Section A: Multiple Choice Questions

1. Programming is part of the phase_____ of the systems life cycle.

systems development

2. Program objectives, desired outputs, needed inputs, and processing requirements are all recorded in the_____ .

program specifications document

3. This is like a summary or outline of the logic of the program you will write.

Pseudocode

4. Identify the programming tool that uses linked symbols to show the sequence of steps needed to solve a programming problem.

Flowchart

5. The outcome of the decision determines which of the two paths to follow in this logic structure.

IF-THEN-ELSE

6. The_____logic structure involves repeating a sequence until a certain condition remains true.

loop

7. Which of the following is not necessary for a good program?

It should contain colourful graphics and an interesting user interface.

8. The process of testing and eliminating errors in a program is also called_____the program.

debugging

9. This is usually the final step in testing a program.

Beta testing

10. A compiler performs the following function:

converts the source code into machine language code.

11. This level of management is concerned with long-range planning and uses information summarized to plan the future growth and direction of the organization.

Top management

12. _____system helps supervisors by generating databases that act as the foundation for the other information systems.

Transaction processing

13. Which of the following refers to a system that summarizes the detailed data of the transaction processing systems in standard reports for middle-level managers?

Management information system (MIS)

14. A sales report that shows that certain items are selling significantly above or below marketing department forecasts is an example of this type of report.

D. Exception

15. The_____keeps records of the number of each kind of part or finished good in the warehouse.

inventory control system

16. A transaction processing system is also sometimes referred to as a

data processing system

17. Who among the following are responsible for operational matters and monitor day-to-day events?

Supervisors

18. In a Group Decision Support System, the_____is generally a decision-maker.

user

19. These systems often can be organized to retrieve information from databases outside the company.

Executive support system (ESS)

20. _____are used in managing documents, communication and scheduling.

Office automation systems

21. Having several instances of the same data is called_____ .

data redundancy

22. If Mr. Smith's bike has been sent to his new address, but the bill to his old one, it can most likely be attributed to a _____ .

lack of data integrity

23. Which of the following is not an advantage of using a database?

Reliability

24. This type of database is organized into many tables with common data items (key fields) linking the tables to one another.

Relational

25. If all the data in a database is not physically located in one place, it would be a(n)____ .

distributed database

26. Information collected by an organization from a variety of external and internal databases is stored in special type of database called a _____ _____ .

data warehouse

27. In the object-oriented database model, this term is the equivalent to a field in a relational model.

Attributes

28. _____ databases store not only data but also instructions to manipulate the data.

Object-oriented

29. In this database model the fields or records are structured in nodes.

Hierarchical model

30. A credit card bill that is processed at one shot - say the end of the month - is an example of_____ .

batch processing

Section B: Structured Questions and Answers

1. What is the Internet of Things (IoT)? Describe briefly the effect of the Internet of Things (IoT) on our daily lives?

The Internet of Things (IoT) refers to the interconnection of everyday physical devices to the internet, allowing them to send and receive data.
Effect on daily life: It automates tasks (e.g., smart thermostats), improves efficiency (e.g., real-time traffic updates), and enhances convenience (e.g., remote monitoring).

2. Choose and describe briefly ONE (1) unique issue of privacy that might affect the development and implementation of the IoT?

One issue is constant surveillance. Smart devices like TVs or assistants may record private conversations unintentionally, causing privacy violations.

3. What government could do to ensure IoT will be safe and secured for adoption by citizens, companies, even government agencies? Give TWO (2) points.

1. Implement strict regulations and security standards for IoT device manufacturers.
2. Promote public education and awareness on safe IoT usage and data privacy.

4. List THREE (3) levels of management in an organisation and illustrate them using an appropriate figure or diagram.

1. Top Management – Strategic decisions
2. Middle Management – Tactical decisions
3. Supervisors – Operational decisions
[Diagram: Pyramid structure with Top at peak, Middle in center, Supervisors at base]

5. Name and describe the FOUR (4) most common types of computer-based information systems.

1. TPS: Handles daily transactions.
2. MIS: Converts TPS data into reports.
3. DSS: Supports decision-making with data analysis.
4. ESS: Assists executives with summaries and forecasts.

6. Identify and differentiate the THREE (3) common categories of reports that are generated in most organizations.

1. Periodic Reports: Generated regularly.
2. Exception Reports: Show unusual activity.
3. Demand Reports: Created upon request.

7. Define the physical and logical views of data.

Physical View: How data is stored.
Logical View: How users interact with the data.

8. Choose and list THREE (3) ways that can be taken to ensure a database's security?

1. Access control.
2. Data encryption.
3. Regular backups.

9. How does a relational database differ from a hierarchical database? Give TWO (2) points.

1. Structure: Relational uses tables; Hierarchical uses parent-child trees.
2. Flexibility: Relational supports many-to-many; Hierarchical supports one-to-many.

10. Name and briefly explain the SIX (6) phases of system analysis and design.

1. Preliminary Investigation
2. System Analysis
3. System Design
4. Development
5. Implementation
6. Maintenance

11. Briefly describe the THREE (3) approaches to conversion to a new system.

1. Parallel: Run old and new systems together.
2. Direct: Immediate switch.
3. Phased: Gradual transition.