

Code No: 54020

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

II B.Tech. II Sem., II Mid-Term Examinations, April – 2014

ELECTRONIC CIRCUIT ANALYSIS

Objective Exam

Name: \_\_\_\_\_ Hall Ticket No. 

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I Choose the correct alternative:**

1. The disadvantage of –ve feedback amplifier is \_\_\_\_\_ [     ]  
A) it reduces gain    B) increases gain    C) stabilizes gain    D) decreases distortion
2. The loop gain of oscillator is  $A\beta =$  \_\_\_\_\_ [     ]  
A) 1    B)  $>1$     C)  $<1$     D) none
3. In \_\_\_\_\_ amplifier, the operating point is selected near to cut off region [     ]  
A) class-A    B) class-B    C) class-C    D) class-D
4. Positive feedback is used in \_\_\_\_\_. [     ]  
A) class-A    B) LC oscillator    C) class-B    D) common base
5. A high –Q-tuned circuit in tuned amplifier permits to have high \_\_\_\_\_ [     ]  
A) Selectivity    B) Fidelity    C) sensitivity    D) None
6. The desensitivity factor is given by \_\_\_\_\_. [     ]  
A)  $\frac{1}{A + A\beta}$     B)  $\frac{A}{1 + A\beta}$     C)  $\frac{1}{1 + A\beta}$     D)  $1 + A\beta$
7. The frequency of oscillation of wein bridge oscillator is given by \_\_\_\_\_ [     ]  
A)  $\frac{1}{2\pi RC}$     B)  $\frac{1}{2RC}$     C)  $2\pi RC$     D)  $2RC$
8. The unit of thermal resistance is \_\_\_\_\_. [     ]  
A)  $k / \omega$     B)  $\frac{\Omega}{W}$     C) degrees Centigrade    D)  $m^2k / \omega$
9. Cross over distortion is present in \_\_\_\_\_ amplifier. [     ]  
A) class-A    B) class-B    C) class-C    D) class-AB
10. \_\_\_\_\_ oscillator is very stable in generation of frequency. [     ]  
A) LC oscillator    B) RC oscillator    C) crystal    D) wein bridge oscillator

Cont....2

**II Fill in the blanks:**

11. For power transistors, thermal resistance is given from \_\_\_\_\_
12. The main function of transformer used in output of power amplifier is to \_\_\_\_\_ the load resistance to output resistance..
13. The 3-dB bandwidth (Hz) of a parallel tuned circuits is given by \_\_\_\_\_
14. The value of input resistance for ideal current amplifier is \_\_\_\_\_
15. The circuit giving the larger value of \_\_\_\_\_ has more stable oscillator frequency.
16. If distortion is present the output power at the fundamental frequency is given by \_\_\_\_\_
17. The feedback signal is \_\_\_\_\_ in voltage shunt feedback amplifier
18. In amplitude stabilization of oscillators \_\_\_\_\_ component is used with +ve temperature coefficient.
19. In voltage shunt feedback amplifier the input resistance with feedback \_\_\_\_\_ and output resistance \_\_\_\_\_
20. To minimize cross over distortion \_\_\_\_\_ amplifier is used

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Set No. 2

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I Choose the correct alternative:**

1. Positive feedback is used in \_\_\_\_\_. [     ]  
A) class-A                      B) LC oscillator                      C) class-B                      D) common base
2. A high –Q-tuned circuit in tuned amplifier permits to have high \_\_\_\_\_. [     ]  
A) Selectivity                      B) Fidelity                      C) sensitivity                      D) None
3. The desensitivity factor is given by \_\_\_\_\_. [     ]  
A)  $\frac{1}{A + A\beta}$                       B)  $\frac{A}{1 + A\beta}$                       C)  $\frac{1}{1 + A\beta}$                       D)  $1 + A\beta$
4. The frequency of oscillation of wein bridge oscillator is given by \_\_\_\_\_. [     ]  
A)  $\frac{1}{2\pi RC}$                       B)  $\frac{1}{2RC}$                       C)  $2\pi RC$                       D)  $2RC$
5. The unit of thermal resistance is \_\_\_\_\_. [     ]  
A)  $k / \omega$                       B)  $\frac{\Omega}{W}$                       C) degrees Centigrade                      D)  $m^2 k / \omega$
6. Cross over distortion is present in \_\_\_\_\_ amplifier. [     ]  
A) class-A                      B) class-B                      C) class-C                      D) class-AB
7. \_\_\_\_\_ oscillator is very stable in generation of frequency. [     ]  
A) LC oscillator                      B) RC oscillator                      C) crystal                      D) wein bridge oscillator
8. The disadvantage of –ve feedback amplifier is \_\_\_\_\_. [     ]  
A) it reduces gain                      B) increases gain                      C) stabilizes gain                      D) decreases distortion
9. The loop gain of oscillator is  $A\beta =$  \_\_\_\_\_. [     ]  
A) 1                      B)  $>1$                       C)  $<1$                       D) none
10. In \_\_\_\_\_ amplifier, the operating point is selected near to cut off region [     ]  
A) class- A                      B) class-B                      C) class-C                      D) class-D

Cont....2

**II Fill in the blanks:**

11. The value of input resistance for ideal current amplifier is \_\_\_\_\_
12. The circuit giving the larger value of \_\_\_\_\_ has more stable oscillator frequency.
13. If distortion is present the output power at the fundamental frequency is given by \_\_\_\_\_
14. The feedback signal is \_\_\_\_\_ in voltage shunt feedback amplifier
15. In amplitude stabilization of oscillators \_\_\_\_\_ component is used with +ve temperature coefficient.
16. In voltage shunt feedback amplifier the input resistance with feedback \_\_\_\_\_ and output resistance \_\_\_\_\_
17. To minimize cross over distortion \_\_\_\_\_ amplifier is used
18. For power transistors, thermal resistance is given from \_\_\_\_\_
19. The main function of transformer used in output of power amplifier is to \_\_\_\_\_ the load resistance to output resistance..
20. The 3-dB bandwidth (Hz) of a parallel tuned circuits is given by \_\_\_\_\_

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Set No. 3

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I Choose the correct alternative:**

1. The desensitivity factor is given by \_\_\_\_\_. [      ]  
A)  $\frac{1}{A + A\beta}$       B)  $\frac{A}{1 + A\beta}$       C)  $\frac{1}{1 + A\beta}$       D)  $1 + A\beta$
2. The frequency of oscillation of wein bridge oscillator is given by \_\_\_\_\_. [      ]  
A)  $\frac{1}{2\pi RC}$       B)  $\frac{1}{2RC}$       C)  $2\pi RC$       D)  $2RC$
3. The unit of thermal resistance is \_\_\_\_\_. [      ]  
A)  $k / \omega$       B)  $\frac{\Omega}{W}$       C) degrees Centigrade      D)  $m^2 k / \omega$
4. Cross over distortion is present in \_\_\_\_\_ amplifier. [      ]  
A) class-A      B) class-B      C) class-C      D) class-AB
5. \_\_\_\_\_ oscillator is very stable in generation of frequency. [      ]  
A) LC oscillator      B) RC oscillator      C) crystal      D) wein bridge oscillator
6. The disadvantage of –ve feedback amplifier is \_\_\_\_\_. [      ]  
A) it reduces gain      B) increases gain      C) stabilizes gain      D) decreases distortion
7. The loop gain of oscillator is  $A\beta =$  \_\_\_\_\_. [      ]  
A) 1      B)  $>1$       C)  $<1$       D) none
8. In \_\_\_\_\_ amplifier, the operating point is selected near to cut off region [      ]  
A) class- A      B) class-B      C) class-C      D) class-D
9. Positive feedback is used in \_\_\_\_\_. [      ]  
A) class-A      B) LC oscillator      C) class-B      D) common base
10. A high –Q-tuned circuit in tuned amplifier permits to have high \_\_\_\_\_. [      ]  
A) Selectivity      B) Fidelity      C) sensitivity      D) None

Cont....2

**II Fill in the blanks:**

11. If distortion is present the output power at the fundamental frequency is given by \_\_\_\_\_
12. The feedback signal is \_\_\_\_\_ in voltage shunt feedback amplifier
13. In amplitude stabilization of oscillators \_\_\_\_\_ component is used with +ve temperature coefficient.
14. In voltage shunt feedback amplifier the input resistance with feedback \_\_\_\_\_ and output resistance \_\_\_\_\_
15. To minimize cross over distortion \_\_\_\_\_ amplifier is used
16. For power transistors, thermal resistance is given from \_\_\_\_\_
17. The main function of transformer used in output of power amplifier is to \_\_\_\_\_ the load resistance to output resistance..
18. The 3-dB bandwidth (Hz) of a parallel tuned circuits is given by \_\_\_\_\_
19. The value of input resistance for ideal current amplifier is \_\_\_\_\_
20. The circuit giving the larger value of \_\_\_\_\_ has more stable oscillator frequency.

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Set No. 4

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Name: \_\_\_\_\_ Hall Ticket No. 

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I Choose the correct alternative:**

1. The unit of thermal resistance is \_\_\_\_\_. [      ]  
A)  $k / \omega$                       B)  $\frac{\Omega}{W}$                       C) degrees Centigrade                      D)  $m^2 k / \omega$
2. Cross over distortion is present in \_\_\_\_\_ amplifier. [      ]  
A) class-A                      B) class-B                      C) class-C                      D) class-AB
3. \_\_\_\_\_ oscillator is very stable in generation of frequency. [      ]  
A) LC oscillator                      B) RC oscillator                      C) crystal                      D) wein bridge oscillator
4. The disadvantage of –ve feedback amplifier is \_\_\_\_\_. [      ]  
A) it reduces gain                      B) increases gain                      C) stabilizes gain                      D) decreases distortion
5. The loop gain of oscillator is  $A\beta =$  \_\_\_\_\_. [      ]  
A) 1                      B)  $>1$                       C)  $<1$                       D) none
6. In \_\_\_\_\_ amplifier, the operating point is selected near to cut off region [      ]  
A) class- A                      B) class-B                      C) class-C                      D) class-D
7. Positive feedback is used in \_\_\_\_\_. [      ]  
A) class-A                      B) LC oscillator                      C) class-B                      D) common base
8. A high –Q-tuned circuit in tuned amplifier permits to have high \_\_\_\_\_. [      ]  
A) Selectivity                      B) Fidelity                      C) sensitivity                      D) None
9. The desensitivity factor is given by \_\_\_\_\_. [      ]  
A)  $\frac{1}{A + A\beta}$                       B)  $\frac{A}{1 + A\beta}$                       C)  $\frac{1}{1 + A\beta}$                       D)  $1 + A\beta$
10. The frequency of oscillation of wein bridge oscillator is given by \_\_\_\_\_. [      ]  
A)  $\frac{1}{2\pi RC}$                       B)  $\frac{1}{2RC}$                       C)  $2\pi RC$                       D)  $2RC$

Cont....2

**II Fill in the blanks:**

11. In amplitude stabilization of oscillators \_\_\_\_\_ component is used with +ve temperature coefficient.
12. In voltage shunt feedback amplifier the input resistance with feedback \_\_\_\_\_ and output resistance \_\_\_\_\_
13. To minimize cross over distortion \_\_\_\_\_ amplifier is used
14. For power transistors, thermal resistance is given from \_\_\_\_\_
15. The main function of transformer used in output of power amplifier is to \_\_\_\_\_ the load resistance to output resistance..
16. The 3-dB bandwidth (Hz) of a parallel tuned circuits is given by \_\_\_\_\_
17. The value of input resistance for ideal current amplifier is \_\_\_\_\_
18. The circuit giving the larger value of \_\_\_\_\_ has more stable oscillator frequency.
19. If distortion is present the output power at the fundamental frequency is given by \_\_\_\_\_
20. The feedback signal is \_\_\_\_\_ in voltage shunt feedback amplifier