

Code No: 58073

Set No. 1

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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

**MICROWAVE ENGINEERING**

**Objective Exam**

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

						A				
--	--	--	--	--	--	---	--	--	--	--

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

**I. Choose the correct alternative:**

1. The cavity Magnetron use strapping to [      ]  
A) Prevent mode jumping      B) prevent cathode back heating  
C) ensure bunching      D) improve the phase focussing
2. The primary purpose of Helix in TWT is [      ]  
A) Prevent electron beam spreading in the long tube      B) reduce axial velocity of the RF field  
C) ensure broad band operation      D) reduce the noise figure
3. The attenuator in the TWT is used for [      ]  
A) help focusing      B) Prevent oscillations      C) Prevent saturation      D) increase gain
4. The biggest advantage of the TRAPATT diode over the IMPATT diode is its [      ]  
A) Lower Noise      B) Higher Efficiency      C) Ability to operate at high frequency      D) none
5. The transferred –electron bulk effect occurs in [      ]  
A) germanium      B) silicon      C) gallium arsenide      D) metal semiconductor junctions
6. Which microwave tube uses buncher and catcher cavities [      ]  
A) Magnetron      B) klystron      C) reflex klystron      D) TWT
7. The major advantage of TWT over a KLYSTRON lies in its [      ]  
A) narrow bandwidth      B) high SWR      C) higher gain      D) NONE
8. Which is not a TWT slow wave structure? [      ]  
A) coupled cavity      (B) Ring Bar      (C) Helix      (D) Periodic permanent magnet
9. Backward wave oscillator is based on [      ]  
A) TWT      (B) Magnetron      (C) klystron      (D) none
10. Which is not an application of microwave cavities [      ]  
A) detector      B) band pass filter      (C) ) band stop filter      (D) none

**Cont.....2**

**II Fill in the Blanks:**

11. \_\_\_\_\_ is the FET at microwave frequencies.
12. \_\_\_\_\_ is used for the measurement of low and medium ranges of microwave power.
13. If the Q of a single stage tuned amplifier is doubled then its bandwidth will become\_\_\_\_\_
14. In TRAPATT diode, TRAPATT stands for\_\_\_\_\_
15. Microwave heating is used in industrial processes for \_\_\_\_\_ the products.
16. Standard mismatching in microwave circuits have SWR from \_\_\_\_\_to\_\_\_\_\_
17. Major source of thermal noise in a microwave system is\_\_\_\_\_
18. Microwave Link repeaters are typically 50Km apart because of the\_\_\_\_\_
19. Major drawback of IMPATT diode is\_\_\_\_\_
20. A \_\_\_\_\_ Diode is suitable for use as a microwave switch.

Code No: 58073

Set No. 2

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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

**MICROWAVE ENGINEERING**

**Objective Exam**

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

						A				
--	--	--	--	--	--	---	--	--	--	--

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

**I. Choose the correct alternative:**

1. The biggest advantage of the TRAPATT diode over the IMPATT diode is its [      ]  
A) Lower Noise      B) Higher Efficiency      C) Ability to operate at high frequency      D) none
2. The transferred –electron bulk effect occurs in [      ]  
A) germanium      B) silicon      C) gallium arsenide      D) metal semiconductor junctions
3. Which microwave tube uses buncher and catcher cavities [      ]  
A) Magnetron      B) klystron      C) reflex klystron      D) TWT
4. The major advantage of TWT over a KLYSTRON lies in its [      ]  
A) narrow bandwidth      B) high SWR      C) higher gain      D) NONE
5. Which is not a TWT slow wave structure? [      ]  
A) coupled cavity      (B) Ring Bar      (C) Helix      (D) Periodic permanent magnet
6. Backward wave oscillator is based on [      ]  
A) TWT      (B) Magnetron      (C) klystron      (D) none
7. Which is not an application of microwave cavities [      ]  
A) detector      B) band pass filter      (C) ) band stop filter      (D) none
8. The cavity Magnetron use strapping to [      ]  
A) Prevent mode jumping      B) prevent cathode back heating  
C) ensure bunching      D) improve the phase focussing
9. The primary purpose of Helix in TWT is [      ]  
A) Prevent electron beam spreading in the long tube      B) reduce axial velocity of the RF field  
C) ensure broad band operation      D) reduce the noise figure
10. The attenuator in the TWT is used for [      ]  
A) help focusing      B) Prevent oscillations      C) Prevent saturation      D) increase gain

**II Fill in the Blanks:**

11. In TRAPATT diode, TRAPATT stands for\_\_\_\_\_
12. Microwave heating is used in industrial processes for \_\_\_\_\_ the products.
13. Standard mismatching in microwave circuits have SWR from \_\_\_\_\_ to\_\_\_\_\_
14. Major source of thermal noise in a microwave system is\_\_\_\_\_
15. Microwave Link repeaters are typically 50Km apart because of the\_\_\_\_\_
16. Major drawback of IMPATT diode is\_\_\_\_\_
17. A \_\_\_\_\_ Diode is suitable for use as a microwave switch.
18. \_\_\_\_\_ is the FET at microwave frequencies.
19. \_\_\_\_\_ is used for the measurement of low and medium ranges of microwave power.
20. If the Q of a single stage tuned amplifier is doubled then its bandwidth will become\_\_\_\_\_

**-oOo-**

Code No: 58073

Set No. 3

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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

**MICROWAVE ENGINEERING**

**Objective Exam**

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

						A				
--	--	--	--	--	--	---	--	--	--	--

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

**I. Choose the correct alternative:**

1. Which microwave tube uses buncher and catcher cavities [      ]  
A) Magnetron      B) klystron      C) reflex klystron      D) TWT
2. The major advantage of TWT over a KLYSTRON lies in its [      ]  
A) narrow bandwidth      B) high SWR      C) higher gain      D) NONE
3. Which is not a TWT slow wave structure? [      ]  
A) coupled cavity      (B) Ring Bar      (C) Helix      (D) Periodic permanent magnet
4. Backward wave oscillator is based on [      ]  
A) TWT      (B) Magnetron      (C) klystron      (D) none
5. Which is not an application of microwave cavities [      ]  
A) detector      B) band pass filter      (C) ) band stop filter      (D) none
6. The cavity Magnetron use strapping to [      ]  
A) Prevent mode jumping      B) prevent cathode back heating  
C) ensure bunching      D) improve the phase focussing
7. The primary purpose of Helix in TWT is [      ]  
A) Prevent electron beam spreading in the long tube      B) reduce axial velocity of the RF field  
C) ensure broad band operation      D) reduce the noise figure
8. The attenuator in the TWT is used for [      ]  
A) help focusing      B) Prevent oscillations      C) Prevent saturation      D) increase gain
9. The biggest advantage of the TRAPATT diode over the IMPATT diode is its [      ]  
A) Lower Noise      B) Higher Efficiency      C) Ability to operate at high frequency      D) none
10. The transferred –electron bulk effect occurs in [      ]  
A) germanium      B) silicon      C) gallium arsenide      D) metal semiconductor junctions

**II Fill in the Blanks:**

11. Standard mismatching in microwave circuits have SWR from \_\_\_\_\_ to \_\_\_\_\_
12. Major source of thermal noise in a microwave system is \_\_\_\_\_
13. Microwave Link repeaters are typically 50Km apart because of the \_\_\_\_\_
14. Major drawback of IMPATT diode is \_\_\_\_\_
15. A \_\_\_\_\_ Diode is suitable for use as a microwave switch.
16. \_\_\_\_\_ is the FET at microwave frequencies.
17. \_\_\_\_\_ is used for the measurement of low and medium ranges of microwave power.
18. If the Q of a single stage tuned amplifier is doubled then its bandwidth will become \_\_\_\_\_
19. In TRAPATT diode, TRAPATT stands for \_\_\_\_\_
20. Microwave heating is used in industrial processes for \_\_\_\_\_ the products.

Code No: 58073

Set No. 4

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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

**MICROWAVE ENGINEERING**

**Objective Exam**

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

						A				
--	--	--	--	--	--	---	--	--	--	--

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

**I. Choose the correct alternative:**

1. Which is not a TWT slow wave structure? [      ]  
A) coupled cavity (B) Ring Bar (C) Helix (D) Periodic permanent magnet
2. Backward wave oscillator is based on [      ]  
A) TWT (B) Magnetron (C) klystron (D) none
3. Which is not an application of microwave cavities [      ]  
A) detector (B) band pass filter (C) band stop filter (D) none
4. The cavity Magnetron use strapping to [      ]  
A) Prevent mode jumping (B) prevent cathode back heating  
C) ensure bunching (D) improve the phase focussing
5. The primary purpose of Helix in TWT is [      ]  
A) Prevent electron beam spreading in the long tube (B) reduce axial velocity of the RF field  
C) ensure broad band operation (D) reduce the noise figure
6. The attenuator in the TWT is used for [      ]  
A) help focusing (B) Prevent oscillations (C) Prevent saturation (D) increase gain
7. The biggest advantage of the TRAPATT diode over the IMPATT diode is its [      ]  
A) Lower Noise (B) Higher Efficiency (C) Ability to operate at high frequency (D) none
8. The transferred –electron bulk effect occurs in [      ]  
A) germanium (B) silicon (C) gallium arsenide (D) metal semiconductor junctions
9. Which microwave tube uses buncher and catcher cavities [      ]  
A) Magnetron (B) klystron (C) reflex klystron (D) TWT
10. The major advantage of TWT over a KLYSTRON lies in its [      ]  
A) narrow bandwidth (B) high SWR (C) higher gain (D) NONE

**Cont.....2**

**II Fill in the Blanks:**

11. Microwave Link repeaters are typically 50 Km apart because of the \_\_\_\_\_
12. Major drawback of IMPATT diode is \_\_\_\_\_
13. A \_\_\_\_\_ Diode is suitable for use as a microwave switch.
14. \_\_\_\_\_ is the FET at microwave frequencies.
15. \_\_\_\_\_ is used for the measurement of low and medium ranges of microwave power.
16. If the Q of a single stage tuned amplifier is doubled then its bandwidth will become \_\_\_\_\_
17. In TRAPATT diode, TRAPATT stands for \_\_\_\_\_
18. Microwave heating is used in industrial processes for \_\_\_\_\_ the products.
19. Standard mismatching in microwave circuits have SWR from \_\_\_\_\_ to \_\_\_\_\_
20. Major source of thermal noise in a microwave system is \_\_\_\_\_