

**First Year BASLP Degree Supplementary Examinations March 2017**

**BIOMEDICAL INSTRUMENTATION AND ACOUSTICS**

**Time : 3 hrs**

**Max marks : 80**

- Answer all questions
- Draw diagram wherever necessary

**Essays**

**(4x10=40)**

1. Discuss the advantages of a condenser microphone compared to other types.  
With supporting diagrams, illustrate how a condenser microphone converts sound pressure variations to electrical signal.
2. Briefly explain the role of a sound level meter in calibrating an audiometer.  
Explain the importance of calibration in diagnostic audiology.
3. Explain the parts of a Computer with a block diagram.
4. State and explain the tasks performed by RAM in the functioning of a computer

**Short notes**

**(5x5=25)**

5. Oscillators
6. Immittance meter
7. Servo controlled AC voltage stabilizer
8. Artificial ear
9. Speech spectrograph

**Answer briefly**

**(5x3=15)**

10. Differentiate sound pressure level and sound power level.
11. With a block diagram explain how an uninterrupted power supply (UPS) functions.
12. Convert the hexa decimal number FA to its equivalent binary number
13. Illustrate the equipment setup required to calibrate a pure tone audiometer in air conduction mode.
14. Explain the role of analog to digital converter in digital hearing aids.

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