BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
MID TERM EXAMINATION 2024-25
INFORMATION TECHNOLOGY (802) (SUB-5)
MARKING SCHEME

Class: XI   **Duration: 3 hrs.**

Date: 23-09-2024   **Max Marks: 60**

Name: ……………………………   **Exam No. :**

A. Multiple Choice Questions.(Answer any 4 from Q.No 1-6)   **4 x 1= 4 Marks**

1. A good friend of yours is very upset as her best friend has had a terrible accident. You are tired from the day's work. The phone rings and the caller ID shows that is her. What should you do?
   a. Ignore the call because you are tired.
   b. Answer the call and talk to her.
   c. Tell her that you are too tired.
   d. Tell her that you will talk again tomorrow

2. Which of these is not an appropriate nonverbal communication at work?
   a. Shaking hands firmly
   b. Looking at a speaker with a smile
   c. Putting arms around a coworker's shoulder
   d. Standing with an upright posture

3. Choose the correct example of oral communication.
   a. Newspaper
   b. Notes
   c. Reports
   d. Face to face interaction

4. The ability to impress the mind, arousing admiration, respect for the way someone looks or carries oneself.
   a. Grooming
   b. Team norms
   c. Impressive appearance
   d. None of these

5. To knowing one's potential by examining and analyzing intellectual and spiritual capacities.
   a. Self-management
   b. Grooming
   c. Self-exploration
   d. Intelligence

6. The ability to navigate and shift in a healthy way one's thoughts, emotions and behaviors in order to make decisions and each goals that benefits oneself and others.
   a. Self-management
   b. Impressive appearance
   c. Intelligence
   d. Self-exploration

B. Multiple Choice Questions and Fill in the blanks.(Answer any 26 from Q.No 7 - 38)
                                                        26 x 1= 26 Marks

7. What type of memory is volatile and loss its data when the computer is turned off?
   a. ROM

    b. Cache memory

    c. SSD

    d. RAM

8. In the binary number system, what does the digit "1" represent?
   a. False
   b. high Voltage
   c. True
   d. Low voltage

9. HDD stands for…**Hard Disk Drive**….

10. Cache memory is placed between the CPU and the …**Main Memory**….memory.

11. How are processors classified?
    a. Based on their size and weight
    b. Based on color and design
    c. Based on clock speed
    d. Based on their price and availability cores, and manufacturing technology.

12. What is the functions of Hard Disk in a computer system?
    a. Manage input output device
    b. Stores programs, files or data and internal resources.
    c. To house the main processor
    d. Provide connection to other computer

13. Pen drive is also known as…**Flash Drive**….

14. The …**Motherboard**…houses the main processor or CPU of the computer.

15. What is the role of a driver in computing?
    a. It insures that data is transmitted accurately and efficiently
    b. It allows the OS to communicate with a specific hardware device
    c. It identifies unique characteristics of devices
    d. It provides common platforms for programs

16. What is the main function of OS?
    a. To develop computer software
    b. To manage computer security
    c. To allocate and manage computer resources
    d. To design computer hardware

17. How is memory allocated to process?
    a. Static allocation
    b. Dynamic allocation
    c. Fixed allocation
    d. None of these

18. To run a program or process on a computer, it needs to be loaded into …**RAM**…..

19. If mouse does not work even if it is properly connected to the computer you should once try to connect it to
    a. Another computer and see if it works
    b. The USB connector
    c. The main power
    d. None of these

20. What is the name given to a systematic approach used to solve a problem?
    a. Debugging
    b. Inventing
    c. Solving
    d. Troubleshooting

21. …**Loose**.. connection can be a reason for the mouse not working.

22. If the speakers are working at the low volume, the first thing you should check is the …**volume**…of your computer.

23. Disk …………..is a condition that occurs when a computer's file system stores files in a non-contiguous or scattered clusters on the hard disk.
   a. Segmentation
   b. Plagiarism
   c. Fragmentation
   d. Backup

24. If you face networking problems, you must press on Control panel->………….
   a. Sharing center
   b. Network
   c. Network and sharing center
   d. None of these

25. It is necessary to …………….unwanted files regularly so that your disk has free space.
   a. Create
   b. Manage
   c. Delete
   d. Backup

26. The Internet will not work if the…**connection**…….point in the computer is faulty.

27. Who introduced the concept the communication?
   a. Donald Davies
   b. Alexander Graham Bell
   c. Len Kleinrock
   d. National Science Foundation

28. What is the latest version of the Internet protocol?
   a. IPv4
   b. IPv5
   c. IPv6
   d. IPv7

29. What does DNS stand for in the context on the Internet?
   a. Digital Networking System
   b. Domain Name Service
   c. Data Node System
   d. Device Network Service

30. Which network device is used to regenerate and boost week signal?
   a. Router
   b. Repeater
   c. Hub
   d. Gateway

31. What does TELNET stand for?
   a. Terminal Login
   b. Terminal Network
   c. Transmission Control Protocol
   d. Transfer Network Protocol

32. Which Network Service is used for file transfers between a client and a server?
   a. Email
   b. Telnet
   c. World wide web
   d. File Transfer Protocol(FTP)

33. What is the purpose of SMTP in email communication?

a. Authenticating users
b. Transferring files
c. **Sending and receiving messages**
d. Accessing web pages.

34. POP3 is the acronym for **…Post Office Protocol**…

35. The short form of "malicious software" is :
   a. **Malware**
   b. Malicware
   c. Maliware
   d. Muscleware

36. …**Antivirus**…software plays an important role in prevention of virus.

37. The 'L' in SSL stands for:
   a. Leak
   b. Level
   c. **Layer**
   d. Line

38. Which of the following is NOT one of the reasons why phishing attacks are carried out?
   a. Identity theft
   b. Financial fraud
   c. Unauthorized access to accounts
   d. **None of these.**

C. Short Answer Questions(Answer any 3 from Q.No 39 – 43)   **3 x 2= 6 Marks**

39. Explain the communication cycle briefly.

Ans- The communication cycle is a process that describes how messages are sent, received, and understood. It typically involves the following steps:

Sender: The person who initiates the communication. They formulate a message based on their thoughts, ideas, or needs.
Encoding: The sender translates the message into symbols or language that can be understood by the receiver. This could be spoken words, written text, gestures, or other forms of communication.
Message: The encoded information that is transmitted. This is the actual content that the sender wants to convey.
Channel: The medium through which the message is sent. This can be verbal (face-to-face, phone), written (email, letter), or non-verbal (body language, facial expressions).
Receiver: The person or group who receives the message. The receiver must decode the message, interpreting the symbols or language used by the sender.
Decoding: The process by which the receiver interprets and understands the message. Effective decoding depends on the receiver's ability to understand the symbols or language used.
Feedback: The response from the receiver back to the sender. This lets the sender know whether the message was received and understood correctly. Feedback can be verbal, non-verbal, or written.

40. Explain the factors affecting perspective in communication.
   Ans-Cultural background
   Language
   Experience
   Emotions
   Social
   Psychological Factors

41. **Describe assertive form of communication with two examples.**

Ans-

Clarity and Directness: Messages are clear and straightforward.

Respect: Communicates with respect for oneself and others.

Confidence: Delivered with confidence without being aggressive.

Responsibility: Takes responsibility for one's own feelings and actions.

Listening: Actively listens to others and responds appropriately.

Scenario: A friend consistently cancels plans at the last minute.

Response: "I feel frustrated when our plans get canceled at the last minute. Can we find a way to schedule our meet-ups that works better for both of us?"

42. **Define Time Management. Explain a few time management strategies.**

Ans- Time management is the process of organizing and planning how to divide your time between different activities. Effective time management enables individuals to work smarter, not harder, so that more is done in less time, even when time is tight and pressures are high. It involves setting goals, prioritizing tasks, and using various techniques to manage workload efficiently.

Time Management Strategies:

Goal setting

Planning

Avoiding Multitasking

43. **Give any six points that are the part of personal grooming checklist.**

Ans-Personal Hygiene, Oral Hygiene, Clothing, Nail Care, Hair care , skin care

D. Short Answer Questions(Answer any 3 from Q.No 44 – 48)   3 x 2= Marks

44. **Why is RAM considered volatile memory? How does it differ from non-volatile memory?**

Ans- RAM (Random Access Memory) is considered volatile memory because it requires a constant power supply to retain data. When the computer is turned off or loses power, all data stored in RAM is lost.

Differences between Volatile and Non-Volatile Memory:
Volatile Memory (e.g., RAM):
Data Retention: Requires continuous power to retain data. Loses all stored information when the power is turned off.
Speed: Generally faster than non-volatile memory. Provides quick read and write access, which is crucial for system performance and running applications.
Usage: Used for temporary storage and working space for the CPU. Stores data that is actively being processed or used by programs.
Non-Volatile Memory:
Data Retention: Retains data even when the power is turned off. Data remains stored until it is deliberately erased or overwritten.
Speed: Typically slower than volatile memory. Read and write speeds can vary, but it is generally not as fast as RAM.
Usage: Used for long-term storage of data. Stores operating system files, applications, user data, and system configurations.

45. **What is the role of the CPU in a computer system?**

Ans- The CPU (Central Processing Unit) is often referred to as the "brain" of the computer. It plays a crucial role in the overall functioning of a computer system.

Main functions and roles of the CPU are-

Execution of instruction

Control Unit, ALU, MU

46. What are the procedures to follow if the monitor is going black?

Ans-Check Power Supply

Check Connection

Check Display Setting

47. What are the two categories of transmission media used in computer networks? Explain with example.

Ans- Transmission media in computer networks can be broadly categorized into two types: **wired (or guided) media** and **wireless (or unguided) media**. Each category has specific examples and applications.

Twisted Pair Cable:Example: Unshielded Twisted Pair (UTP) and Shielded Twisted Pair (STP). Wireless media use electromagnetic waves to transmit data through the air without the need for physical cables. The main types of wireless media are:

Radio Waves:

Example: Wi-Fi (Wireless Fidelity) and Bluetooth.

48. Give any three protective measures that you can take while accessing Internet.

Ans- Use Strong, Unique Passwords

Enable Two-Factor Authentication (2FA)

Keep Software and Systems Updated

E. Long Answer Questions(Answer any 2 from Q.No 49 – 51)   2 x 3 = 6 Marks

49. Write the roles of an Operating System? Name and explain.

Ans- An Operating System (OS) is essential software that manages computer hardware and software resources and provides common services for computer programs.

The primary roles of an operating system:

Process management

File Management

Device Management

Memory management

Networking

50. What is disk defragmentation?

Ans- Disk defragmentation is a process used to optimize and improve the performance of a computer's hard disk drive (HDD). Over time, as files are created, modified, and deleted, they can become fragmented (meaning that the data for a single file is scattered across different locations on the disk rather than being stored in a contiguous block.)

51. Explain the role of DNS in Internet Communication.

Ans- The Domain Name System (DNS) plays a crucial role in Internet communication by translating human-readable domain names into machine-readable IP addresses.

This process is essential for enabling seamless communication between devices on the internet.

F. **Higher Order Thinking Skills Questions.(Answer any 3 from Q.No 52 -56) 3 x 4 = 12 Marks**

52. **How does cache memory improve the performance of a computer system? Discuss its placement, function and impact on CPU operations.**

Ans- **Cache memory** is a small, high-speed storage area located close to the CPU that temporarily holds frequently accessed data and instructions. It improves the performance of a computer system by reducing the time the CPU needs to access data from the slower main memory (RAM)

Its placement, function, and impact on CPU operations:

The cache levels are strategically placed to balance speed and capacity.

This reduces the need to fetch data from the slower main memory, which can significantly speed up processing times.

Faster Access: By storing frequently accessed data and instructions closer to the CPU, cache memory reduces the time it takes for the CPU to retrieve this information

53. **What general procedure must you follow if any peripheral device in NOT working?**

Ans- Check Connections:

Verify Device Compatibility:

Update Drivers:

Run Troubleshooters:

Reset the Device:

Update the Operating System:

54. **How does a router enable communication between devices on different networks? What is the advantage of using a router in a network?**

Ans- Packet Forwarding: Routers receive data packets from one network and determine the most efficient path to forward them to their destination network. This is based on the IP address contained in the packet header.

Firewall: Many routers include firewall functionality to filter incoming and outgoing traffic based on predefined security rules, protecting the network from unauthorized access and attacks.

Advantages of Using a Router in a Network

Connectivity: Routers enable multiple devices to connect to the internet through a single connection, facilitating communication between different networks (e.g., local network to the internet).

Network Segmentation: Routers can segment large networks into smaller, more manageable subnetworks, improving network performance and security by isolating different parts of the network.

Security: Routers often include built-in security features such as firewalls, VPN support, and intrusion detection/prevention systems, providing an additional layer of protection for the network.

55. **How does digital literacy help in identifying and addressing cyberbullying?**

Ans- Identification of Cyberbullying

Recognizing Cyberbullying Behaviour: Digital literacy helps individuals understand what constitutes cyberbullying, such as harassment, threats, spreading rumours, and posting harmful content.

Awareness of Cyberbullying Signs: Educated individuals can identify signs of cyberbullying, such as sudden changes in online behaviour, reluctance to use devices, emotional distress after using the internet, and unusual social media activity.

Understanding Online Platforms: Being literate in digital platforms means knowing where cyberbullying can occur, such as social media, messaging apps, forums, and gaming communities.

56. Give any four protective measures that we can take while accessing Internet.

Ans- Use Strong&Unique Passwords: Create strong passwords that include a mix of letters (both uppercase and lowercase), numbers, and special characters. Avoid using easily guessable information such as birthdays or common words. Use different passwords for different accounts and consider using a password manager to keep track of them.

Enable Two-Factor Authentication (2FA): Two-factor authentication adds an extra layer of security by requiring not only a password but also a second form of verification, such as a code sent to your phone or an authentication app. This helps protect your accounts even if your password is compromised.

Keep Software Up-to-Date: Regularly update your operating system, web browsers, and any installed applications. Software updates often include security patches that address vulnerabilities that hackers could exploit.

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