Total No. of Printed Pages:2

SUBJECT CODE NO:- P-306
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E. (EC/ECT/IEC/E&C) Examination MAY/JUNE-2016
Electronics Devices & Circuits - II
(Revised)

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

"Please check whether you have got the right question paper."

N.B
i) Q.No.1 and Q.No.6 are compulsory.
ii) Solve any two questions from remaining questions in each section
iii) Figures to the right indicate full marks.

Section A

Q.1 Solve any five 10
i) Draw characteristics of tunnel diode with various regions.
ii) Differentiate between voltage and power amplifier.
iii) What is need of pulse amplifier?
iv) Draw block diagram of operational amplifier.
v) What are different applications of laser diode?
vi) Necessity of heat sink.
vii) What is the efficiency of class – B amplifier?
viii) Why level shifter circuit is needed in operational amplifier?

Q.2 a) Explain construction, working and applications of CCD. 08
b) Draw and explain frequency response of RC coupled amplifier. 07

Q.3 a) Derive DC analysis of operational amplifier. 08
b) What is pulse amplifier? Explain in detail. 07

Q.4 a) What are different configurations of differential amplifier? Explain any one in detail. 08
b) What is meant by Gunn Effect? Explain. 07

Q.5 a) Explain class – A amplifier and drive the expression for efficiency. 08
b) What is current mirror circuit? Why it is need in op –amp. 07

Section B

Q.6 Solve any five 10
i) Define differentiator with its output equation.
ii) Compare bistable & astable multivibrator.
iii) Define duty cycle.
iv) Draw shunt positive clippers with its waveforms.
v) What are various blocking oscillators? Draw any one.
vi) Draw simple current sweep generator.
vii) What is necessity of commutating capacitor?
viii) Explain general features of voltage time base generators.

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Q.7	a)	Draw and explain output of integrator for square waveform.	08
	b)	Explain positive clamper with 5V P-P with biasing voltage of 2V.	07
Q.8	a)	What is meant by monostable multivibrator? Explain with proper waveforms.	08
	b)	What is Schmitt trigger explain with its wave forms.	07
Q.9	a)	Explain RC control blocking oscillator with neat sketches.	08
	b)	Describe general features of time base generators.	07

Q.10 Short notes (Any Three) 15

i) Clampers
ii) Symmetrical triggering
iii) Miller time base generators.
iv) Diode control blocking oscillator.

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