**ASSIGNMENT**

**NAME:**

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**DEPT:**

**SOFTWARE ENGINEERING**

**LEVEL:**

**200LVL**

**MATRIC NO:**

**23/0052**

**COURSE:**

**INS**

**GROUP B**

**Question 1 Answer:** Relationship between SAD and SE

* SAD defines the what (requirement and design) while SE focuses on how (implementation and technical realization)
* SAD bridge the gap between business stakeholder and technical teams, while SE ensures the technical feasibility and quality of the system
* SAD ensures that business goals are accurately translated into system requirement while SE ensures these requirements are implemented in a robust, efficient, and maintainable manner
* Both fields are tightly integrated within modern development methodologies such waterfall, Agile, etc.
* Continuous collaboration between SAD and SE teams ensures that final software aligns needs and business goals.

**Question 2 Answer:**

* **Systems Modularity:** It refers a process of dividing a system into chunks or modules of a relatively uniform size. Modules can represent a system simply, making it easier to understand and easier to redesign and rebuild.
* **Systems Cohesion:** is the extent to which a subsystem performs a single function. In the MP3 player example, supplying power is a single function

**Question 3 Answer:**

* **Supra-system:** is a larger system that contain one or more subsystem. It provides the overall framework within which smaller systems operate. It usually interacts with its environment and other systems at a higher level.
* **Subsystem:** is a smaller component of a large system(supra-system). It performs specific functions that contribute to the operation of the entire system. Subsystem may also contain their own subsystem.

**Question 4 Answer:**

* Organization(order): the arrangement of components that helps to achieve objectives.
* Interaction
* Interdependence: this means each part or part of the computer depend on one another.
* Integration
* Central objective

**Question 5 Answer:**

* **Transaction processing system:** it can be defined as a computer-based system that captures, classifies, stores, maintains, updates and retrieves transaction data for record keeping and for input to other types of CBIS.

**Question 6 Answer:**

* **DSS:** A Decision Support System (DSS) is a computer-based information system that helps a user to take decisions in semi-structured situations.

**Question 7 Answer:**

* **Expert System:** Expert systems are special information systems which are designed to manipulate knowledge rather than information. Expert systems are developed by utilizing the knowledge and expertise of a specialist (expert) in a particular domain.
* **Examples:** DENDRAL, CADUCEUS, ECOCROP. SHRDLU, etc.

**Question 8 Answer:**

* **KBS:** A Knowledge-based system (KBS) is a type of computer system that analyzes knowledge, data and other information from sources to generate new knowledge.

**Question 9 Answer:**

* **Simulation model:** It allows us to collect pertinent information about the behavior of the system by executing a computerized model.

**Question 10 Answer:**

* **Digital Firm:** it is one where nearly all of the organization's significant business relationshipswith customers, suppliers, and employees are digitally enabled and mediated.