Total No. of Printed Pages:2

SUBJECT CODE NO:- H-206
FACULTY OF SCIENCE AND TECHNOLOGY
S.E. (EC/ECT/IEC/E&C) (Sem-II)
Electronics Devices & Circuits – II
[OLD]

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B
1) Q.1 from sections A and Q.6 from section B – are compulsory.
2) Solve any two questions from remaining questions from each section.
3) Assume suitable data wherever necessary.

Section A

Q.1 Solve any five questions 10

a) How power is dissipated in power amplifier?
b) Draw the construction of IMPATT diode
c) Explain working of LASER diode in brief
d) What are ideal characteristics of op-amp?
e) Draw I/P, O/P wave forms for class AB amp
f) What is meant by push pull amplifier
g) Give the different applications of BARITT diode
h) Draw block diagram of operational amplifier

Q.2 a) Draw and explain V-I characteristics of Tunnel diode 08
b) What is meant by CCD? Explain 07

Q.3 a) Draw and explain transformer coupled amplifier 08
b) Class – output stage has an efficiency of 60% if the maximum collector dissipation of each transistor is .5w, calculate the d.c input power and the a.c output power. 07

Q.4 a) Derive dual input dual output AC analysis of operational Amplifier 08
b) Explain why pulse amplifier is needed draw its freq. domain response 07

Q.5 Write short note on (any three) 15

a) Gunn diode
b) Heat sink design
c) Class-c amplifier
d) Harmonic distortion in power amplifier

Section B

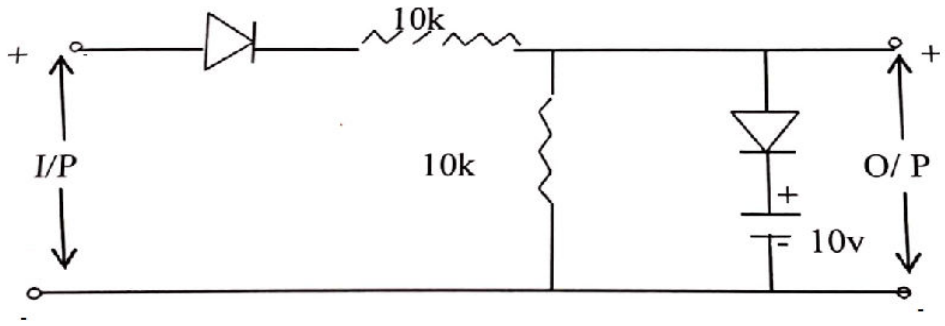
Q.6 Solve any five questions. 10

a) What is sweep generator?
b) What is clamper? Draw input and output waveform for positive clamper.
c) Explain in brief the role of commutating capacitor in self-biased binary.
d) Differentiate between symmetric and asymmetric triggering.
e) What is RC control blocking oscillator?

f) What are basic types of sweep generators?
g) What is diode control blocking oscillator?
h) What is the effect of positive clipper circuit?

Q.7 a) What is the effect of positive biasing in positive clamper circuit? 08
b) Draw the frequency response of Differentiator for sine wave input. 07

Q.8 a) Draw and explain AB Amplifier. 07
b) For the circuit shown below the input is 50 sin wt. draw the transfer characteristics and input output wave forms assuming ideal diodes 08



Q.9 a) Draw and explain Monostable multivibrator 08
b) Draw and explain Miller's time base generator. 07

Q.10 Write short note on (any three) 15
a) RC controlled blocking oscillator
b) Boot strap sweep generator
c) current time base generator
d) Integrator