected website
  - (b) Emails
  - (c) Official Antivirus CDs
  - (d) USBs

61. \_\_\_\_\_ gets installed & stays hidden in your computer's memory. It stays involved to the specific type of files which it infects.
- (a) Boot Sector Virus (b) Direct Action Virus  
(c) Polymorphic Virus (d) Multipartite Virus
62. \_\_\_\_\_ is also known as cavity virus.
- (a) Non-resident virus (b) Overwrite Virus  
(c) Polymorphic Virus (d) Space-filler Virus
63. The \_\_\_\_\_ can cost you money, by sending text messages from your mobile phone numbers.
- (a) IM - Trojans (b) Backdoor Trojans  
(c) SMS Trojan (d) Ransom Trojan
64. USENET falls under which category of public key sharing?
- (a) Public announcement  
(b) Publicly available directory  
(c) Public-key authority  
(d) Public-key certificates
65. In cryptography, what is cipher?
- (a) Algorithm for performing encryption and decryption  
(b) Encrypted message  
(c) Both algorithm for performing encryption and decryption and encrypted message  
(d) Decrypted message
66. In asymmetric key cryptography, the private key is kept by \_\_\_\_\_
- (a) Sender  
(b) Receiver  
(c) Sender and receiver  
(d) All the connected devices to the network
67. What is data encryption standard (DES)?
- (a) Block cipher (b) Stream cipher  
(c) Bit cipher (d) Byte cipher
68. Cryptographic hash function takes an arbitrary block of data and returns \_\_\_\_\_
- (a) Fixed size bit string  
(b) Variable size bit string  
(c) Both fixed size bit string and variable size bit string  
(d) Variable sized byte string
69. Which network topology requires a central controller or hub?
- (a) Star (b) Mesh  
(c) Ring (d) Bus
70. \_\_\_\_\_ topology requires a multipoint connection.
- (a) Star (b) Mesh  
(c) Ring (d) Bus
71. Data communication system within a building or campus is \_\_\_\_\_
- (a) LAN (b) WAN  
(c) MAN (d) PAN
72. WAN stands for \_\_\_\_\_
- (a) World Area Network (b) Wide Area Network  
(c) Web Area Network (d) Web Access Network
73. \_\_\_\_\_ is the multiplexing technique that shifts each signal to a different carrier frequency.
- (a) FDM (b) TDM  
(c) Both FDM & TDM (d) PDM
74. Two devices are in network if \_\_\_\_\_
- (a) A process in one device is able to exchange information with a process in another device  
(b) A process is running on both devices  
(c) PIDs of the processes running of different devices are same  
(d) A process is active and another is inactive
75. Bluetooth is an example of \_\_\_\_\_
- (a) Personal area network (b) Local area network  
(c) Virtual private network (d) Wide area network
76. Network congestion occurs \_\_\_\_\_
- (a) In case of traffic overloading  
(b) When a system terminates  
(c) When connection between two nodes terminates  
(d) In case of transfer failure
77. The keys used in cryptography are
- (a) Secret key (b) Private key  
(c) Public key (d) All of them
78. CHAP stands for?
- (a) Challenge Handshake authentication protocol  
(b) Challenge Hardware authentication protocol  
(c) Circuit Hardware authentication protocol  
(d) Circuit Handshake authentication protocol
79. The information that gets transformed in encryption is \_\_\_\_\_
- (a) Plain text (b) Parallel text  
(c) Encrypted text (d) Decrypted text
80. Network layer firewall works as a \_\_\_\_\_
- (a) Frame filter (b) Packet filter  
(c) Signal filter (d) Content filter
81. WPA2 is used for security in \_\_\_\_\_
- (a) ethernet (b) bluetooth  
(c) wi-fi (d) e-mail
82. Pretty good privacy (PGP) is used in \_\_\_\_\_
- (a) browser security (b) email security  
(c) FTP security (d) wifi security
83. Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?
- (a) CDMA (b) CSMA/CA  
(c) ALOHA (d) CSMA/CD

84. What is Wired Equivalent Privacy (WEP)?  
(a) Security algorithm for ethernet  
(b) Security algorithm for wireless networks  
(c) Security algorithm for usb communication  
(d) Security algorithm for emails
85. What is WPA?  
(a) Wi-fi protected access (b) Wired protected access  
(c) Wired process access (d) Wi-fi process access
86. An interconnected collection of piconet is called \_\_\_\_\_  
(a) Scatternet (b) Micronet  
(c) Mininet (d) Multinet
87. Which one of the following can be considered as the class of computer threats?  
(a) Dos Attack (b) Phishing  
(c) Soliciting (d) Both A and C
88. \_\_\_\_\_ is a type of software designed to help the user's computer detect viruses and avoid them.  
(a) Malware (b) Adware  
(c) Antivirus (d) Both B and C
89. Which one of the following is a type of antivirus program?  
(a) Quick heal (b) McAfee  
(c) Kaspersky (d) All of the above
90. Which one of the following is actually considered as the first computer virus?  
(a) Sasser (b) Blaster  
(c) Creeper (d) Both A and C
91. Code Red is a type of \_\_\_\_\_  
(a) An Antivirus Program (b) A photo editing software  
(c) A computer virus (d) A video editing software
92. Which one of the following is also referred to as malicious software?  
(a) Maliciousware (b) Badware  
(c) Illegalware (d) Malware
93. Secure Hash Algorithm 1 (SHA-1) has a message digest of:  
(a) 160-bits (b) 512-bits  
(c) 628-bits (d) 820-bits
94. In message confidentiality, the transmitted message must make sense to only intended:  
(a) Receiver (b) Sender  
(c) Modular (d) Translator
95. Hash function guarantees the integrity of a message. It guarantees that the message has not been:  
(a) Replaced (b) Over view  
(c) Changed (d) Violated
96. A digital signature needs a:  
(a) Shared-key system (b) Private key system  
(c) Secret key (d) Public key system
97. A session symmetric key between two parties is used:  
(a) Multiple time (b) Twice  
(c) Only once (d) Conditions dependent
98. Encryption and decryption provide secrecy or confidentiality, but not provide:  
(a) Authentication (b) Privacy  
(c) Integrity (d) Modularity
99. MAC stands for:  
(a) Message Arbitrary Connection  
(b) Message Authentication Control  
(c) Message Authentication Code  
(d) Message Authentication Cipher
100. The digest created by a hash function is normally called as:  
(a) Modify Authentication Connection  
(b) Message Authentication Control  
(c) Message Authentication Cipher  
(d) Modification Detection Code (MDC)
101. When the data must arrive at the receiver exactly as they were sent, it is called:  
(a) Message confidentiality (b) Message integrity  
(c) Message splashing (d) Message binding
102. In message integrity, Secure Hash Algorithm (SHA-1) hash algorithms create on N-bit message, digest of a message of:  
(a) 512 bit blocks (b) 210 bit blocks  
(c) 1510 bit blocks (d) 2020 bit blocks
103. IP security (IPSec) is a collection of protocols designed by the IETF to provide security for a packet at the:  
(a) Data link (b) Network  
(c) Transport (d) None
104. A packet-filter firewall filters at the \_\_\_ or \_\_\_ layer.  
(a) Network; Application (b) Network; Transport  
(c) Transport; Application (d) None of the above
105. Which of the following attacks is threatening integrity?  
(a) Traffic analysis (b) Denial of Service  
(c) Masquerading (d) None of the above
106. In which of the following cryptographies, the same key is used by the sender and the receiver?  
(a) Asymmetric key (b) Public key  
(c) Symmetric key (d) None of the above
107. Which among the following can provide authentication, integrity, and non-repudiation for a message?  
(a) Compression (b) Digital Signature  
(c) Encryption/decryption (d) None of the above
108. In which of the following cryptographies, everyone has access to everyone's public key?  
(a) Symmetric-key (b) Secret key  
(c) Asymmetric-key (d) None of these

245. Which keyword dynamically creates an object?  
 (a) create (b) make  
 (c) new (d) instance
246. Which function sorts array in ascending order?  
 (a) sort() (b) order()  
 (c) asc() (d) arsort()
247. Which function returns number of array elements?  
 (a) size() (b) count()  
 (c) array\_size() (d) total()
248. Difference between require() and include():  
 (a) require() shows warning  
 (b) require() stops execution  
 (c) include() stops execution  
 (d) Both same
249. Which function checks if value exists in array?  
 (a) in\_array() (b) exists()  
 (c) search() (d) find()
250. PHP scripts are executed on:  
 (a) Browser (b) Client machine  
 (c) Server (d) OS kernel
251. JavaScript is a \_\_\_\_\_ side scripting language.  
 (a) Server (b) Client  
 (c) Database (d) Middleware
252. Which symbol is used to declare a variable in JavaScript?  
 (a) \$ (b) var / let / const  
 (c) @ (d) #
253. Which method outputs data to the browser console?  
 (a) echo() (b) print()  
 (c) console.log() (d) document.write()
254. Which of the following is NOT a JavaScript data type?  
 (a) String (b) Boolean  
 (c) Float (d) Undefined
255. Which operator is used for strict comparison in JS?  
 (a) == (b) ===  
 (c) = (d) !==
256. Which function parses a string to an integer?  
 (a) parseFloat() (b) parseInt()  
 (c) Number() (d) convert()
257. Which keyword declares a constant variable?  
 (a) var (b) let  
 (c) const (d) static
258. Which event occurs when the user clicks an HTML element?  
 (a) onclick (b) onmouseover  
 (c) onmouseover (d) onhover
259. Which method adds an element at the end of an array?  
 (a) push() (b) pop()  
 (c) shift() (d) unshift()
260. Which loop is guaranteed to run at least once?  
 (a) for (b) while  
 (c) do...while (d) foreach
261. Which object represents the web browser window?  
 (a) document (b) window  
 (c) navigator (d) screen
262. Which method changes the content of an HTML element?  
 (a) innerText (b) innerHTML  
 (c) textContent (d) all of the above
263. Which keyword refers to the current object?  
 (a) self (b) this  
 (c) current (d) object
264. Which operator is used to check inequality in JS?  
 (a) != (b) <>  
 (c) !== (d) Both A & C
265. Which method converts a JS object to a JSON string?  
 (a) JSON.parse() (b) JSON.stringify()  
 (c) JSON.convert() (d) JSON.encode()  
*Ans. (b) — JSON.stringify()*
266. Which method converts a JSON string into a JS object?  
 (a) JSON.parse() (b) JSON.stringify()  
 (c) JSON.decode() (d) JSON.toObject()
267. What does NaN stand for?  
 (a) Not a Number (b) Null and None  
 (c) New Array Number (d) Not available Number
268. Which method removes the last element of an array?  
 (a) pop() (b) push()  
 (c) shift() (d) unshift()
269. Which operator is used to check type equality?  
 (a) typeof (b) instanceof  
 (c) === (d) isType
270. Which object gives information about the client browser?  
 (a) screen (b) window  
 (c) navigator (d) document
271. Which method removes the first element from an array?  
 (a) pop() (b) push()  
 (c) shift() (d) unshift()
272. Which method adds elements to the beginning of an array?  
 (a) push() (b) pop()  
 (c) shift() (d) unshift()
273. Which method merges two arrays?  
 (a) merge() (b) join()  
 (c) concat() (d) append()

274. Which method converts array to a string separated by commas?  
(a) toString() (b) join()  
(c) stringify() (d) convert()  
**Ans. (a)** — toString()
275. Which statement defines an anonymous function?  
(a) function foo() {} (b) function() {}  
(c) () => {} (d) Both B & C
276. Which keyword stops loop iteration immediately?  
(a) stop (b) break  
(c) continue (d) exit
277. Which keyword skips current iteration in a loop?  
(a) stop (b) break  
(c) continue (d) skip
278. Which object represents the HTML document?  
(a) window (b) document  
(c) navigator (d) location
279. Which method finds an element by its ID?  
(a) document.getElementById()  
(b) document.querySelectorAll()  
(c) document.getElementsByClassName()  
(d) document.querySelector()  
**Ans. (a)** — document.getElementById()
280. Which method finds the first element matching a CSS selector?  
(a) getElementById()  
(b) querySelector()  
(c) getElementsByClassName()  
(d) getElementsByTagName()
281. Which method finds all elements matching a CSS selector?  
(a) querySelector()  
(b) querySelectorAll()  
(c) getElementsByClassName()  
(d) getElementsByTagName()
282. Which property changes the content of an element?  
(a) innerHTML (b) textContent  
(c) innerText (d) all of the above  
**Ans. (d)** — all of the above
283. Which method adds HTML element dynamically?  
(a) createElement() (b) appendChild()  
(c) insertBefore() (d) all of the above
284. Which method removes an HTML element?  
(a) removeChild() (b) remove()  
(c) Both A & B (d) delete()
285. Which event occurs when user moves mouse over an element?  
(a) onmouseover (b) onmousemove  
(c) onmouseenter (d) Both A & C
286. Which event occurs when user moves mouse out of an element?  
(a) onmouseleave (b) onmouseout  
(c) Both A & B (d) onhoverout
287. Which method delays function execution?  
(a) setInterval() (b) setTimeout()  
(c) delay() (d) sleep()
288. Which method executes function repeatedly at intervals?  
(a) setTimeout() (b) setInterval()  
(c) repeat() (d) loop()
289. Which method stops setInterval() execution?  
(a) clearTimeout() (b) clearInterval()  
(c) stopInterval() (d) removeInterval()
290. Which operator checks if a property exists in an object?  
(a) in (b) instanceof  
(c) hasOwnProperty() (d) Both A & C  
**Ans. (d)** — Both A & C
291. Which keyword is used to create a JS class?  
(a) class (b) function  
(c) object (d) new
292. Which keyword creates an object from class?  
(a) new (b) object  
(c) instance (d) this
293. Which method is called automatically when an object is converted to string?  
(a) \_\_toString() (b) toString()  
(c) string() (d) toStr()
294. Which method converts a string to a number?  
(a) parseInt() (b) parseFloat()  
(c) Number() (d) all of the above
295. Which type of storage stores data across browser sessions?  
(a) localStorage (b) sessionStorage  
(c) cookies (d) memory
296. Which type of storage stores data for one session only?  
(a) localStorage (b) sessionStorage  
(c) cookies (d) memory
297. Which object holds URL and location info?  
(a) window.location (b) document.location  
(c) navigator.location (d) locationObject
298. Which function converts string to lowercase?  
(a) lower() (b) toLowerCase()  
(c) lowercase() (d) strLower()
299. Which function converts string to uppercase?  
(a) upper() (b) toUpperCase()  
(c) uppercase() (d) strUpper()
300. Which method checks if a string contains another string?  
(a) contains() (b) includes()  
(c) find() (d) search()

## Answer with Explanation

1. **Ans. (d) <h1>**  
The <head> section contains metadata, not visible content. Headings like <h1> must be placed inside the <body> section.
2. **Ans. (a) alt**  
The alt attribute provides descriptive text for images, which is essential for accessibility and SEO.
3. **Ans. (c) <nav>**  
<nav> is a semantic container introduced in HTML5 specifically for navigation menus.
4. **Ans. (c) <div>**  
<div> is a non-semantic container that has no inherent meaning, unlike <article>, <section>, or <header>.
5. **Ans. (a) <map>**  
<map> defines the image map, while <area> defines clickable regions within it.
6. **Ans. (b) CSS text-align property**  
The <center> tag is obsolete. Text and element alignment is now handled using CSS.
7. **Ans. (b) <!DOCTYPE html>**  
HTML5 uses a simplified DOCTYPE: <!DOCTYPE html> to ensure standard mode rendering.
8. **Ans. (b) JavaScript**  
Dynamic HTML (DHTML) combines HTML, CSS, and JavaScript to create interactive and animated web pages.
9. **Ans. (c) <audio>**  
The <audio> tag embeds audio files with optional controls like play, pause, and volume.
10. **Ans. (c) <textarea>**  
<textarea> is used for multi-line user input; <input> supports only single-line text fields.
11. **Ans. (a) novalidate**  
The novalidate attribute disables automatic HTML5 validation for a form.
12. **Ans. (b) required**  
The required attribute ensures that the user cannot submit a form without filling in the field.
13. **Ans. (d) It boosts page performance**  
<iframe> can load external content but usually increases page load time due to additional HTTP requests.
14. **Ans. (c) http:// or https://**  
Web pages commonly use HTTP or HTTPS URLs to embed external resources like images, scripts, or videos.
15. **Ans. (a) <embed>**  
**Explanation:** The <embed> tag can display PDFs, videos, and other media types directly in a browser.
16. **Ans. (c) <pre>**  
<pre> preserves whitespace and line breaks, displaying text in a fixed-width font.
17. **Ans. (d) name**  
Radio buttons sharing the same name attribute form a group where only one can be selected.
18. **Ans. (b) <q> or <blockquote>**  
<q> is used for inline quotes, while <blockquote> is for block-level quotations.
19. **Ans. (c) <th>**  
<th> defines a table header cell, usually displayed in bold and centered by default.
20. **Ans. (d) All of the above**  
<dl> is the container for the list, <dt> defines terms, and <dd> defines their descriptions.
21. **Ans. (b) Mobile layout scaling**  
The viewport meta tag (<meta name="viewport" ...>) controls how a webpage is scaled and displayed on mobile devices, enabling responsive design.
22. **Ans. (d) monthYear**  
HTML5 input types include date, month, range, color, etc. monthYear is not valid; the correct type for month selection is month.
23. **Ans. (c) Any HTML element**  
Setting contenteditable="true" can make the content of almost any HTML element editable.
24. **Ans. (a) lang**  
The lang attribute, e.g., <html lang="en">, indicates the language of the document for accessibility and SEO.
25. **Ans. (c) <title>**  
The <title> tag defines the page title shown in the browser tab and is crucial for SEO.
26. **Ans. (c) Interactivity**  
Dynamic HTML (DHTML) combines HTML, CSS, and JavaScript to make webpages interactive with animations, events, and style changes.
27. **Ans. (b) <code>**  
<code> semantically represents inline computer code; <pre> is for preformatted text.
28. **Ans. (c) <select>**  
<select> combined with <option> elements creates a drop-down list.
29. **Ans. (b) target="\_blank"**  
target="\_blank" opens the linked page in a new tab or window.