

MOSFET Amplifiers

- In case of Enhancement n-channel MOSFETs
 - V_{GS} has positive polarity and V_{DS} has negative polarity.
 - V_{GS} & V_{DS} have positive polarity.
 - Both V_{GS} and V_{DS} have negative polarity.
 - V_{GS} has negative polarity and V_{DS} has positive polarity.
- Which of the following semiconductor device is most insensitive to temperature effects.
 - BJT
 - JFET
 - MOSFET
 - None of above
- In Enhancement n-channel MOSFET, an induced n type channel can be produced between the source and the drain if
 - $V_{GS} = 0$
 - V_{GS} is positive
 - V_{GS} is negative
 - None of these
- The threshold voltage of an n-channel enhancement mode MOSFET is 0.5V when the device is biased at gate voltage of 3V, pinch off would occur at the drain voltage of
 - 1.5V
 - 2.5V
 - 3.5V
 - 4.5V
- The term I_{DSS} is not used in
 - D-MOSFET
 - E-MOSFET
 - JFET
 - BJT
- The expression $I_D = K[V_{GS} - V_{GS(th)}]^2$ can be used only for
 - BJT
 - E-MOSFET
 - D-MOSFET
 - JFET
- The polarity of V_{GS} for E only MOSFET is
 - Positive
 - Negative
 - Zero
 - Depends on P or N channel

8. Self-bias cannot be used in
- BJT circuits
 - JFET biasing
 - E-MOSFET
 - Depletion mode operation
9. Input impedance of MOSFET is
- Less than FET but more than BJT
 - More than BJT and FET
 - More than FET but less than BJT
 - Less than that of FET and BJT
10. A D-MOSFET can operate in the
- Depletion mode only
 - Enhancement mode only
 - Depletion mode or enhancement mode
 - Low impedance mode
11. When an n-channel D-MOSFET has $I_D > I_{DSS}$ it
- Will be destroyed
 - Is operating in depletion mode
 - Is forward biased
 - Is operating in the enhancement mode
12. Which of the following device has revolutionized the computer industry
- JFET
 - D-MOSFET
 - E-MOSFET
 - Power FET
13. A MOSFET differs from JFET mainly because
- of power rating
 - the MOSFET has two gates
 - the JFET has a p-n junction
 - none of the above
14. A certain p-channel E-MOSFET has $V_{GS(th)} = -2V$. If $V_{GS} = 0V$, the drain current is
- 0 mA
 - $I_{D(on)}$
 - Maximum
 - I_{DSS}

15. The $V_{GS(on)}$ of an N channel E-MOSFET is
- Less than threshold voltage
 - Equal to gate source cutoff voltage
 - Greater than $V_{DS(on)}$
 - Greater than $V_{GS(th)}$
16. An E-MOSFET that operates at the cutoff or in the ohmic region is an example of
- Current source
 - An active load
 - A passive load
 - A switching device
17. C-MOS stands for
- Common MOS
 - Active load switching
 - P channel and n channel devices
 - Complementary MOS
18. The main advantage of C-MOS is its
- High power rating
 - Small signal operation
 - Switching capability
 - Low power consumption

Answers

- | | | | |
|---------|---------|---------|---------|
| 1. (b) | 2. (b) | 3. (b) | 4. (b) |
| 5. (b) | 6. (b) | 7. (d) | 8. (c) |
| 9. (b) | 10. (c) | 11. (d) | 12. (c) |
| 13. (c) | 14. (a) | 15. (d) | 16. (d) |
| 17. (d) | 18. (d) | | |