INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, KANCHEEPURAM

भारतीय सूचना प्रौद्योगिकी, अभिकल्पना एवं विनिर्माण संस्थान, कांचीपुरम

(An Institute of National Importance under the Ministry of Education, Government of India)

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Level II

Time: 150 min

Marks: 100

Technical Knowledge Test (ICC)

1. Maximum number of cores that a typical Intel Core i7 processor can have
   A. 128 cores
   B. 64 cores
   C. 20 cores
   D. 4 cores

2. Data loss is minimum in
   A. Copper cable
   B. Aluminium cable
   C. Optical Fiber cable
   D. Gold Cable

3. For long distance data transmission, preferred light source is
   A. LED
   B. White light source
   C. Infra Red light
   D. Laser light

4. Single Mode Fiber can be used for
   A. Short distance data communication
   B. Very short distance data communication
   C. Long distance data communication
   D. Within a building

5. Methodology for joining two fiber cables is called
   A. Soldering
   B. Welding
   C. Ultrasonic Welding
   D. Splicing

6. Firewall is a device used for
   A. Preventing networks from virus, spams and attacks
   B. Preventing networks from Fire
   C. Protecting networks from theft
   D. Protecting networks from high voltage

7. *Arattai* is an App used for
   A. Computation
   B. Messenger
   C. Programming
   D. Artificial Intelligence

8. Which one is not a Collaboration tool

    A. Zoom
    B. TeamViewer
    C. Google Meet
    D. Python

9. Which one is not a web design tool

    A. Visual studio Code
    B. Bootstrap
    C. Sass
    D. SQL

10. Which of the following maintains the Domain Name System (DNS) ?
    A. a single server
    B. A desktop system
    C. distributed database system
    D. none of the above mentioned

11. Which of the following is designed to control the operations of a computer?
    A. User
    B. Application Software
    C. System Software
    D. Utility Software

12. mySQL is used for
    A. for storing and retrieving data
    B. creation of website
    C. managing file system
    D. creation of user interfaces

13. What is 'xyz' in the following SQL statement?
    SELECT abc FROM xyz;
    A. Database name
    B. Row name
    C. Table name
    D. Column name

14. Which MySQL clause is used to combine rows from two or more tables?
    A. JOIN
    B. COMBINE
    C. MERGE
    D. UNION

15. Which type of Programming does Python support?
    A. object-oriented programming
    B. structured programming
    C. functional programming
    D. all of the mentioned

16. What are the two main types of functions in Python?
    A. System function
    B. Custom function
    C. Built-in function & User defined function
    D. User function

17. Which of the following statements is used to create an empty set in Python?
    A. ( )
    B. [ ]
    C. { }
    D. set()

18. Which command is used for taking "server side help" in MySQL command line tool?
    A. /h
    B. /c
    C. /e
    D. None of the mentioned

19. Which Clause is used to select a particular table in MySQL?
    A. ALTER
    B. SELECT
    C. FROM
    D. WHERE

20. Which one of the following is not a keyword in Python language?
    A. pass
    B. eval
    C. assert
    D. nonlocal

21. For a Hard Disk Drive "Defragmentation process" ?
    A. Removes viruses
    B. Increases storage capacity
    C. Reorganizes data for faster access
    D. Recovers deleted files

22 An "Anti-Virus" program can safeguard your computer system

    A. From physical damage
    B. From monitor damage
    C. From software and OS damage
    D. From network damage

23 Computer systems require atleast
    E. Two antivirus programs
    F. One antivirus program
    G. Multiple antivirus protection
    H. No antivirus

24 Which one is not a Cyber Attach
 A. phishing,
 B. ransomware and malware
 C. denial-of-service (DoS),
 D. ILOVEYOU worm

25 Device required to prevent computer systems from virus attacks for any organization is
 A. Network Router
 B. Wifi Access Point
 C. Firewall
 D. Large capacity Servers

26 Which of the following is widely used e-mail protocol ?
 A. FTP
 B. SMTP
 C. HTTP
 D. SSL

27 Function of router is to
 A. Store data
 B. Direct network traffic between devices
 C. Display images
 D. Distribute program between systems

28. The purpose of VLAN is to
 A. To increase bandwidth
 B. To manage IP address
 C. Encrypt and decrypt data
 D. To create separate broadcast domains

29. Which is the default protocol used in Directory Services
 A. DHCP
 B. FTTP
 C. LDAP
 D. DNS

30. Active Directory services is used to
 A. Manage users and devices in a network
 B. Organize files
 C. Transfer files between server and client
 D. To activate a computer system

31. Local Area Network operates on which of the following layer
 A. Physical layer
 B. Network layer
 C. Data Link layer
 D. Physical and data link layer

32. The purpose of DHCP server is to
    A. Allocate IP address to clients
    B. Manage servers
    C. Transfer data between client and server
    D. Manage Domain Name

33. To troubleshoot Network connectivity issues which of the following command is used
    A. Telnet
    B. Netstat
    C. Traceroute
    D. Dir

34. Ping is a command used to
    A. Check the reachability of the host
    B. Check data transfer speed
    C. Check duplex mode
    D. NATing

35. Which of the following command is used to find your own system MAC address
    A. ipconfig /all
    B. ping
    C. nbstat
    D. arp

36. Which of the following is a system software
    A. Windows 11
    B. Microsoft Office
    C. Microsoft TeamViewer
    D. Adobe Acrobat reader

37. What happens if you install a 64-bit OS on a 32-bit processor?

A. It runs faster
B. It installs normally
C. Installation will fail
D. It uses only 32-bit drivers

38. Which one of the following is a volatile memory
    A. DVD
    B. SSD
    C. RAM
    D. Pen Drive

39. The core function of Operating system is to
    A. Help user
    B. Perform arithmetic calculations
    C. Provide Internet access to users
    D. Manage hardware and software resources

40. The main function of URL is to
    A. Specifies the location of a resource on a computer network and a mechanism
       for retrieving it.
    B. Locate the Network
    C. Regulate the Network traffic
    D. Identify the Server Link

41. What does the shortcut Ctrl + V do?
    A. Copies the selected text
    B. Pastes the copied text
    C. Cuts the selected text
    D. Selects all text

42. Which of the following is a function of a router?
    A. To store data
    B. To direct network traffic between devices
    C. To display images
    D. To play audio

43. What is the main purpose of cache memory?
    A. To increase storage capacity
    B. To speed up data access from the main memory
    C. To backup data
    D. To display graphics

44. Which is the IEEE protocol for Wireless LAN
    A. IEEE 802.3
    B. IEEE 802.11
    C. IEEE 802.2
    D. IEEE 802.16

45. Functions in C Language are always _____
    A. Internal
    B. External
    C. Both Internal and External
    D. External and Internal are not valid terms for functions

46. Which of the following declaration is not supported by C language?
    A. String str;
    B. char *str;
    C. float str = 3e2;
    D. Both "String str;" and "float str = 3e2;"

47. What is the result of logical or relational expression in C?
    A. True or False
    B. 0 or 1
    C. 0 if an expression is false and any positive number if an expression is true
    D. None of the mentioned

48. scanf() is a predefined function in_____header file.
   A. stdlib.h
   B. ctype.h
   C. stdio.h
   D. stdarg.H

49. What type of resource is most likely to be a shared common resource in a computer Network?
   A. Printers
   B. Speakers
   C. Floppy disk drives
   D. Keyboards

50. First page of Website is termed as
   A. Homepage
   B. Index
   C. JAVA script
   D. Bookmark

51. Which of the following is not a binary number?
   A. 202
   B. 001
   C. 111
   D. 101

52. Which of the following is not an Artificial Intelligence (AI) application
   A. ChatGPT
   B. Google Gemini
   C. ELSA Speak
   D. MySQL

53. Routing capability is a feature of
   A. Layer 2 switches
   B. Layer 3 and Layer 4 switches
   C. Modem
   D. Wifi Access Point

54. For large network in big campus like IIT requires
   A. Layer 2 switches
   B. Layer 3 switches
   C. Manageable core L2/L3/L4 Switches
   D. Hub

55. Defragmentation is a process for
   A. reorganizing data on an HDD to put file fragments into contiguous or single locations
   B. Split hard disk into two
   C. Creating multiple virtual drives
   D. Formatting hard disk

56. Command used to switch from Windows screen to DOS prompt
    A. COMMAND
    B. EXIT
    C. Cmd
    D. QUIT

57. DOS command for invoking Disk Management is
    A. Dm
    B. diskmgmt
    C. dmt
    D. manage

58. Windows utility to split unallocated hard disk into multiple volumes is
    A. Windows file manager
    B. Windows Personalization
    C. Disk Management
    D. Windows accounts manger

59. Shrink Volume in Disk Management will
    A. Change volume label
    B. Rearrange volume
    C. Mount Volume
    D. Resize hard disk space

60. Which file system is used by Windows 10 or above
    A. FAT32
    B. exFAT
    C. NTFS
    D. FAT26

61. Which one of the following is not a programming language
    A. Java
    B. C#
    C. Python
    D. Microsoft Powerpoint

62. Which one of the standards is used for Database connectivity
    A. IEEE standard
    B. MySQL
    C. JDBC and ODBC
    D. IEEE 802.1

63. Which one is not an UNIX File system
    A. Ordinary files
    B. Directory files
    C. Device files
    D. NTFS

64. Directory separator in UNIX is
   A. Backward slash \
   B. Forward slash /
   C. Semi Colan ;
   D. Ash symbil #

65. Which one not a Network topology
   A. Bush
   B. Star
   C. Ring
   D. Token Ring

66. A *checksum error* indicates
   A. File corruption
   B. Virus attack
   C. File extension error
   D. Incorrect file type

67. An Access Point (AP) is a
   A. Point in a Computer Network
   B. Methodology to access Network
   C. A Network Device
   D. Network cable Terminator

68. Address length in iPv4 is
   A. 128 bit
   B. 32 bit
   C. 16 bit
   D. 8 bit

69. Which one of the following is not an iPv4 address
   A. 192.168.10.1
   B. 192.168.1.1
   C. 10.10.14.24
   D. All the above

70. A typical security certificate for a Website is
   A. Microsoft Certified
   B. SSL
   C. CSSLP
   D. CASE

71. Which is one a A typical security certified website:
   A. www.iiitdm.ac.in
   B. http://iiitdm.com
   C. https://iiitdm.ac.in
   D. iiitdm.ac.in

72. Regulatory authority in Inda for Domain Names
    A. National Physical Laboratory
    B. NCERT
    C. NIXI
    D. IIIT Madras

73. One of the Indian domain registrar NIC stands for
    A. National Informatics Centre
    B. National Internet Centre
    C. National Information Council
    D. National Institute of Computer

74. Indian Government organization which act as national response centre for computer security incidents
    A. NIC
    B. NIXI
    C. CERT-In
    D. ERNET India

75. Website is the one which is
    A. Webpages stored in the Internet
    B. Webpages stored in a Computer/Server connected to a Network
    C. Webpages stored in a Desktop system
    D. Common files in a Desktop

76. Structured data is best stored in:
    A. Excel
    B. SQL databases
    C. Images
    D. PDFs

77. Which of the following is unstructured data?
    A. CSV files
    B. SQL tables
    C. Text messages
    D. Excel sheets

78. APIs are used to:
    A. Build websites
    B. Communicate with databases
    C. Automate data extraction
    D. Write JavaScript

79. What is the purpose of data visualization?
    A. Cleaning data
    B. Modeling data
    C. Making data understandable
    D. Encrypting data

80. What does KPI stand for in analytics?
    A. Key Performance Indicator
    B. Knowledge Performance Input
    C. Key Predictive Insight
    D. Knowledge Per Index

81. Which SQL function is used to count rows?
   A. COUNT()
   B. TOTAL()
   C. SUM()
   D. LENGTH()

82. A device driver is a
    A. Software used for formatting a disk
    B. Port which connects Computer and its peripherals
    C. Software to communicate with OS and a device after converting into a
       machine understandable code
    D. Software used for disk defragmentation

83. To achieve high performance of CPU, a very high speed memory is placed in
between CPU and Primary memory is called:
    A. Generic
    B. EPROM
    C. Cache
    D. ROM

84. Which one of the following does not require a device driver
    A. Printer
    B. CD Drive
    C. Cache
    D. Plotter

85. Which device is used to connect different networks?
A. Switch
B. Hub
C. Router
D. Bridge

86. The main function of the Transport layer is:
A. Routing
B. Error detection and correction
C. End-to-end communication
D. Physical addressing

87. What is the default port number for HTTP?
A: 20
B: 21
C: 25
D: 80

88. Which of the following is a private IP address?
A. 192.168.1.1
B. 8.8.8.8
C. 172.33.0.1
D. 11.0.0.1

89. What is the unit of data at the Data Link Layer called?
A. Bit
B. Frame
C. Packet
D. Segment

90. Which of the following is a connection-oriented protocol?
A. UDP
B. IP
C. TCP
D. ICMP

91. Which of the following is the default port number for MySQL?
A. 8080
B. 3306
C. 1521
D.1433

92. Which SQL statement is used to retrieve data from a database?
    A. EXTRACT
    B. GET
    C. SELECT
    D. FETCH

93. Which clause is used to filter records in a SQL query?
    A. WHERE
    B. HAVING
    C. GROUP BY
    D. ORDER BY

94. What will the following query return?
SELECT COUNT(*) FROM employees WHERE salary > 50000;
    A. The total salary of all employees
    B. The number of employees earning more than 50,000
    C. The list of employees with salary > 50,000
    D. The average salary of employees

95. Which of the following is the first step in installing an operating system?
A. Configuring user accounts
B. Partitioning the hard drive
C. Installing device drivers
D. Formatting external storage

96. What is the main purpose of formatting a partition before installing an OS?
A. To install antivirus software
B. To check system performance
C. To prepare the partition for file storage
D. To delete BIOS settings

97. What is a *dual-boot system*?
A. A computer that runs two operating systems alternately
B. A system with two processors
C. A system that boots from two hard drives simultaneously
D. A virtual machine setup

98. In Linux installation, the root directory is represented by:

A. /root
B. /home
C. /
D. /etc

99. Which of the following tools can be used to create a bootable USB drive for OS installation?

A. Disk Cleanup
B. Rufus
C. Notepad
D. WinRAR

100. What is the function of a bootloader during OS installation?

A. Manages device drivers
B. Loads the operating system into memory
C. Creates partitions
D. Installs application software

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64
128