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**MANIPAL INSTITUTE OF TECHNOLOGY**  
**MANIPAL**  
*(A constituent unit of MAHE, Manipal)*

**V SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY)**

**END SEMESTER EXAMINATIONS, NOV 2018**

**SUBJECT: SOUND ENGINEERING [PMT 3104]**

**REVISED CREDIT SYSTEM  
 (23/11/2018)**

Time: 3 Hours

MAX. MARKS: 50

**Instructions to Candidates:**

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

**1A.** Explain the following:

- a. Rhythm      b. Timbre      c. Order      d. Tempo

**1B.** With the help of a neat diagram explain “phase.”

**1C.** Draw a neat diagram of the cross section of the cochlea explain the parts.

**[ 02 + 04 + 04 ]**

**2A.** Explain the importance of the 3 things that can happen to sound generated in a given space.

**2B.** What are the negative effects of not considering the following parameters when buying a microphone:

- a. Pickup patterns      b. Microphone Size  
 c. Microphone Connector type      d. Power Source Needed

**2C.** What are the important characteristics of microphones for professional use?

**[ 02 + 04 + 04 ]**

**3A.** Explain different types of preamps based on form factor.

**3B.** With a neat diagram explain the working of an electrostatic microphone.

**3C.** Explain the characteristics of the studio monitors which are ideal for a control room with a dimension of 6ft X 6ft.

**[ 02 + 04 + 04 ]**

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**4A.** What are leader tape? What are the negative effects of not having a leader tape?

**4B.** What are factors effecting the quality and storage of the tapes?

**4C.** Explain the following.

a. Nyquist Theorem

b. Nyquist rate

Oversamplings

**[ 02 + 04 + 04 ]**

**5A.** Explain boom miking and its techniques.

**5B.** Explain 4 types of Stereo miking techniques

**5C.** What are the guidelines to be followed when miking a person for radio?

**[ 02 + 04 + 04 ]**