

**B. ARCH. 3<sup>RD</sup> YEAR 2<sup>ND</sup> SEMESTER EXAMINATION 2017****BUILDING DISEASES AND TREATMENT**

Full Marks : 100

Time : Three Hours

Answer Question Nos. 1 and 2, and any **four** questions from the rest. Question Nos. 1 and 2 contain **20** marks each, and Question Nos. 3-8 contain **15** marks each.

- Q1. Define the meaning, objective and methodology of 'Maintenance' for Architecture. Define 'Restoration' giving examples. Mention the standards of ethics that must be followed in conservation works. Explain the role of heritage buildings in an urban setting.
- Q2. Draw appropriate sketches with labels of - a) Section of Foundation of an old building (load-bearing structure with 387 mm thick wall at ground floor) up to 300 mm above plinth level; b) Section of the Roof (with timber beam) of an old brick-masonry building; and c) Section of the Roof (frame-structure) of a new building.
- Q3. Mention the specific causes of damages and decays that may arise in buildings of various ages. What formalities and specifications should an Inspection Report for an old building contain?
- Q4. Write a detailed note on the causes and the respective remedial measures of the possible damages and decays that you may find in the walls of an old building.
- Q5. Write a detailed note on 'Rising Dampness'. Answer with appropriate sketches and labeling to what measures you will take to minimize rising dampness problem in the cases of - a) an old building with lower plinth level than present ground level; b) a very old historic building with thick walls.
- Q6. A portion of concrete from the ceiling of a room on the top floor of a 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.
- Q7. What problems can you find in plain and reinforced cement concrete construction? Describe the precautionary measures that must be taken to safeguard failure of concrete construction.
- Q8. Describe the assessment process of damages in a building mentioning various stages, their objectives and operations. Mention the three types of tests for assessment. Prepare a list mentioning summary of major tests.