Code No: A109210203 **Set No. 1**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
ELECTRONIC DEVICES AND CIRCUITS
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. If Av<1 & Ai is very large, hence it has very ____ input impedance and _____ output impedance.[ ]
(a) High, High (b) Low, High (c) Low, Low (d) High, Low

2. The properties of JFET resemble those of _________ [ ]
(a) Thermionic Valves (b) NPN transistor (c) PNP transistors (d) UJT

3. The ranges of ON state resistance of FET is from ______Ω to ______ Ω. [ ]
(a) 10 to 100 (b) 100 to 1K (c) 100 to 100K (d) 10 to 1K

4. The DC input resistance of a JFET is _______ Assume, I_{GSS}= 5pA at 10V. [ ]
(a) $4X10^{12}$ (b) $2X10^{12}$ (c) $20X10^{-12}$ (d) $5X10^{-12}$

5. Varactor diodes are used in ______ frequency circuits. [ ]
(a) Audio (b) High (c)Low (d) None

6. The advantage of FET is _______. [ ]
(a) High power gain (b) Less Noisy (c) Compact Size (d) All the above

7. When N-Channel depletion type MOSFET is used in enhanced mode, _________. [ ]
(a) The gate will be +ve. (b) The gate will be –ve. (c) gate will be at ground level. (d) None.

8. FET is popularly referred as ________________. [ ]
(a) Voltage variable resistor (b) Voltage dependent resistor (c) Both (d) None

9. A CD amplifier uses FET having r_d= 300K, μ=15 & load resistance as 300K, the output impedance is [ ]
(a) 0.789 (b) 0.98 (c) 0.882 (d) 0.682

10. The problem of thermal run away ____ in case of FET. [ ]
(a) Increases (b) Decreases (c) Doesn’t exist (d) None.

Cont……2

II Fill in the Blanks:

11. h-parameters valid for _______ region of frequency range.

12. Conversion efficiency of an amplifier circuit is defined as ____

13. The MOSFET that can be used in both enhancement mode & depletion mode is ______

14. The voltage V_{DS} at which I_D tends to level off in JFET is called ________

15. The disadvantage of JFET amplifier circuits is ____ as compared to BJT amplifier circuits.

16. For an N-channel silicon FET, with $a=3X10^{-4}$ & $N_D=10^{15}$ electrons/cm^3. The pinch off voltage is ___

17. The high frequency gain of CS amplifier is limited by _________.

18. Varactor diode operates in _________.

19. The multiplication factor in Avalanche photo diode is ___________

20. The relation between μ, r_d & g_m for JFET is ___________.

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Code No: A109210203 **Set No. 2**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
ELECTRONIC DEVICES AND CIRCUITS
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 DC input resistance of a JFET is _______ Assume, I_{GSS}= 5pA at 10V. [ ]
(a) $4X10^{12}$ (b) $2X10^{12}$ (c) $20X10^{-12}$ (d) $5X10^{-12}$

2. Varactor diodes are used in ______ frequency circuits. [ ]
(a) Audio (b) High (c)Low (d) None

3. The advantage of FET is _______. [ ]
(a) High power gain (b) Less Noisy (c) Compact Size (d) All the above

4. When N-Channel depletion type MOSFET is used in enhanced mode, _________. [ ]
(a) The gate will be +ve. (b) The gate will be –ve. (c) gate will be at ground level. (d) None.

5. FET is popularly referred as ________________. [ ]
(a) Voltage variable resistor (b) Voltage dependent resistor (c) Both (d) None

6. A CD amplifier uses FET having r_d= 300K, μ=15 & load resistance as 300K, the output impedance is [ ]
(a) 0.789 (b) 0.98 (c) 0.882 (d) 0.682

7. The problem of thermal run away ____ in case of FET. [ ]
(a) Increases (b) Decreases (c) Doesn't exist (d) None.

8. If Av<1 & Ai is very large, hence it has very ____ input impedance and _____ output impedance.[ ]
(a) High, High (b) Low, High (c) Low, Low (d) High, Low

9. The properties of JFET resemble those of _________ [ ]
(a) Thermionic Valves (b) NPN transistor (c) PNP transistors (d) UJT

10. The ranges of ON state resistance of FET is from ______Ω to ______ Ω. [ ]
(a) 10 to 100 (b) 100 to 1K (c) 100 to 100K (d) 10 to 1K

Cont……2

II Fill in the Blanks:

11. The voltage V_{DS} at which I_D tends to level off in JFET is called ________

12. The disadvantage of JFET amplifier circuits is ____ as compared to BJT amplifier circuits.

13. For an N-channel silicon FET, with $a=3X10^{-4}$ & $N_D=10^{15}$ electrons/cm^3. The pinch off voltage is ___

14. The high frequency gain of CS amplifier is limited by _________.

15. Varactor diode operates in _________.

16. The multiplication factor in Avalanche photo diode is ___________

17. The relation between μ, r_d & g_m for JFET is ___________.

18. h-parameters valid for _______ region of frequency range.

19. Conversion efficiency of an amplifier circuit is defined as ____

20. The MOSFET that can be used in both enhancement mode & depletion mode is ______

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Code No: A109210203 **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
ELECTRONIC DEVICES AND CIRCUITS
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 advantage of FET is _______. [ ]
(a) High power gain (b) Less Noisy (c) Compact Size (d) All the above

2. When N-Channel depletion type MOSFET is used in enhanced mode, _________. [ ]
(a) The gate will be +ve. (b) The gate will be –ve. (c) gate will be at ground level. (d) None.

3. FET is popularly referred as ________________. [ ]
(a) Voltage variable resistor (b) Voltage dependent resistor (c) Both (d) None

4. A CD amplifier uses FET having r_d= 300K, μ=15 & load resistance as 300K, the output impedance is [ ]
(a) 0.789 (b) 0.98 (c) 0.882 (d) 0.682

5. The problem of thermal run away ____ in case of FET. [ ]
(a) Increases (b) Decreases (c) Doesn't exist (d) None.

6. If Av<1 & Ai is very large, hence it has very ____ input impedance and _____ output impedance.[ ]
(a) High, High (b) Low, High (c) Low, Low (d) High, Low

7. The properties of JFET resemble those of _________ [ ]
(a) Thermionic Valves (b) NPN transistor (c) PNP transistors (d) UJT

8. The ranges of ON state resistance of FET is from ______Ω to ______ Ω. [ ]
(a) 10 to 100 (b) 100 to 1K (c) 100 to 100K (d) 10 to 1K

9. The DC input resistance of a JFET is _______ Assume, I_{GSS}= 5pA at 10V. [ ]
(a) $4X10^{12}$ (b) $2X10^{12}$ (c) $20X10^{-12}$ (d) $5X10^{-12}$

10. Varactor diodes are used in ______ frequency circuits. [ ]
(a) Audio (b) High (c)Low (d) None

Cont……2

II Fill in the Blanks:

11. For an N-channel silicon FET, with $a=3X10^{-4}$ & $N_D=10^{15}$ electrons/cm^3. The pinch off voltage is ___

12. The high frequency gain of CS amplifier is limited by _________.

13. Varactor diode operates in _________.

14. The multiplication factor in Avalanche photo diode is ___________

15. The relation between μ, r_d & g_m for JFET is ___________.

16. h-parameters valid for _______ region of frequency range.

17. Conversion efficiency of an amplifier circuit is defined as ____

18. The MOSFET that can be used in both enhancement mode & depletion mode is ______

19. The voltage V_{DS} at which I_D tends to level off in JFET is called ________

20. The disadvantage of JFET amplifier circuits is ____ as compared to BJT amplifier circuits.

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Code No: A109210203 **Set No. 4**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
ELECTRONIC DEVICES AND CIRCUITS
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. FET is popularly referred as ________________. [ ]
(a) Voltage variable resistor (b) Voltage dependent resistor (c) Both (d) None

2. A CD amplifier uses FET having r_d= 300K, μ=15 & load resistance as 300K, the output impedance is [ ]
(a) 0.789 (b) 0.98 (c) 0.882 (d) 0.682

3. The problem of thermal run away ____ in case of FET. [ ]
(a) Increases (b) Decreases (c) Doesn’t exist (d) None.

4. If Av<1 & Ai is very large, hence it has very ____ input impedance and _____ output impedance.[ ]
(a) High, High (b) Low, High (c) Low, Low (d) High, Low

5. The properties of JFET resemble those of _________ [ ]
(a) Thermionic Valves (b) NPN transistor (c) PNP transistors (d) UJT

6. The ranges of ON state resistance of FET is from ______Ω to ______ Ω. [ ]
(a) 10 to 100 (b) 100 to 1K (c) 100 to 100K (d) 10 to 1K

7. The DC input resistance of a JFET is _______ Assume, I_{GSS}= 5pA at 10V. [ ]
(a) $4X10^{12}$ (b) $2X10^{12}$ (c) $20X10^{-12}$ (d) $5X10^{-12}$

8. Varactor diodes are used in ______ frequency circuits. [ ]
(a) Audio (b) High (c)Low (d) None

9. The advantage of FET is _______. [ ]
(a) High power gain (b) Less Noisy (c) Compact Size (d) All the above

10. When N-Channel depletion type MOSFET is used in enhanced mode, _________. [ ]
(a) The gate will be +ve. (b) The gate will be –ve. (c) gate will be at ground level. (d) None.

Cont……2

II Fill in the Blanks:

11. Varactor diode operates in _________.

12. The multiplication factor in Avalanche photo diode is ___________

13. The relation between μ, r_d & g_m for JFET is ___________.

14. h-parameters valid for _______ region of frequency range.

15. Conversion efficiency of an amplifier circuit is defined as ____

16. The MOSFET that can be used in both enhancement mode & depletion mode is ______

17. The voltage V_{DS} at which I_D tends to level off in JFET is called ________

18. The disadvantage of JFET amplifier circuits is ____ as compared to BJT amplifier circuits.

19. For an N-channel silicon FET, with $a=3X10^{-4}$ & $N_D=10^{15}$ electrons/cm^3. The pinch off voltage is ___

20. The high frequency gain of CS amplifier is limited by _________.

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