No. of Printed Pages : 4 180933/170933
Roll No. .....

Electrical Engg.
Subject:- Electronics II

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Heat sink reduces_____
a) transistor power b) ambient temperature
c) junction temperature d) collector current

Q.2 Complementary push pull amplifier use_____
a) two PNP transistors
b) two NPN transistors
c) one NPN and other PNP
d) None of the above

Q.3 In series RLC circuit, below resonant frequency, impedance is_____
a) capacitive b) inductive
c) resistive d) None of the above

Q.4 The effects of negative feedback are following except _____
a) Reduction in gain
b) reduction in output impedance
c) Increase in distortion

d) increase in bandwidth

Q.5 The material with the piezo-electric effect is
a) Quartz b) Rochelle salt
c) Tourmaline d) All of the above

Q.6 In series RC circuit, voltage across the resistance
a) is in phase with current
b) is in phase with source voltage
c) lead source voltage by 90^o
d) lag the current by 90^o

Q.7 A diode clipper circuit
a) inserts dc level
b) produces average of input
c) removes part of waveform
d) increases peak value

Q.8 The multivibrator which does not require any trigger is_____
a) Astable multivibrator
b) Monostable multivibrator
c) Bistable multivibrator
d) None of the above

Q.9 The output of IC 7915 is _____
a) +15V b) -15V
c) +5V d) -5V

Q.10 Operational amplifier amplify _____
a) ac only b) dc only
c) ac and dc both d) None of the above

SECTION-B

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

Q.11 What is collector efficiency?

Q.12 What is feedback in amplifier?

Q.13 What is the efficiency of class C power amplifier?

Q.14 Which feedback is used in oscillator?

Q.15 In which region transistor act as a amplifier?

Q.16 Define the term non-linear wave shaping circuit.

Q.17 Define switches. What are different types of switches?

Q.18 What is the output waveform of multivibrator?

Q.19 Which pin in IC 555 is used for threshold voltage?

Q.20 What is adjustable voltage regulator?

SECTION-C

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

Q.21 Distinguish between voltage and power amplifier.

Q.22 Define the terms:- power dissipation capability, distortion.

Q.23 What is the effect of negative feedback on input resistance?

Q.24 Why heat sink is important while using power amplifier?

Q.25 Compare series and parallel resonance circuit.

Q.26 Discuss the features of emitter follower circuit.

Q.27 Explain different types of feedback used in amplifiers.

Q.28 How an op-amp is used as integrator circuit?

Q.29 Explain the working of Colpitt oscillator.

Q.30 Discuss the operation of CVTs.

Q.31 How a 555 timer is used as monostable multivibrator?

Q.32 What are the advantages of double tuned amplifier over single tuned amplifier?

Q.33 Discuss the applications of operational amplifier.

Q.34 How diode is used as wave shaping circuit? Explain with neat sketches.

Q.35 Discuss the working principle of SMPS.

SECTION-D

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

Q.36 Discuss with the help of circuit diagram, the push pull amplifier. Describe advantages and disadvantages of push pull amplifier.

Q.37 Explain the working and construction of Wein Bridge Oscillator.

Q.38 Write a short note on any two:-

a) Piezoelectric crystal

b) Barkhausen criteria for oscillations

c) Hartley oscillator