

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**INDUSTRIAL AND TECHNOLOGY EDUCATION DEPARTMENT**  
**2019/2020 SECOND SEMESTER EXAMINATION**

**COURSE TITLE: BUILDING ENVIRONMENT AND MAN**

**COURSE CODE: ITE 348**

**Time Allowed: 2 Hours.**

**Attempt Only 4 Questions**

1a. Modern sources of artificial light convert electrical energy both within the building and environment. Discusses -Maximum of 1 page

b. Lamps are categorized in to 2, mention them and give 3 examples under each.

2a. Identify 5 factors that effects the performance of A C

b. Sketch the diagram of an air conditioning system, identify 5 components and briefly explain each

c. Briefly explain the working principles of A C from terming on -turning off.

3a. Write a short note on acoustics with emphasis on the Definition, Scope and Application in man's building and environment.

b. With a diagram show sound transmission from cause to effect process that converts energy from some other form in to sonic energy , producing a sound wave.

c. With the aid of diagram, clearly indicate Wavelength, Frequency, Amplitude and Velocity in sound wave. Briefly explain each term.

4a Sketch and label an electric fan and briefly explain 5 components of the fan.

b. Fan as a powered machine used to create airflow which has basically 3 requirements - Functional, Technical and Constructional . Mention 3 under each requirement.

c. mention 3 ways, maintenance can be carried out on fans.

5a Write short note on the 3 major categories of ventilation in buildings

b. Ventilation system in the building is essential for the occupants. Mention 5 factors that influences this system,

c. Briefly explain these terms as they relate to ventilation

i. Displacement ventilation

ii. Personalized

iii. Stratum ventilation

iv indoor Environment

v. Piston ventilation