



**B.E DEGREE EXAMINATIONS: MAY2015**

(Regulation 2009)

Fourth Semester

**ELECTRONICS AND COMMUNICATION ENGINEERING**

ECE106: Electronic Circuits-II

**Time: Three Hours**

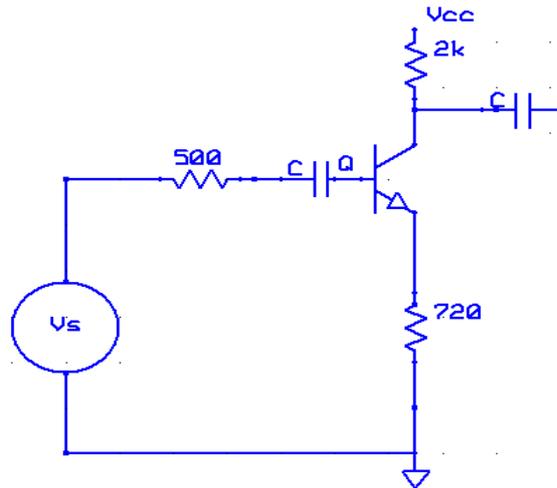
**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Feedback in an amplifier always help to
  - a) Control its output
  - b) Increase its gain
  - c) Decrease input impedance
  - d) Stabilize gain
2. An amplifier with no feedback has a gain-bandwidth product of 4 MHz. Its closed loop gain is 40. The new bandwidth is
  - a) 100 KHz
  - b) 160 MHz
  - c) 10 KHz
  - d) 200 KHz
3. For sustained oscillations, the loop gain should be
  - a) Zero
  - b) Less than unity
  - c) Greater than unity
  - d) Infinite
4. The primary advantage of crystal oscillator is that
  - a) Oscillate at any frequency
  - b) High output voltage
  - c) Frequency is constant
  - d) Very low dc supply voltage
5. \_\_\_\_\_ amplifier is used to amplify RF signal.
  - a) Audio frequency
  - b) Push pull
  - c) Video
  - d) Tuned voltage
6. A tuned circuit has resonant frequency of 1 MHz. To get a bandwidth of 20 KHz, Q factor is
  - a) 20
  - b) 50
  - c) 100
  - d) 500
7. A triangular waveform can be generated by
  - a) Differentiating a square wave
  - b) Differentiating a sine wave





22. a) Explain RC phase shift oscillator and derive the expression for frequency of Oscillation.

(OR)

- b) Explain in detail about Hartley and Colpitts oscillators.

23. a) Explain and Derive the bandwidth of double tuned amplifier

(OR)

- b) Design a single tuned amplifier to operate at 255 KHz with a bandwidth of 15 KHz given the following specifications.  $g_m = 0.05$ ,  $h_{fe} = 250$ ,  $C_{be} = 750\text{ pF}$ ,  $R_L = 100\ \Omega$ ,  $Q = 80$ ,  $r_i = 4.3\text{ K}$

24. a) Explain in detail about monostable multivibrator and determine its pulse width.

(OR)

- b) Describe and illustrate with necessary waveforms the operation of RC differentiator and integrator.

25. a) Discuss about RC controlled astable blocking oscillator in detail.

(OR)

- b) Explain in detail about current time base generators.

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