

# SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA

SEMESTER END EXAMINATIONS (REGULAR) NOVEMBER - 2016

M. ARCH II YEAR III SEMESTER

## HVAC & IAQ DESIGN DIRECTIONS (10210304)

Maximum Marks – 50

Time –2 Hours

a) Answer any Two questions out of 1 to 4 questions.

b) Question No.5 is compulsory and answer any four out of six sub-questions.

- Q1. “The goal of HVAC System in a building is to provide Healthy and Comfortable built environment and being energy efficient and cost effective”. Elaborate on the strategies to achieve this in building design. (15M)
- Q2. Discuss briefly the (15M)
- Ventilation requirements for office buildings as per NBC India.
  - Various components of a mechanical ventilation System.
- Q3. What are the significant pollutants to IAQ? Provide suitable strategies to improve IAQ in buildings. (15M)
- Q4. Elaborate briefly the method of calculating heating/cooling loads in buildings for HVAC system design. (15M)
- Q5. Write short notes on any FOUR of the following: (4x5= 20M)
- Building related illness
  - Window Air-conditioner
  - Natural ventilation in Hot and Humid climatic Zones
  - Evaporative cooling
  - Stack effect
  - Sensible and latent heat gains

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