

**ELECTRONICS-II**  
**4<sup>th</sup>/Electrical/2526/2252/May'16**

**Duration: 3hrs**

**M. Marks=75**

**SECTION A**

**Q.1 Attempt all questions;**

**1.5x10=15**

- a. To cool down power transistors \_\_\_\_\_ is used.
- b. The gain of an amplifier with feedback is also called a \_\_\_\_\_ loop gain.
- c. Tuned amplifiers are never employed for \_\_\_\_\_ frequency signals.
- d. Op-amps are the most popular type of \_\_\_\_\_ IC.
- e. The resistance of a loudspeaker is usually a few hundred ohms. (T/F)
- f. To obtain undamped oscillation \_\_\_\_\_ feedback is necessary.
- g. RC circuit can act as low pass and high pass circuit.(T/F)
- h. A common device which can be used as an electronics switch is a \_\_\_\_\_.
- i. SMPS stands for \_\_\_\_\_.
- j. Class \_\_\_\_\_ power amplifier has the highest collector efficiency.

**SECTION B**

**Q.2 Attempt any FIVE questions:**

**6x5=30**

- a. What do you mean by oscillator? Discuss essential parts of an oscillator circuit.
- b. What do you mean by Class A amplifier? Explain?
- c. Differentiate between a voltage amplifier and a power amplifier.
- d. Discuss in brief block diagram of 555 IC timer.
- e. Define feedback. Discuss the advantages of negative feedback amplifiers.
- f. Explain diode clamping circuit in brief.
- g. Define the following terms:  
    i) Series resonance      (ii) Parallel resonance      (iii) Q factor

**SECTION C**

**Q.3 Attempt any THREE questions:**

**3x10=30**

- a. Explain the working principle of push pull amplifier with the help of diagram. Also explain its advantages and disadvantages.
- b. Explain working and applications of collector coupled monostable multivibrator circuit using power amplifiers.
- c. Describe the working of Wein bridge oscillator with the help of diagram.
- d. Write the short note on any **TWO**:  
    (i) SMPS  
    (ii) Single tuned amplifier.  
    (iii) Operational amplifier