

- Q.28 Explain complementary PUSH PULL amplifiers.  
 Q.29 Explain working of single ended power amplifiers.  
 Q.30 Derive expression for gain of an amplifier employing negative feedback.  
 Q.31 Explain various diode clamping circuits.  
 Q.32 Explain the concept of Schmitt Trigger circuit.  
 Q.33 Explain how op-amp can be used as differentiator.  
 Q.34 Explain positive feedback and its advantages.  
 Q.35 Explain working of oscillator colpitt.

#### **SECTION-D**

**Note :** Long Answer type question. Attempt any two questions out of three questions. (2x10=20)

- Q.37 Explain the Barkhausen criterion for oscillations and Draw the circuit of phase shift oscillator and explain its working.  
 Q.37 Draw and explain the block diagram of IC 555 as monostable multivibrator.  
 Q.38 Explain the working operation of Double tuned voltage amplifier and its characteristics and frequency response.

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**4th Sem./ Elect/GE/PS Engineering  
Subject : Electronic Devices & Circuits**

**Time : 3 Hrs.**

**M.M. : 100**

#### **SECTION-A**

**Note :** Multiple choice questions. All questions are compulsory. (10x1=10)

- Q.1 The push-pull circuit must use \_\_\_\_\_ operation:  
 a) Class A                                    b) Class B  
 c) Class C                                    d) None  
 Q.2 In class A operation, the operating point is generally located \_\_\_\_\_ of the D.C. Load line.  
 a) At cut off point                        b) At the middle  
 c) At saturation point                    d) None  
 Q.3 The voltage gain of an emitter follower is \_\_\_\_\_  
 a) Less than 1                              b) Greater than 1  
 c) = 1                                        d) None  
 Q.4 A turned amplifier uses \_\_\_\_\_ load:  
 a) Resistive                                b) Capacitive  
 c) Inductive                                d) LC Tank  
 Q.5 \_\_\_\_\_ is a fixed frequency oscillator

- a) Phase shift oscillator b) Colpitt  
c) Crystal d) None of above
- Q.6 A circuit that generates square wave is called:  
a) Oscillator b) Amplifier  
c) Multivibrator d) None
- Q.7 An oscillator always needs an amplifier with:  
a) Negative feedback b) Positive feedback  
c) Both feedback d) LC tank circuit
- Q.8 An Op-amp is a device which has following number of inputs:  
a) 2 b) 1  
c) 4 d) None
- Q.9 Number of pins in IC 741 OP-AMP \_\_\_\_\_.  
a) 2 b) 8  
c) 6 d) None
- Q.10 The output waveform of 555 timer is:  
a) Sinusoidal b) Triangular  
c) Rectangular d) None

## SECTION-B

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

Q.11 Distortion.

- Q.12 Multistage amplifier.  
Q.13 Astable multivibrator.  
Q.14 Collector efficiency.  
Q.15 Power Amplifier.  
Q.16 VCO  
Q.17 Line Regulation.  
Q.18 Resonance.  
Q.19 Diode Clamping.  
Q.20 PSRR

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain the working principle of Photo transistor.  
Q.22 Explain the working principle of Class A amplifier and its collector efficiency.  
Q.23 What is importance of Impedance matching in amplifiers.  
Q.24 Explain transformer couples amplifiers.  
Q.25 Explain the basic concept of VCO and its applications.  
Q.26 Explain the basic concept of Fixed voltage regulators.  
Q.27 Explain RC integrating and differentiating circuits.