National Forensic
Sciences University
Knowledge | Wisdom | Fulfilment
An Institution of National Importance
(Ministry of Home Affairs, Government of India)

Answer Key
March 30, 2025

SSA - Cyber Security - Examination

1. Look at this series: 7, 10, 8, 11, 9, 12, ... What number should come next?

A 7

✓ **B** 10

C 12

D 13

2. Look at this series: 53, 53, 40, 40, 27, 27, ... What number should come next?

A 12

✓ **B** 14

C 27

D 53

3. Which word does NOT belong with the others?

A inch

✓ **B** ounce

C centimeter

D yard

4. Cup is to coffee as bowl is to

A dish

✓ **B** soup

C spoon

D food

5. In a certain code language, 'ANIMALS' is written as 'SLAMINA'. How is 'ONLINE' written in that code?

✓ **A** ENILNO

B OLINEN

C LNOINE

D NNLOIE

6. Rita told Mani, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Rita's friend?

✓ **A** Cousin

B Daughter

C Friend

D Aunt

7. Which year in the future will have the same calendar exactly as 2009?

A 2010

B 2013

✓ **C** 2015

D 2017

8. Mr Deepak Mohan walks 5 km towards the south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. What direction is he facing right now?

A West

✓ **B** South

C North-East

D South-Wes

9. In a row of persons, the position of Saket from the left side of the row is 27th and position of Saket from the right side of the row is 34th. Find the total number of students in the row?

✓ **A** 60

B 61

C 62

D 59

10. If KEYS= MDAR, then LOCK= ?

A NEJJ

✓ B NNEJ

C JENN

D JENJ

11. Pick the odd one out

A 4

B 16

C 36

✓ D 8

12. 2 : 8 :: 4 : ?

A 16

✓ B 64

C 128

D 20

13. Choose the word or group of words which is most similar in meaning to the word printed in bold: Magniloquent

A Amusing

B Humorous

C Intelligent

✓ D Boastful

14. Rearrange the following parts (1, 2, 3 and 4) in proper sequence to obtain a correct sentence.1. and he who has hope, 2. has hope 3. has everything 4. the person who has health

A 1, 4, 3, 2

B 3, 2, 4, 1

C 3, 4, 1, 2

✓ D 4, 2, 1, 3

15. Following is a set of four sentences. Choose the sentence which is most appropriate, grammatically, semantically & logically.

✓ **A** It is highly desirable that you complete the syllabus before the commencement of the annual exams.

B It is highly desirable for you to complete your syllabus before the commencement of the annual exams.

C It is highly desirable if you complete the syllabus before the commencement of the annual exams.

D It is highly desired if you should complete the syllabus before the commencement of the half yearly exams.

16. The remainder is 29, when a number is divided 56. If the same number is divided by 8, then what is the remainder?

A 3

B 4

C 7

✓ **D** 5

17. If a : b = 2 : 3 and b : c = 5 : 7, then find a : b : c.

A 0.5105208333333333

✓ **B** 0.4273263888888889

C 0.5919097222222222

D 0.09383101851851851

18. A mixture contains alcohol and water in the ratio of 7 : 5. If 8 liters of water is added to the mixture, then the ratio becomes 7 : 9. Find the quantity of alcohol in the given mixture?

A 15 liters

✓ **B** 14 liters

C 19 liters

D 21 liters

19. Find the average of all numbers between 5 and 49 which are divisible by 5.

A 20

✓ **B** 25

C 30

D 35

20. Who is the architect of the world's longest constitution?

A BR Rao

✓ B BR Ambedkar

C C Rajagoplachari

D Jawaharlal Nehru

21. What is the average of first 150 natural numbers?

A 70

B 70.5

C 75

✓ D 75.5

22. What is the value of x in the equation $3x - 15 - 6 = 0$?

✓ A 7

B 8

C 9

D -9

23. What is the sum of the numbers: 1, 2, 3, 4, ..., 99, 100?

A 5000

✓ B 5050

C 5100

D 5150

24. The cost of an article is Rs.160. What should be the selling price in rupees to obtain a profit of 15 percent?

A 180

B 182

✓ C 184

D 186

25. From the given alternatives select the word which cannot be formed by using the letters of the given word. ALTERNATIVE

A EARN

B LATTER

✓ C INNATE

D RAIN

26. Who is the father of Computers?

A James Gosling

✓ B Charles Babbage

C Dennis Ritchie

D Bjarne Stroustrup

27. Which of the following is the correct abbreviation of COMPUTER?

A Commonly Occupied Machines Used in Technical and Educational Research

B Commonly Operated Machines Used in Technical and Environmental Research

C Commonly Oriented Machines Used in Technical and Educational Research

✓ D Commonly Operated Machines Used in Technical and Educational Research

28. What is the full form of CPU?

A Computer Processing Unit

B Computer Principle Unit

✓ C Central Processing Unit

D Control Processing Unit

29. Which of the following is the smallest unit of data in a computer?

✓ A Bit

B KB

C Nibble

D Byte

30. Which of the following is designed to control the operations of a computer?

  A User

  B Application Software

✓ **C** System Software

  D Utility Software

31. Which of the following can access the server?

✓ **A** Web Client

  B User

  C Web Browser

  D Web Server

32. Which of the following is a type of technique in which dumb terminals are connected to a central computer system?

✓ **A** Time Sharing

  B Message passing

  C Batch environment

  D User environment

33. Which feature of OOP indicates code reusability?

  A Abstraction

  B Polymorphism

  C Encapsulation

✓ **D** Inheritance

34. The field that covers a variety of computer networks, both public and private, that are used in everyday jobs.

  A Artificial Intelligence

  B ML

✓ **C** Network Security

  D IT

35. The process of verifying the identity of a user.

✓ **A** Authentication

B Identification

C Validation

D Verification

36. An algorithm in encryption is called _____

A Algorithm

B Procedure

✓ **C** Cipher

D Module

37. The full form of Malware is _____

A Malfunctioned Software

B Multipurpose Software

✓ **C** Malicious Software

D Malfunctioning of Security

38. _____ is a code injecting method used for attacking the database of a system / website.

A HTML injection

✓ **B** SQL Injection

C Malicious code injection

D XML Injection

39. This attack can be deployed by infusing a malicious code in a website's comment section. What is "this" attack referred to here?

A SQL injection

B HTML Injection

✓ **C** Cross Site Scripting (XSS)

D Cross Site Request Forgery (XSRF)

40. Compromising a user's session for exploiting the user's data and do malicious activities or misuse user's credentials is called _____

✓ **A** Session Hijacking

B Session Fixation

C Cookie stuffing

D Session Spying

41. Which of them is not a wireless attack?

A Eavesdropping

B MAC Spoofing

C Wireless Hijacking

✓ **D** Phishing

42. An attempt to harm, damage or cause threat to a system or network is broadly termed as _____

A Cyber-crime

✓ **B** Cyber Attack

C System hijacking

D Digital crime

43. These are a collective term for malicious spying programs used for secretly monitoring someone's activity and actions over a digital medium.

A Malware

B Remote Access Trojans

C Keyloggers

✓ **D** Spyware

44. Which is the legal form of hacking based on which jobs are provided in IT industries and firms?

A Cracking

B Non ethical Hacking

✓ **C** Ethical hacking

D Hactivism

45. _____ are those individuals who maintain and handles IT security in any firm or organization.

✓ **A** IT Security Engineer

B Cyber Security Interns

C Software Security Specialist

D Security Auditor

46. _____ security consultants uses database security monitoring & scanning tools to maintain security to different data residing in the database / servers / cloud.

✓ **A** Database

B Network

C System

D Hardware

47. What type of malware disguises itself as a legitimate program or file?

A Ransomware

B Adware

✓ **C** Trojan

D Spyware

48. What type of malware is used to spy on a user's computer and steal sensitive information?

A Virus

✓ **B** Spyware

C Worm

D Adware

49. What type of malware is designed to replicate itself and spread to other computers in a network?

A Virus

B Spyware

✓ **C** Worm

D Adware

50. What type of malware encrypts a user's files and demands payment to restore access?

✓ **A** Ransomware

B Adware

C Trojan

D Spyware

51. What is the primary role of Security Information and Event Management (SIEM) in web security?

A Enhancing website aesthetics

B Actively blocking all incoming and outgoing traffic

✓ **C** Collecting, analyzing, and correlating security event data

D Granting unrestricted access to all users

52. If SIEM were a detective, what would be its primary function in web security?

A Improving website aesthetics

B Actively blocking all incoming and outgoing traffic

✓ **C** Investigating and identifying security incidents

D Granting unrestricted access to all users

53. What types of data does SIEM collect for analysis in web security?

A Only web server access logs

B Only firewall logs

✓ **C** Various security event logs from different sources

D Granting unrestricted access to all users

54. What is the primary purpose of authentication in web security?

A Ensuring data confidentiality

✓ **B** Verifying the identity of users or systems

C Preventing denial-of-service attacks

D Enhancing user experience

55. What is the primary distinction between authentication and authorization?

✓ **A** Authentication verifies identity, while authorization controls access permissions.

B Authentication controls access permissions, while authorization verifies identity.

C Authentication and authorization are interchangeable terms.

D Authentication and authorization serve the same purpose in web security.

56. What is the role of session cookies in user authentication?

A Storing sensitive user data

✓ **B** Verifying the user's identity during each session

C Enabling multi-factor authentication

D Enhancing server performance

57. Which of the following is an example of a biometric authentication factor?

A Username and password

✓ **B** Fingerprint recognition

C Security questions

D One-time passcode

58. What is the purpose of CAPTCHA in the authentication process?

A Encrypting user data

✓ **B** Preventing automated bots from accessing a system

C Enhancing user experience

D Validating user identities

59. What authentication factor is involved in the process of verifying a user's identity through a mobile device?

A Biometric authentication

B Something the user possesses

C Something the user knows

✓ **D** Geolocation authentication

60. What risk is associated with the use of public Wi-Fi networks in the context of user authentication?

A SQL injection vulnerabilities

B Cross-Site Scripting (XSS) attacks

✓ C Man-in-the-Middle (MitM) attacks

D Credential stuffing attacks

61. Which one of the following is considered in the category of computer threats?

A Soliciting

✓ B DoS attack

C Phishing

D Both A and B

62. Which one is considered to be a type of antivirus program?

A Kaspersky

B Mcafee

C Quick heal

✓ D All of the mentioned

63. Which of the following phrases describes taking someone else's creation or idea and using it for one's own advantage?

A Intellectual property rights

B Piracy

C Plagiarism

✓ D All of the mentioned

64. Which of these methods is used to check the validity of a message?

A Digital signature

B Protocol

✓ C Message Digest

D Decryption algorithm

65. To hide information inside a picture, what technology is used?

A Rootkits

B Bitmapping

✓ C Steganography

D Image Rendering

66. What is the purpose of a Denial of Service attack?

A Exploit a weakness in the TCP/IP stack

B To execute a Trojan on a system

✓ C To overload a system so it is no longer operational

D To shutdown services by turning them off

67. The first phase of hacking an IT system is compromise of which foundation of security?

A Availability

✓ B Confidentiality

C Integrity

D Authentication

68. Performing hacking activities with the intent on gaining visibility for an unfair situation is called _____.

A Cracking

B Analysis

✓ C Hacktivism

D Exploitation

69. What is the most important activity in system hacking?

A Information gathering

✓ B Cracking passwords

C Escalating privileges

D Covering tracks

70. What is the term used for a security measure that restricts network traffic based on predefined rules or policies?

✓ **A** Firewall

B VPN

C Intrusion detection system (IDS)

D Two-factor authentication

71. What is the primary goal of business continuity planning in cybersecurity?

A To eliminate all cyber threats

✓ **B** To assess the impact of risks on business operations

C To manage and reduce the impact and likelihood of identified risks

D To promote unrestricted data sharing

72. In the context of business continuity planning, what does the term "recovery point objective (RPO)" refer to?

A The maximum acceptable downtime for critical systems

✓ **B** The point in time to which data must be recovered after a disruption

C The process of eliminating all vulnerabilities

D The impact of a risk on business operations

73. In the context of business continuity planning, what does the term "crisis management" involve?

A The process of eliminating all vulnerabilities

✓ **B** Providing leadership and decision-making during a crisis

C Choosing not to engage in activities that pose significant risks

D The impact of a risk on business operations

74. What is the primary concern in IoT security?

A Unauthorized access to cloud services

B Data encryption

✓ **C** Device vulnerabilities and unauthorized access

D Phishing attacks

75. What is a common challenge in securing IoT devices with limited computational resources?

A Excessive encryption

✓ B Lack of standardized protocols

C Overreliance on cloud services

D Redundant authentication measures

76. What role does encryption play in IoT security?

A Ensuring device interoperability

✓ B Securing data transmission and storage

C Managing device firmware updates

D Facilitating device discovery

77. What is a challenge associated with IoT device authentication?

✓ A Lack of standardized authentication methods

B Overreliance on cloud services

C Inadequate encryption measures

D Limited device interoperability

78. What security measure involves separating different network segments to contain potential threats in IoT environments?

A Data encryption

✓ B Network segmentation

C Two-factor authentication

D Intrusion detection system

79. What security measure involves monitoring and analyzing network traffic to detect and respond to suspicious activities?

A Data encryption

B Network segmentation

✓ C Intrusion detection system (IDS)

D Secure boot process

80. What is a consideration in securing IoT devices that operate with limited power resources?

A Excessive use of encryption

B Lack of standardized authentication methods

C Timely and regular firmware updates

✓ D Efficient use of power-efficient security mechanisms

81. What is a potential risk associated with IoT devices lacking proper authentication mechanisms?

A Increased device interoperability

✓ B Unauthorized access and data breaches

C Lack of standardized protocols

D Inefficient use of power resources

82. What is the primary goal of using machine learning in cybersecurity?

A Automating routine administrative tasks

✓ B Identifying and responding to cyber threats

C Enhancing user authentication processes

D Improving network bandwidth efficiency

83. What is the role of AI in enhancing incident response in cybersecurity?

A Generating complex passwords

✓ B Automating the analysis of security incidents

C Improving physical access controls

D Enhancing network encryption protocols

84. What is the purpose of using AI in anomaly detection in cybersecurity?

A Automating routine administrative tasks

✓ B Identifying patterns and anomalies in data behavior

C Enhancing user authentication processes

D Improving network bandwidth efficiency

85. How can machine learning assist in phishing detection?

A   Analyzing network bandwidth

✓ B   Identifying patterns and anomalies in email content

C   Improving physical access controls

D   Enhancing intrusion detection systems

86. What role does AI play in predictive analytics for cybersecurity?

A   Performing routine backups

✓ B   Predicting potential security incidents and threats

C   Improving physical access controls

D   Enhancing network encryption protocols

87. What is the purpose of using AI in the context of security risk assessment?

A   Performing routine backups

✓ B   Automating the analysis of security risks and vulnerabilities

C   Improving physical access controls

D   Enhancing network encryption protocols

88. In what way can AI enhance the identification and prevention of data exfiltration attacks?

A   Performing routine backups

B   Automating the analysis of security incidents

C   Improving physical access controls

✓ D   Analyzing patterns in user and network behavior

89. What is the role of a public key in blockchain transactions?

A   Encrypting transaction data

✓ B   Validating the authenticity of transactions

C   Generating a digital signature

D   Managing consensus algorithms

90. What is the role of a hash function in blockchain security?

A   Encrypting transaction data

B   Validating the authenticity of transactions

C   Creating a consensus mechanism

✓ D   Efficiently securing data integrity

91. What is the purpose of a digital signature in a blockchain transaction?

A   Encrypting transaction data

✓ B   Validating the authenticity of transactions

C   Creating a consensus mechanism

D   Efficiently securing data integrity

92. The main objective of internal auditing is to confirm the efficiency and effectiveness of operations and their contribution to the achievement of organizational goals. Internal audit also acts as a control mechanism for management to

A   Ensure adequate internal control

B   Review the reliability of records

C   Prevent and detect fraud

✓ D   All of the mentioned

93. Which of the following would be the first step in establishing an information security program?

✓ A   Adoption of a corporate information security policy statement

B   Development and implementation of an information security standards manual

C   Development of a security awareness-training program

D   Purchase of security access control software

94. The MOST important reason for an IS auditor to obtain sufficient and appropriate audit evidence is to:

A   Comply with regulatory requirements

✓ B   Provide a basis for drawing reasonable conclusions

C   Ensure complete audit coverage

D   Perform the audit according to the defined scope

95. Child pornography is an offence under section _____.

A   67 C

B   67 A

✓ C   67 B

D   67 D

96. Sending of unsolicited bulk and commercial messages over the internet is _____.

A Stalking

B Phishing

✓ C Spamming

D Spoofing

97. The receiving of unsolicited bulk emails is known as ——

A Virus

B Spoofing

✓ C Spam

D Worms

98. There are three c's in computer forensics. Which is one of the three?

✓ A Control

B Chance

C Chains

D Core

99. Physical Forensics Discipline includes which of the following?

✓ A Bloodstain

B Eating

C Searching

D Watching

100. Which of the following techniques are used during computer forensics investigations?

A Cross-drive analysis

B Live analysis

C Deleted files

✓ D All of the mentioned