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B.E. (Full Time) DEGREE END SEMESTER EXAMINATION NOV/DEC 2012.

ELECTRONICS AND COMMUNICATION ENGINEERING

FOURTH SEMESTER

EC 9252 ELECTRONICS CIRCUITS -II

(Regulation 2008)

TIME ;3 HOURS

MAX.MARKS 100

ANSWER ALL QUESTIONS

PART –A (10 x2 =20 Marks)

1. Write an expression for voltage gain of a feedback amplifier having forward gain A and feed back factor B .
2. What is the need of frequency compensation in transistor amplifiers?
3. Write the two barkhausn criteria to be satisfied to generate oscillations.
4. Draw the circuit of Armstrong oscillator and mention its application.
5. What are the salient features of tuned amplifiers?
6. Mention the advantages of stagger tuning in amplifiers..
7. Define the parameter that affects the switching speed of transistors.
8. Draw the input output characteristics of Schmitt trigger .
9. Define ripple factor and write its value for full wave rectifier.
10. What are the elements used in D.C – D.C converters?.

PART –B (5 x16 =80 Marks)

11. Draw the block diagram representation of four feedback technologies and compare its performance on various gains and impedances.

12. a) i) What is Wein's network? Deduce the expression for its attenuation at zero phase shift between input and output. (10)
ii) Explain its use to generate stable sinusoidal signal.. (6)

(OR)

- b) i) Draw the circuit of colpitt's oscillator and derive the expression for its frequency of oscillations. (10)
ii) How is it modified to work as clapp's oscillator. What is its application? (6)

13. a) Draw the circuit of a single tuned amplifier and derive expression for its gain and bandwidth .and hence comment on its stability.

(OR)

- b) Discuss with relevant theory, how the stability of tuned amplifiers is achieved using neutralization techniques.

14. a) i) Explain the working of mono stable multi vibrator with relevant waveforms. (10)
ii) Derive the expression for varying its pulse width at the output. (6)

(OR)

- b) i) Illustrate the principle of generating sweep wave forms. (6)
ii) Discuss a method to generate linear sweep wave form.. (10)

- 15.a) i) Explain the working of a full wave bridge rectifier (8)
ii) Draw the circuit of an electronic series voltage regulator and explain how it regulates the output of bridge rectifier.. (8)

(OR)

- b) i) Discuss the construction , working ,and characteristics of IGBT. (8)
ii) With the help of a block diagram explain the working of SMPS. (8)