

Q.28 What is the condition for resonance in tuned amplifier?

Q.29 How can we use op-amp as integrator?

Q.30 Draw and explain the block diagram of IC 555 timer.

Q.31 Explain the working of fixed voltage regulator IC 7805.

Q.32 What are the applications of UPS?

### SECTION-D

**Note:** Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Explain working of SMPS with circuit diagram.

Q.34 What is clipping? Explain its types.

Q.35 Explain with the help of diagram working of Wein bridge amplifier.

Q.36 Explain push pull amplifier with diagram and why it is called push pull?

No. of Printed Pages : 4

Roll No. ....

127543

**4th Sem. / Fire Tech. & Safety**

**Subject : Electronic Devices & Circuits**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Objective type questions. All questions are compulsory (10x1=10)

Q.1 RC coupling is used for \_\_\_\_\_ amplification.

Q.2 The last stage of audio amplifier is called as \_\_\_\_\_

Q.3 Class \_\_\_\_\_ power amplifier has highest collector efficiency.

Q.4 The negative feedback in amplifier increases \_\_\_\_\_ of its voltage gain.

Q.5 In a transistor oscillator, the active device is \_\_\_\_\_

Q.6 Emitter follower is used for \_\_\_\_\_

Q.7 Q factor of coil is \_\_\_\_\_

(60)

(4)

127543

(1)

127543

- Q.8 IC 555 timer has \_\_\_\_\_ number of pin.
- Q.9 An ideal Op-Amp has \_\_\_\_\_ Input impedance.
- Q.10 The output of 7805 IC and 7905 IC voltage regulator is \_\_\_\_\_ & \_\_\_\_\_ volt respectively.

### SECTION-B

**Note:** Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

- Q.11 Why the gain of amplifier is calculated in decibels?
- Q.12 What do you mean by frequency response curve?
- Q.13 What is the overall gain of multistage amplifier?
- Q.14 List two advantages and disadvantages of push amplifier.
- Q.15 What are the advantages of feedback amplifier?
- Q.16 What is difference between oscillator and alternator?

(2)

127543

- Q.17 Draw the block diagram of an oscillator?
- Q.18 Why RLC parallel circuit at resonance is also called as rejector circuit.
- Q.19 What is a clipping circuit? And also name its type.
- Q.20 What is an A-stable multi-vibrator?
- Q.21 Define slew rate.
- Q.22 How Op-Amp is used as inverting amplifier?

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

- Q.23 Give the classification of amplifier depending upon various factors.
- Q.24 What are the advantages of push pull amplifier?
- Q.25 What is input offset voltage of an op-amp?
- Q.26 Describe working of emitter follower and its application
- Q.27 Explain piezoelectric effect.

(3)

127543