GPCET
Pioneering Innovative Education

G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AT), KURNOOL
B.Tech – IV-II Semester MID I Examinations
Branch: ECE

SET 1

Sub: RF IC (13A04804) **Date: 16-02-2018**
Time: 1½ Hrs. **Max Marks: 30M**

Question 1 is compulsory. Answer one from 2 or 3 and one from 4 or 5.

S.No.		Questions	Marks	Unit	CO	Cognitive Level
1	a)	What are the conditions for resonance in parallel RLC networks ?	2	1	C410.1	Remember
	b)	Draw the circuits for tuned amplifier.	2	2	C410.1	Apply
	c)	What is the image resistance?	2	1	C410.1	Remember
	d)	Define the reflection coefficient?	2	1	C410.2	Remember
	e)	Difference between lumped and distributed parameters?	2	2	C410.2	Understand
2		Explain in detail the basic architecture of Radio Frequency system?	10	1	C410.1	Understand
3		Explain in detail pi and T- matching of a network?	10	1	C410.1	Understand
4		Explain the open circuit time constant to estimate the band width of a given circuit With examples.	10	2	C410.2	Understand
5		Draw & Analyze the circuit diagram for CS- amplifier for a single tuned load & the Cascaded Amplifier.	10	2	C410.2	Understand& Apply

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SET 2

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S.No.		Questions	Marks	Unit	CO	Cognitive Level
1	a)	State the Maximum power transfer theorem & its conditions?	2	1	C410.1	Remember
	b)	what is the relation between the gain and bandwidth factor?	2	1	C410.1	Remember
	c)	Draw the circuits for tuned amplifier.	2	2	C410.2	Apply
	d)	What are the conditions for resonance in parallel RLC networks ?	2	1	C410.2	Remember
	e)	How do you know the accuracy of OCTC & SCTC methods?	2	2	C410.2	Understand
2		Design and convert Series to parallel RL & RC network Transformations?	10	1	C410.1	Understand
3		Explain in detail the basic architecture of Radio Frequency system?	10	1	C410.1	Understand
4		Prove that a long channel MOS device transconductance depends only on the square root of bias current?	10	2	C410.2	Apply
5		Explain the Short circuit time constant to estimate the band width of a given circuit. With examples ?	10	2	C410.2	Understand

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SET 3

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Question 1 is compulsory. Answer one from 2 or 3 and one from 4 or 5.

S.No.		Questions	Marks	Unit	CO	Cognitive Level
1	a)	What is reflection coefficient in RF system?	2	1	C410.1	Analyze
	b)	What are the conditions for resonance in parallel RLC networks ?	2	1	C410.1	Remember
	c)	How do you know the accuracy of OCTC & SCTC methods?	2	2	C410.2	Understand
	d)	State the relation between B.W & Rise time for Ist order systems?	2	2	C410.2	Understand
	e)	What is LNA & PA?	2	1	C410.1	Remember
2		Explain in detail the basic architecture of Radio Frequency system?	10	1	C410.1	Understand
3		Explain in detail pi and T- matching of a network?	10	1	C410.1	Understand
4		Prove that a long channel MOS device transconductance depends only on the square root of bias current?	5	2	C410.2	Remember
5		Explain the Short circuit time constant to estimate the band width of a given circuit. With examples ?	10	2	C410.2	Understand

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SET 4

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S.No.		Questions	Marks	Unit	CO	Cognitive Level
1	a)	What are the conditions for resonance in parallel RLC network?	2	1	C410.1	Remember
	b)	What is the relation between the gain and bandwidth factor?	2	1	C410.1	Remember
	c)	What is figure of merit for a Mos device?	2	2	C410.2	Analyze
	d)	) How do you know the accuracy of OCTC & SCTC methods?	2	2	C410.2	Remember
	e)	What is reflection coefficient in RF system?	2	2	C410.2	Remember
2		Design and convert Series to parallel RL & RC network Transformations?	10	1	C410.1	Understand
3		Explain in detail the basic architecture of Radio Frequency system?	10	1	C410.1	Understand
4		Prove that a long channel MOS device transconductance depends only on the square root of bias current?	10	2	C410.2	Analyze
5		Explain the circuit diagram for CS- amplifier for a single tuned load & the Cascaded Amplifier.	10	2	C410.2	Understand

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