

No. of Printed Pages : 4

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123743/30943

**4th Sem / Branch : Electrical, GE, Power Station,  
Elect. Engg,Fine Tech & Safety**

**Subject:- Electronic Devices and Circuits**

Time : 3Hrs.

M.M. : 100

### **SECTION-A**

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

**Q.1** Multistage amplifier amplifies \_\_\_\_\_

- a) Voltage level
- b) Power level
- c) Current level
- d) None

**Q.2** Radio receiver uses \_\_\_\_\_ number of stages in IF section

- a) Two
- b) Three
- c) Four
- d) Five

**Q.3** In class A Amplifier, collector current flows for \_\_\_\_\_

- a) Less than half cycle
- b) Half the cycle
- c) Entire cycle
- d) Less than entire cycle

**Q.4** The Hartley Oscillator uses

- a) Negative feedback
- b) Negative
- c) Sinusoidal
- d) None

**Q.5** Transistor can be used as \_\_\_\_\_ for application

- a) Switch
- b) Amplifier
- c) Inverter
- d) All

**Q.6** \_\_\_\_\_ multivibrators are used as flip-flop in digital circuits

- a) Astable
- b) Monostable
- c) Bistable
- d) None

**Q.7** The collector efficiency of amplifier is maximum for:

- a) Class A
- b) Class B
- c) Class C
- d) Class AB

**Q.8** Sample and hold circuit is used in application like \_\_\_\_\_

- a) D/A converter
- b) A/D converter
- c) Amplification
- d) None

**Q.9** Feedback in Schmitt trigger is a \_\_\_\_\_ series

- a) Positive
- b) Negative
- c) Current
- d) None

**Q.10** A Schmitt trigger uses \_\_\_\_\_ feedback to generate square wave

- a) Positive
- b) Negative
- c) Current Series
- d) None

## **SECTION-B**

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

- Q.11 In 555 timer \_\_\_\_\_ pin is used for trigger pulse?
- Q.12 What is a tuned amplifier?
- Q.13 \_\_\_\_\_ multivibrator is called one shot multivibrator?
- Q.14 In intergrator circuit, output is taken across \_\_\_\_\_
- Q.15 What is positive feedback .
- Q.16 What is voltage amplifier?
- Q.17 Crystal oscillator is used where \_\_\_\_\_ frequency is required.
- Q.18 The negative feedback reduces \_\_\_\_\_ in amplifier
- Q.19 Push Pull amplifier uses class \_\_\_\_\_?
- Q.20 The distortion is minimum in \_\_\_\_\_ type of power amplifiers.

## **SECTION-C**

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are heat skin and why are they important.
- Q.22 Why power amplifiers are called large signal amplifiers.
- Q.23 Explain in brief operation of push pull amplifier.
- Q.24 Discuss the effect of negative feedback on gain, distortion and bandwidth.

- Q.25 Name various types of oscillator and state two applications of oscillator.
- Q.26 What are the advantages of tuned amplifiers.
- Q.27 Write a short note on Double tuned voltage amplifiers
- Q.28 Draw pin diagram of 555 timer.
- Q.29 Write a note on phototransistors.
- Q.30 Explain working of bistable multivibrator?
- Q.31 Explain block diagram of OP AMP and draw its symbol.
- Q.32 Explain RC as integrator circuits.
- Q.33 Explain Line regulation
- Q.34 Write a note on VCO
- Q.35 Explain concept of schmitt trigger circuit using OP AMP

## **SECTION-D**

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

- Q.36 Define collector efficiency and derive expression for class A amplifier.
- Q.37 Explain working of RC phase shift oscillator
- Q.38 Explain working principle of photodiode