Israel's Power Grid Hack:

- Significance: This attack is regarded as one of the most severe cyber attacks ever.
- Impact: The hacker gained control over Israel's power grid, showcasing the potential for widespread disruption and chaos if critical infrastructure is compromised.

Hydropower Plant Hack in Upstate New York (2014):

- Incident: A hydropower plant in upstate New York fell victim to a cyber attack in 2014.
- Implication: This emphasizes that even seemingly unrelated and remote facilities, like a hydropower plant, can be targeted, posing risks to local communities and infrastructure.

Cyber Worm Targeting Iran's Infrastructure:

- Situation: Iran's critical infrastructure, including its main nuclear power plant, is under threat from a potent cyber worm.
- Consequence: This showcases the evolving nature of cyber threats and the potential for devastating impacts on nations' vital systems.

Bangladesh Best Group Hacking Indian Websites:

- Breach: The Bangladesh Best Group successfully hacked into nearly 20,000 Indian websites, including those of the Indian Border Security Force.
- Ramification: This underlines the cross-border nature of cyber attacks and the need for robust defenses to safeguard national security.

Virus for Power Grids and Pipelines Available Online:

- Discovery: The revelation that the first virus capable of crashing power grids or damaging pipelines is accessible online for anyone to download.
- Concern: The widespread availability of such destructive tools raises alarms about the potential misuse and the importance of securing critical infrastructure.

SBI Debit Card Branch Cybersecurity Breach:

- Incident: India experienced its most significant data breach involving SBI debit cards, initially met with denial by the banks.
- Recognition: The incident underscores the critical need for transparency and acknowledgment in addressing cybersecurity breaches, emphasizing the historical magnitude of the breach.

Related posts:

- 1. Explain briefly computer security. How you will design the policies for information security within an organization ?
- 2. Which components of the computer system need to be secure ?
- 3. Discuss the goals of computer security system.
- 4. Describe the problems related with computer security.
- 5. Explain security measure taken to protect the system.
- 6. How can an organization protect its computer system hardware ?
- 7. What are the advantages and disadvantages of computer security ?
- 8. Write short note on security policy used for computer systems.
- 9. Discuss different security models in details.
- 10. What are the advantages and disadvantages of Biba Model ?
- 11. Discuss the security mechanism used to provide security in computer system.
- 12. What are the components of security policy ?

- 13. Discuss various attacks in computer security.
- 14. Write short note on server-side attack and insider attack.
- 15. Differentiate between active and passive attack.
- 16. Write a short note on marketplace for vulnerabilities.
- 17. How can we defend zero-day vulnerabilities ?
- 18. Discuss error 404 hacking digital India part 1 chase.
- 19. Discuss control hijacking in computer security.
- 20. Describe briefly buffer overflow attack.OR What is control hijacking with an example ? Explain the term of buffer overflow in control hijacking.
- 21. How to prevent buffer overflow attack?
- 22. Explain integer overflow attack.
- 23. How can we prevent integer overflow attack ?
- 24. What do you understand by format string vulnerabilities ?
- 25. How can we prevent format string vulnerabilities ?
- 26. How can we control hijacking attack?
- 27. Define and explain the term confidentiality policy.
- 28. What is Data breach ?
- 29. What are the issues related Bell-LaPadula model?
- 30. Explain Discretionary Access Control (DAC).
- 31. Explain the issues related with DAC.
- 32. Describe Mandatory Access Control (MAC).
- 33. What are the problems related with MAC?
- 34. What are the advantage and disadvantages of DAC and MAC ?
- 35. Differentiate between DAC and MAC.
- 36. Describe confinement principle in brief.
- 37. Describe detour used in Unix user ids and process ids.
- 38. Explain basic permission bits on non-directories and directories files.

- 39. Define SUID, SGID and sticky bits with basic difference.
- 40. Discuss confinement techniques in details.
- 41. What do you understand by VM based isolation?
- 42. Describe the types of VM based isolation.
- 43. Discuss briefly the term rootkit.
- 44. Explain the purpose of rootkit. What are the examples of rootkits ?
- 45. Explain various types of rootkits.
- 46. How can we prevent rootkits ?
- 47. What is Intrusion Detection System (IDS) ?
- 48. Explain the types of intrusion detection system.
- 49. Discuss the need of intrusion detection system.
- 50. Explain advantages and disadvantages of different types of IDS.
- 51. What are the features of intrusion detection system ?
- 52. What are the components of IDS ?
- 53. What is an intrusion detection system ? What are the difficulties in anomaly detection ?
- 54. Why is security hard ?
- 55. What is Access Control list (ACL) and also define what are the technologies used in access control ?
- 56. Write short notes on Software Fault Isolation (SFI)i. Goal and solution, ii. SFI approach.
- 57. Explain briefly the term access control.
- 58. Describe different models of access control.
- 59. Discuss implementation of access control ABAC and MAC.
- 60. Briefly explain the uses of access control system.
- 61. What are the components of access control system ?
- 62. Discuss access control principle and security principle used for access control.
- 63. What are the characteristics and features of Unix ?
- 64. Differentiate between Unix and Windows.

- 65. What are the various issues in access control ?
- 66. Describe browser isolation.
- 67. Explain working of browser isolation.
- 68. Define browser isolation technology. What are browser isolation vendors ?
- 69. Define web security with its goals.
- 70. Explain threat modelling. What is its purpose?
- 71. Discuss threat modelling methodologies.
- 72. Explain tools used for threats modelling.
- 73. How to create a threat model ?
- 74. What is rendering ? Discuss rendering engine. List some rendering engine in web browser.
- 75. Explain security interface framework.
- 76. Describe cookies and frame busting.
- 77. Discuss web server threats in details.
- 78. Describe cross-site request forgery in details.
- 79. How can we prevent CSRF attack ?
- 80. When does CSRF attack takes place ?
- 81. Write short note on cross-site scripting (XSS).
- 82. Explain different ways used to prevent XSS.
- 83. Describe XSS vulnerabilities.
- 84. What is the principle of public key cryptography ? Discuss the applications for public key cryptography.
- 85. Difference between symmetric and asymmetric key cryptography.
- 86. What are the advantages and disadvantages of RSA?
- 87. Write a short note on hybrid cryptosystem.
- 88. Describe briefly the term digital envelope.
- 89. Explain the digital signatures.

- 90. Describe the steps used in creating digital signature.
- 91. Write a short note on Message Digest (MD) hash function.
- 92. What are the properties and requirements for a digital signature ?
- 93. Explain the variants of digital signatures.
- 94. What is hash function ? Discuss SHA-512 with all required steps, round function and block diagram.
- 95. What are the characteristics of SHA function ?
- 96. Discuss public key distribution. Describe the various schemes used for public key distribution.
- 97. Discuss X.509 certificates in detail. What is the role of X.509 certificates in cryptography ?
- 98. Discuss X.509 digital certificate format.
- 99. What do you mean by PGP ? Discuss its application.
- 100. Discuss the steps that are followed for the transmission and reception of PGP messages.
- 101. Explain real world protocols.
- 102. List the basic terminology used in cryptography.
- 103. Discuss the functionality of S/MIME.
- 104. What is email security ?
- 105. What is an email certificate ?
- 106. What is Transport Layer Security (TLS) ?
- 107. What are the components of TLS ? Explain the working of TLS.
- 108. Explain internet protocol security (IPSec) in detail.
- 109. Write a short note on the applications of IP security.
- 110. What are the advantages of IPSec ?
- 111. What are the uses of IP security ?
- 112. Discuss components of IP Security.

- 113. Explain the working of IP Security.
- 114. Describe briefly Domain Name Server (DNS).
- 115. How DNS security works ?
- 116. Explain the DNS security threats.
- 117. Discuss measures against DNS attacks.
- 118. Explain SSL encryption. What are the steps involved inSSL server authentication ?
- 119. What is DES ? Why were double and triple DES created and what are they ?
- 120. Write short note on secret key cryptography. Also list its advantages, disadvantages and examples.
- 121. Define internet infrastructure. What are different internet infrastructures ?
- 122. Explain the advantages and disadvantages of in TCP/IP model.
- 123. Give a short summary of IP protocol functions.
- 124. Define routing protocols.
- 125. What are the types of routing protocols ?
- 126. Discuss the advantages and disadvantages of different routing protocols.
- 127. What do you mean by DNS ? Explain DNS rebinding attack.
- 128. How DNS rebinding work ?
- 129. Discuss the features of DNS rebinding attack.
- 130. How can we prevent DNS rebinding attack ?
- 131. Explain key management protocol
- 132. What are the advantages and disadvantages of key management protocol ?
- 133. What are the security and operational requirements forkey management protocol ?
- 134. Write a short note on VPN and tunnel mode.
- 135. Discuss link layer connection in TCP/IP model.
- 136. Write short note on firewall.
- 137. What is packet filtering firewall ? Explain its advantage and disadvantage.
- 138. Write short note on telnet.

- 139. Explain briefly fragmentation at network layer.
- 140. Write short note on proxy firewall.
- 141. Write short note on intrusion detection.
- 142. What is packet filtering firewall ? Explain its advantage and disadvantage.
- 143. What is Cyberethics?