Code No. 6038 / S

FACULTY OF ENGINEERING

B.E. 2/4 (EE/Inst.) I – Semester (Supplementary) Examination, July 2014

Subject : Electronic Engineering - I

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1		Distinguish between zener breakdown and avalanche breakdown.	3
2		What is the role of bleeder resistance in a rectifier circuit using an LC filter?	2
3		Explain the concept of base width modulation.	2
4		What do you understand by transistor biasing? Why is it necessary to bias a transistor?	3
5		Explain why E-MOSFET is called normally off MOSFET.	3
6		Draw the small signal equivalent model of FET.	3
7		Why do we need more than one stage of amplifiers in practical circuits?	2
8		State Miller's theorem.	2
9		Explain about the effect of emitter by pass capacitor on LF response.	3
10		Why coupling capacitors are not required in a transformer coupled amplifier?	2

PART – B (50 Marks)

11	a)	What is a rectifier? Derive the expression for ripple factor of a full-wave center-tapped rectifier.	6
	b)	Explain the V-I characteristics of a p-n junction diode using the current equation.	4
12	a)	Explain how h-parameters can be calculated from static characteristics.	6
	b)	Compare CB, CE and CC configuration.	4
13	a)	Explain the construction, operation and characteristics of a JFET with necessary Diagrams.	7
	b)	What is the difference between the enhancement and depletion MOSFETs.	3
14	a)	Explain the construction, operation and characteristics of UJT.	7
	b)	List out the differences between DIAC and TRIAC.	3
15	a)	Explain in detail about difference amplifier.	5
	b)	Discuss in detail various types of distortions in amplifiers.	5
16		Discuss the effect of cascading multiple stages of amplifier sections over gain and bandwidth of the overall amplifier Derive the expressions for overall gain for n-stage cascaded system.	10
17		Write short notes on :	
	a)	Transistor as an amplifier	5
	b)	Transformer coupled amplifier	5

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