EX/ARCH/T/422/2019

B. ARCH. 4TH YEAR 2ND SEMESTER EXAMINATION 2019

BUILDING MAINTENANCE AND MANAGEMENT

Full Marks : 100 Time : Three Hours

Answer any **five** questions. Each question is for **20** marks.

Q1. Write a note on 'Maintenance' of a building clearly defining its objectives and methodology. Give definitions of the terms 'Conservation' and 'Restoration'. Mention the standards of 'Ethics' that one follows in the process of 'Conservation' of a building.

Q2. Mention the process of 'Inspection' of a building for assessing its physical condition, and write down the 'Inspection Report Format' in this regard. Define some types of tests for assessing the quality of damage and decay in buildings and mention which test determines what damage.

Q3. Write a scientific note on 'Rising Dampness' mentioning its effects on buildings and human beings. Write a list of 'Causes' behind 'Rising Dampness'. With proper drawings, explain how you can prevent or control 'Rising Dampness' in buildings.

Q4. Write a note on all types of damages and decays that you can find in the load-bearing walls of the old buildings. Describe with sketches the general techniques of repair of damaged load-bearing walls.

Q5. Draw appropriate sketches with labels of - a) Section of the Roof (with timber beam) of an old brick-masonry building; and b) Section of the Roof (frame-structure) of a new building. A portion of concrete from the ceiling of a room on the top floor of a modern building has fallen. Mention with appropriate sketch-views and technical specifications how you will do the repair work to arrest further damage of the building.

Q6. Define 'M20' Grade of Concrete. Write with proper sketches where you would place the reinforcement bars in a cantilever balcony slab. What damages can you find in plain and reinforced cement concrete construction? Describe the precautionary measures that must be taken to safeguard failure of concrete construction.