

KATHMANDU UNIVERSITY  
End Semester Examination  
June/July, 2019

Level : B.E.  
Year : IV  
Time : 2 hrs. 30 mins.

Course : ETEG 440  
Semester : II  
F. M. : 40

SECTION "B"

*Attempt ANY FOUR questions.*

*Missing data may be suitably assumed. Each symbol carries their usual meaning.*

1.
  - a. Explain the significance of room acoustics? What is the creative use of phase in acoustic engineering? Explain with the help of appropriate example. [6]
  - b. Explain the sound propagation mechanism in multiple room environment. [4]
  
2.
  - a. how the characteristics of room is improved by using different types of absorbers? Explain with the help of suitable diagram. [6]
  - b. what type of parameters are selected to design the room for music. [4]
  
3.
  - a. What do you mean by Sound field? What is the significance of different types of sound field? [4]
  - b. Define sound power level and Sound intensity level. [3]
  - c. What is sound masking and frequency weighting? [3]
  
4.
  - a. Assume that three sound of different frequency are to be combined. Let the three sound pressure levels be i) 90 dB ii) 88 dB iii) 85 dB. Calculate the total sound pressure level in dB. [5]
  - b. Define tones and noise with example. [2]
  - c. Define Octave and Decade with example. [3]
  
5.
  - a. What do you mean by Directivity factor and directivity index? [4]
  - b. Explain the subjective correlation parameters of sound with example. [4]
  - c. How can we control the room acoustic with active sound control system and using active noise cancelation techniques. [2]

