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Course Code: CSE 227
Course Title: System Analysis and Design
Class Test: 1 Section: 68_A
Total Marks: 15 Time: 1 Hr Set: B

Part A

Choose the correct answer (5x1 = 5 Marks):

1. A department reviews whether its teaching methods, course content, and assessment activities collectively support the stated COs. Which OBE principle is being applied?
A. Student-centered learning
B. Evidence-based assessment
C. Alignment
D. Continuous Quality Improvement

2. Which situation most clearly demonstrates **A3: Innovation** within Complex Engineering Activities?
A. Using the same documented procedure repeatedly
B. Following laboratory instructions without modification
C. Developing or applying a novel approach to address an engineering problem
D. Recording the attendance of project team members

3. A software engineering project requires students to work with incomplete information, identify conflicting requirements from different stakeholders, and make engineering decisions rather than simply applying a predefined procedure. Which CEP attributes are particularly relevant?
A. P1, P2, and P6
B. A1, A2, and A3
C. P4 and P5 only
D. A4 and A5 only

4. A course instructor defines COs using verbs such as *understand*, *know*, and *learn*, but finds it difficult to measure whether students have achieved them. Which characteristic of effective COs is most directly missing?
A. Alignment with the department's vision
B. Use of observable and assessable actions
C. Inclusion of all course topics
D. Connection with student attendance

5. A department wants to determine whether a program's graduates have achieved the competencies expected by the time they complete the program. It then uses course-level evidence to support this evaluation. Which sequence best represents the relationship among the outcomes?
A. CO → PO
B. PO → CO → PEO
C. PEO → CO → Vision
D. CO → PEO → PO

Part B

Read the scenario carefully and answer the following questions:

MediCare Plus Ltd. plans to develop a Hospital Information Management System (HIMS) to integrate major hospital activities. The proposed system will support patient registration, appointment management, electronic health records, laboratory services, pharmacy information, billing, and reporting. Doctors and nurses will access patient information to support clinical decision-making, while hospital administrators will use the system for operational monitoring and resource management. Regulatory authorities may access summarized data for healthcare quality monitoring and policy planning. The project involves several stakeholders, including patients, doctors, nurses, hospital administrators, IT personnel, laboratory staff, and regulatory authorities. The System Analyst must understand the needs of these stakeholders and translate them into appropriate system requirements and solutions.

1. Explain the major roles and responsibilities of a System Analyst in developing the HIMS. Discuss at least three roles and provide a suitable example for each based on the scenario. 3
2. Describe the major phases of the System Development Life Cycle (SDLC). Explain how each phase can be applied to the development of the HIMS, from identifying the hospital's needs to system implementation and maintenance. 4
3. Identify and explain three types of information that the System Analyst needs to collect before designing the HIMS. Give one relevant example of each type of information from the scenario. 3