IT-351 Final Exam – 472

Question 1: Circle True or False for each of the following statements (5 marks)

1. Transforming requests into changes is a major maintenance activity. (True) | (False).

2. During alpha testing users test a completed information system using simulated data. (True) | (False).

3. Corporate strategic planning and information systems planning must be aligned for effective project selection. (True) | (False).

4. Extreme Programming (XP) emphasizes long development cycles with minimal testing. (True) | (False).

5. Maintenance activities are limited to software changes. (True) | (False).

6. A primitive level data flow diagram is the first deliverable produced during requirements structuring. (True) | (False).

7. Implementation is the last phase of the systems development life cycle. (True) | (False).

8. Sources and sinks are internal to the system. (True) | (False).

9. A deliverable is an end product in a phase of the SDLC. (True) | (False).

10. Preventive maintenance safeguards a system from future problems. (True) | (False)

Question 2: Choose the correct answer (5 marks)

1. What is the correct order of the SDLC phases?

   a. Planning, Analysis, Design, Implementation, Maintenance.

   b. Analysis, Planning, Design, Implementation, Maintenance.

   c. Planning, Design, Analysis, Implementation, Maintenance.

   d. Planning, Analysis, Implementation, Design, Maintenance.

2. Data in motion, moving from one place in a system to another.

a. Data store.

b. Data flow.

c. External entity.

d. Process.

3. The process in which the current system is replaced by the new system best describes:

a. Installation.

b. Implementation.

c. Maintenance.

d. System Integration.

4. The Baseline Project Plan (BPP) includes all of the following EXCEPT:

a. Feasibility assessment.

b. System request report.

c. Project scope statement.

d. Management issues.

5. Which of the following is an example of an intangible project benefit?

a. Reduced labor costs.

b. Increased sales revenue.

c. Improved employee morale.

d. Faster transaction processing times.

6. An ongoing process that defines the mission, objectives, and strategies of an organization refers to:

a. Corporate strategic planning.

b. Information systems planning.

c. Operational planning

d. Business process reengineering.

7. Calculating an employee's salary is represented in a data flow diagram as a:

a. Data store.

b. Data flow.

c. External entity.

d. Process.

8. After maintenance, which of the following is the most expensive and most time-consuming phase of the entire life cycle?

a.implementation

b. Systems Analysis.

c. Systems Design.

d. Systems Planning.

9. The objective of the project planning process is:

a. The development of a Baseline Project Plan and Project Scope Statement

b. The submission of a System Request and initial feasibility study.

c. The creation of logical data flow diagrams and entity-relationship models.

d. The design of physical system specifications and technical architecture.

10. There are ___ major activities involved in system implementation.

a. Four. c. Seven.

b. Three. d. six.

Question3: fill-in-the-blank: **(7 marks)**

a.Business Proces Reengineering b.Open-ended questions c.Balance

d.Mean time between failure e.Maintaince f.Installation

g.Decision table

1. _____ is the search for, and implementation of, radical change in business processes to achieve breakthrough improvements in products and services.

2. During an interview or on a questionnaire, _____ are used when you want the respondent to answer in their own words without being limited to pre specified choices.

3. In Data Flow Diagrams (DFDs), the conservation of inputs and outputs to a process when that process is decomposed to a lower level is known as _____.

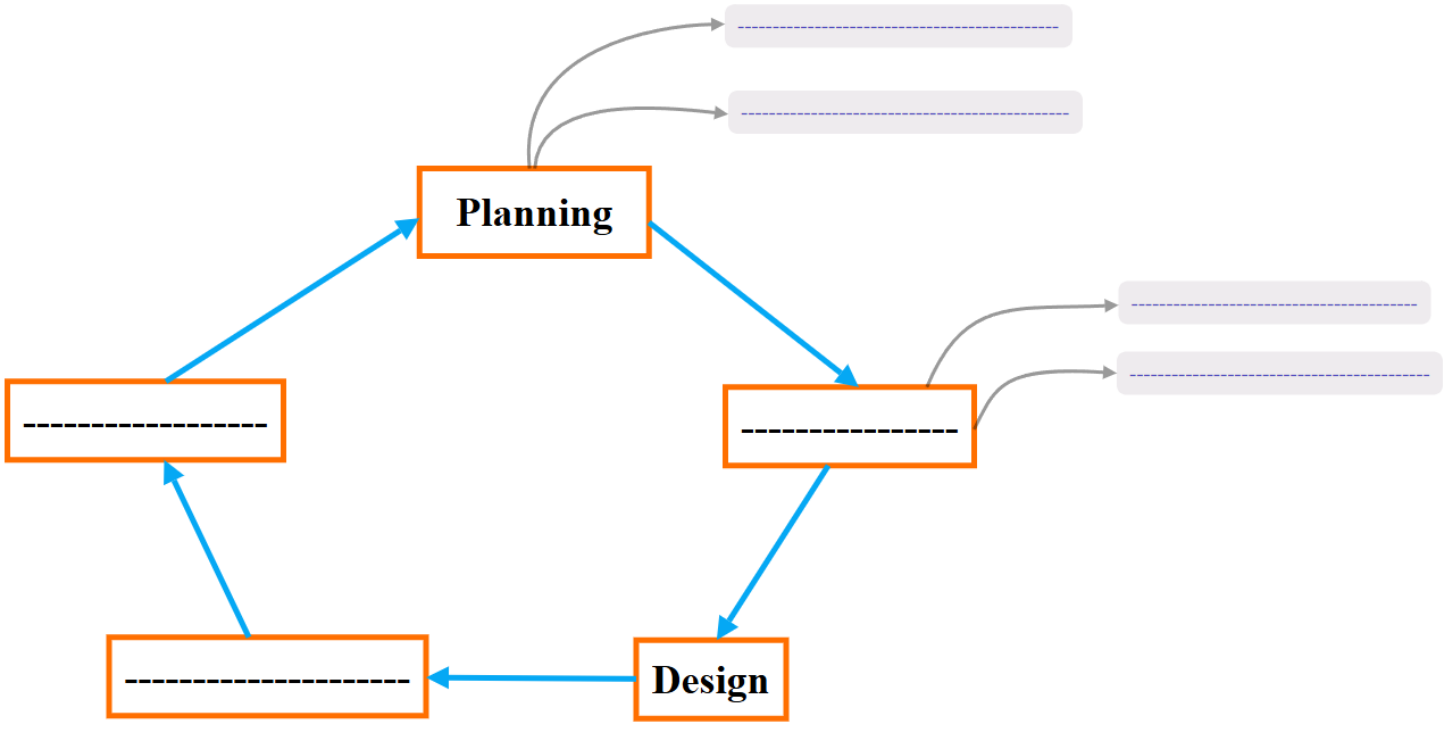
4. A measurement of error occurrences that can be tracked over time to indicate the quality and reliability of a system is called the _____.

5. The phase of the SDLC where changes are made to a system to fix bugs, adapt to new environments, or enhance its functionality is called _____.

6. The organizational process of physically changing over from the current information system to a new one is known as _____.

7. A _____ is a matrix representation of the logic of a decision, which specifies the possible conditions for the decision and the resulting actions that must be taken.

Question4: The provided diagram illustrates the five core phases of the Systems Development Life Cycle (SDLC). Based on the flow of the cycle, fill in the missing phases.: (5 marks)



Question5: Classify each item with the correct letter of classification
A = Process B = Data Flow C = Data Store D = External Entity (6 marks)

1. Generate student transcript		7. Library system	
2. Course registration request		8. Check course schedules	
3.Student personal details		9. Library database	
4. Manage library records		10. Student transcript details	
5. Library record updates		11. Finance department	
6. Student		12. Tuition payment records	

Question6: List the main types of maintenance types and maintenance activities
(4 marks)

maintenance types	maintenance activities

Question7: List the Six activity of Implementation and briefly explain each one.
(6 marks)

Question8: Fill in the missing project sizes and risk levels in the Project Risk Assessment Matrix provided below. **(3 marks)**

		Low Structure	High Structure
High Familiarity with Technology or Application Area	Large Project	----------	(2) Low risk
	----------	(3) Very low risk (very susceptible to mismanagement)	----------
Low Familiarity with Technology or Application Area	Large Project	----------	(6) Medium risk
	----------	----------	(8) Medium-low risk

Question9:

Perfect Pizza wants to install a system to record orders for pizza and chicken wings. When regular customers call Perfect Pizza on the phone, their phone number goes automatically into the Pizza system. Once the order is taken, the name, address, and last order date comes automatically up on the screen. The order is printed, the total, including tax and delivery, is calculated. Then the order is sent to the cook. A receipt is printed. Occasionally, special offer (coupons) is printed so the customer gets a discount. Drivers who make deliveries give customers a copy of the receipt and the order. Weekly totals are kept for comparison with last year's performance.

1. Draw a context diagram for the Perfect Pizza system. (4 mark)
2. Draw a Level-0 Data Flow Diagram for the Perfect Pizza system, illustrating the major processes, data flows, and data stores. (5 Marks)

Answers :

Question1:

1. **T**
2. **T**
3. **T**
4. **F**
5. **F**
6. **F**
7. **F**
8. **F**
9. **T**
10. **T**

Question2:

1. **a**
2. **b**
3. **a**
4. **b**
5. **c**
6. **a**
7. **d**
8. **a**
9. **a**
10. **d**

Question3: fill-in-the-blank:

1 a. Business Process Reengineering

2 b. Open-ended questions

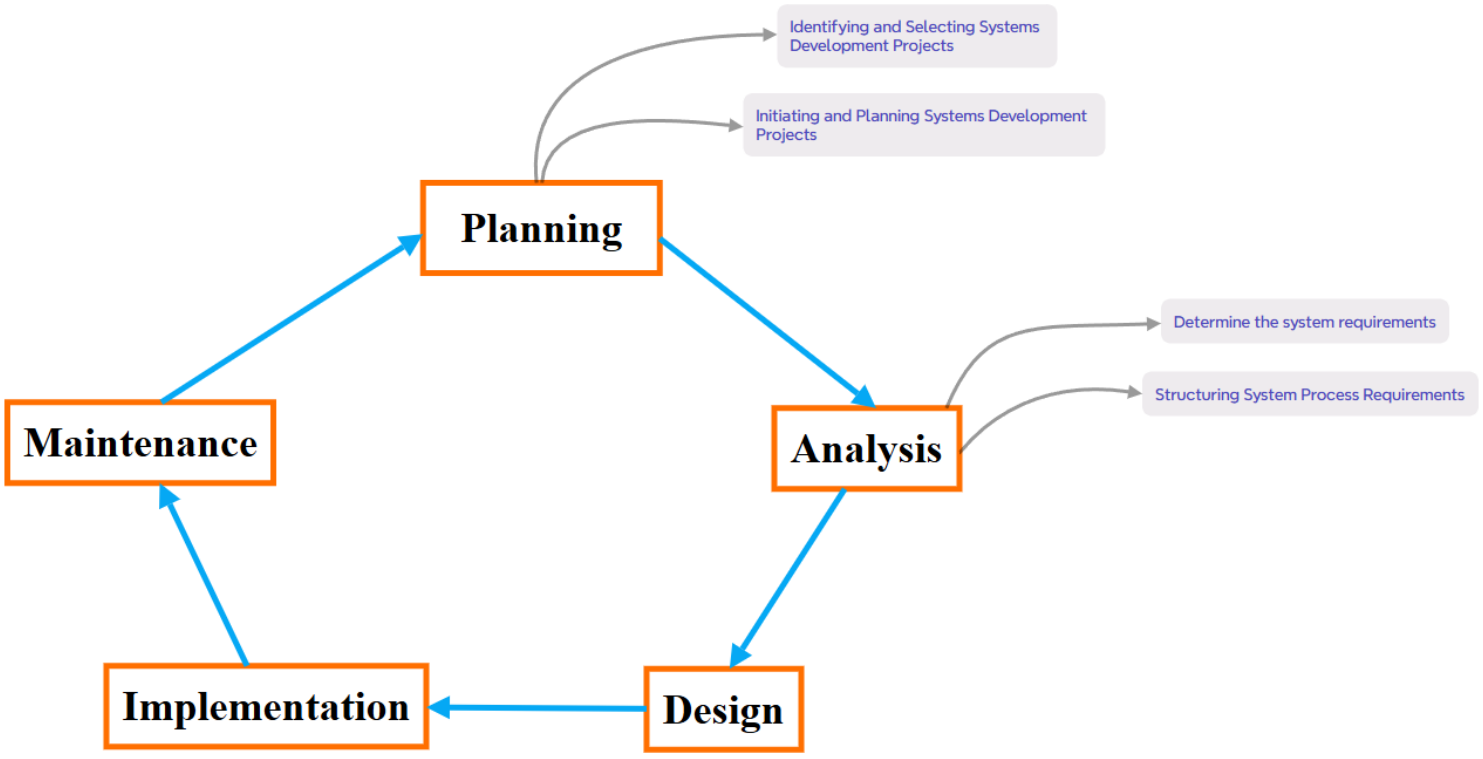
3 c. Balance

4 d. Mean time between failure

5 e. Maintenance 6. f. Installation

6 g. Decision table

Question4:



Question5:

1 A (Process)

2 B (Data Flow)

3 B (Data Flow)

4 A (Process)

5 B (Data Flow)

6 D (External Entity)

7 D (External Entity)

8 A (Process)

9 C (Data Store)

10 B (Data Flow)

11 D (External Entity)

12 C (Data Store)

Question6:

maintenance types	maintenance activities
Corrective maintenance	Obtaining maintenance requests
Adaptive maintenance	Transforming requests into changes
Perfective maintenance	Designing changes
Preventive maintenance	Implementing changes

Question7:

1. Coding The process where the physical design specifications are turned into working computer code. Programmers write, build, and assemble the actual software components of the new system.

2. Testing The comprehensive evaluation of the system to ensure it works correctly and meets all the defined business requirements. This includes finding and fixing bugs through various stages

3. Installation The organizational process of physically changing over from the old, current information system to the brand-new one. This can be done in several ways, such as a direct cutover, running both in parallel, phased rollouts, or a pilot installation.

4. Documentation The creation of written or digital materials that detail how the system works. This includes both system documentation (for the IT professionals who will maintain it) and user documentation (manuals and guides for the employees who will use it daily).

5. Training The process of educating and teaching the end-users and management how to effectively operate the new system. This ensures a smooth transition and that the staff is comfortable with the new workflows.

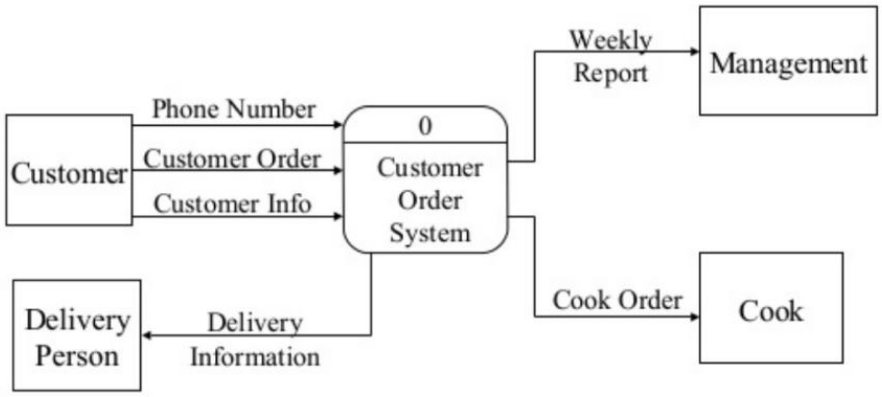
6. Support The ongoing assistance provided to users after the system has been installed and is actively running. This typically involves setting up a help desk, providing contact resources, and troubleshooting any immediate post-launch issues they encounter.

Question8:

		Low Structure	High Structure
High Familiarity with Technology or Application Area	Large Project	(1) Low risk (very susceptible to mismanagement)	(2) Low risk
	Small Project	(3) Very low risk (very susceptible to mismanagement)	(4) Very low risk
Low Familiarity with Technology or Application Area	Large Project	(5) Very high risk	(6) Medium risk
	Small Project	(7) High risk	(8) Medium-low risk

Question9:

Context Diagram



Current Logical Level-1 Diagram

