Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐          Total No. of Pages : 02

Total No. of Questions : 08

**B.Architecture (2012 & Onwards)   (Sem.–6)**
# BUILDING SERVICES-III
**Subject Code : BACH-605**
**M.Code : 72291**

Time : 3 Hrs.                                                    Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**
1. Attempt 5 questions in all with at least one question from each unit
2. First question is compulsory.
3. Assume any missing data/dimension. Draw neat sketches where necessary.

Q1. a) What is artificial ventilation? (2)

   b) Explain briefly cooling load. Which gases are used for refrigeration? (2)

   c) Explain absorption, reverberation time (give formula also), transmission & reflection of sound. (2)

   d) Enlist advantages of acoustic materials. (2)

   e) Explain briefly the applicability of intelligent buildings. (2)

## UNIT-I

Q2. Discuss air conditioning with respect to its role & importance along with the principles govern the air conditioning? What is cooling load & air cycle? Also explain methods of cooling and heating. (12.5)

Q3. A small guest house (20 bedrooms, lobby, dining area etc.) is to be centrally air conditioned. Explain various parts of AC plant to be installed with diagrams. (12.5)

## UNIT-II

Q4. Explain the acoustical design considerations for a studio & lecture hall with the help of neat diagrams. Also explain the methods of acoustical treatment. (12.5)

Q5. What are acoustical materials & their different types of available in the market? Explain each along with its application. (12.5)

## UNIT-III

Q6. Explain the relevance, importance and scope of building automation. (12.5)

Q7. What is building management system? Explain its functions & applicability to different services. (12.5)

Q8. Explain limitations, advantages & disadvantages, components & the integration of Building management systems in buildings. (12.5)

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**