

**First Year BASLP Degree Examinations September 2018**

**Biomedical Instrumentation and Acoustics**

**(2016 Scheme)**

Time: 3 hrs

Max marks: 80

- Answer all questions
- Draw diagrams wherever necessary

**Essays**

**(4x10=40)**

1. Identify the electronic component which is used as a rotary type volume control in hearing aids. Explain how it controls the volume.
2. Explain the parts of a Computer with a block diagram
3. Explain why dB scale is preferred to quantify sound. Walls of certain audio rooms are different from the normal walls. What is the difference. What difference it makes in the quality of sound.
4. State and explain the role of RAM in the functioning of the computer.

**Short Notes**

**(5x5=25)**

5. What are application softwares. List any two application software. What is PN junction. Explain the formation of potential barrier in a PN junction.
6. Which electronic device is used for generating a pure tone in an audiometer. Explain how it functions.
7. Explain how a speech spectrograph functions
8. An amplifier needs to be implemented in a hearing aid for analog type. Which device will be selected for this purpose. How does it amplify.
9. Condenser microphone

**Answer Briefly**

**(5x3=15)**

10. Differentiate between analog and digital systems.
11. Operating systems.
12. Which type of microphone is used in hearing aids. Explain it with neat diagram.
13. With a truth table explain how the following gates function.
  - OR
  - AND
14. Explain sound pressure level and sound power level

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