

# 2012 Scheme

Q.P. Code: 104015

Reg. No.:.....

**First Year BASLP Degree Supplementary Examinations April 2021**

## **Biomedical Instrumentation and Acoustics**

**Time: 3 hrs**

**Max marks: 80**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

### **Essays**

**(4x10=40)**

1. • With neat block diagram explain the working principle of servo controlled voltage stabilizers.  
• Explain switched mode power supply. With neat block diagram explain its working principle. (5+5)
2. • What are microphones. With neat diagram explain the working principle of condenser microphone.  
• What is acoustic impedance. Explain the properties of sound. (5+5)
3. Explain J-K flip flop and derive draw table. With truth table explain all the logic gates. (5+5)
4. • Explain the classification of hearing aids based on technology and aesthetic aspects.  
• With neat block diagram explain the working principle of audiometers. (5+5)

### **Short notes**

**(5x5=25)**

5. DC power supply.
6. Loud speaker and their enclosures.
7. Operating system software.
8. Transducers and electrodes.
9. Digital signal processing.

### **Answer briefly**

**(5x3=15)**

10. Distinguish between active components and passive components.
11. Explain in detail the nature and propagation of sound.
12. With neat block diagram explain the working of computer.
13. Explain in detail the working principle of induction loop system.
14. Explain SLM.

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