MOSFET Questions

Question 1

The three connections of a MOSFET are:

A. Gate, Drain, Emitter
B. Gate, Collector, Source
C. Base, Drain, Source
D. Gate, Drain, Source

Question 2

The connection usually connected to zero volts is the:

A. Base
B. Gate
C. Drain
D. Collector
E. Source
F. Emitter

Question 3

A MOSFET is a:

A. current operated device
B. power operated device
C. resistance operated device
D. voltage operated device

Question 4

The minimum voltage required to turn on a MOSFET is about:

A. 0.0 V
B. 0.7 V
C. 3.0 V
D. 9.0 V

Question 5

The symbol for the transconductance of a MOSFET is:

A. g_M
B. S
C. h_{FE}
D. V_{GS}

Question 6

For a certain MOSFET, the transconductance is 0.2 S, the threshold voltage is 3.5 V and V_{GS} is 5.0 V. The maximum Drain current is:

A. 0.3 A
B. 0.7 A
C. 1.0 A
D. undetermined

Question 7

For a certain MOSFET, the transconductance is 400 mS, the threshold voltage is 3.0 V and V_{GS} is 9.0 V. The maximum Drain current is:

A. 1.2 A
B. 2.4 A
C. 3.6 A
D. 2400 A

Question 8

For a certain MOSFET the threshold voltage is 4.0 V. A Gate-Source voltage of 12 V allows a maximum Drain current of 4.8 A. The transconductance of the MOSFET is:

A. 0.6 S
B. 1.2 S
C. 3.2 S
D. 19.2 S

Question 9

A load taking 15 A is controlled by a MOSFET with a threshold voltage of 3.0 V. If the transconductance is 2.5 S, what is the minimum Gate-Source voltage?

A. 3.0 V
B. 6.0 V
C. 9.0 V
D. 12.0 V

Question 10

A load taking 8.0 A is controlled by a MOSFET with a threshold voltage of 3.0 V. If the maximum Gate-Source voltage is 5.0 V, what is the minimum transconductance of the MOSFET?

A. 1.6 S
B. 2.7 S
C. 4.0 S
D. 8.0 S

Answers

1. D
2. E
3. D
4. C
5. A
6. A
7. B
8. A
9. C
10. C

Website

http://www.pfnicholls.com/Electronics_Resources/QuestionIndex.html

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