Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examination – June – 2017**

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| **Code :** | **16MT2004** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PRINCIPLES OF AUDIO ENGINEERING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | List down and explain the various characteristics of sound wave in detail. | CO1 | 15 |
| b. | Explain Loudness perception of human ear. | CO1 | 5 |
| (OR) | | | | |
| 2. | a. | Sketch a neat diagram of human ear anatomy. Divide the human ear into its three parts and explain them in detail. | CO1 | 15 |
| b. | Explain Spatial perception of human ear. | CO1 | 5 |
| 3. | a. | Classify microphones according to their Construction. Compare and contrast their features. | CO1 | 14 |
|  | b. | Differentiate between AB miking technique and XY Miking Technique. | CO1 | 6 |
| (OR) | | | | |
| 4. | a. | Classify microphones according to their Polar Pattern. Discuss their application, advantages and disadvantages. | CO1 | 14 |
|  | b. | List any 3 specifications of microphones critical in choosing a microphone for a specific applicaton. | CO2 | 6 |
| 5. | a. | Point out the differences between an Active Crossover network and Pasive crossover network. | CO2 | 12 |
|  | b. | List down the different parts of the Low frequency drivers in the cross section view mentioned below: | CO1 | 8 |
| (OR) | | | | |
| 6. |  | Sketch, Compare and contrast the features of loudspeakers made up of Electromagnetic transducer and Piezoelectric transducer. | CO1 | 20 |
| 7. | a. | List down all the specifications of a professional Power amplifier. Explain each one of them in detail. | CO2 | 10 |
|  | b. | Explain the various track features in an analog audio mixer. | CO2 | 10 |
| (OR) | | | | |
| 8. | a. | Classify different types of audio mixers according to their applications. Compare and contast their features. | CO2 | 8 |
|  | b. | Show how to choose a right amplifier for a specific set of Loudspeakers. Assume the amplifier and loudspeaker power ratings. | CO2 | 12 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Explain the process of converting analog audio into digital audio. | CO3 | 10 |
|  | b. | Estimate the space required to store a stereo digital audio recorded for 2 minutes in \*.wav format if the sampling rate and bit dept used were 48kHz and 16bit respectively. | CO2 | 10 |

ALL THE BEST