

V.P & R.P.T.P. SCIENCE, V.V.NAGAR

B.Sc. (IVth SEM.) ELECTRONICS Internal Exam

DATE: 09/03/2019

SUB: US04CELE01

TIME: 3:00 pm to 5:00 pm

MARKS-50

Q-1 Choose correct answer

[08]

1. _____ is a unit of relative power change.
(A) Decibel. (C) Volt.
(B) Ampere. (D) None of these
2. The Field effect transistor (FET) is a _____ operated device.
(A) Voltage (C) Current.
(B) Resistance. (D) None of these
3. FET potential divider biasing circuit is _____ than self-bias circuit.
(A) Better (C) Worst.
(B) Not better. (D) None of these
4. In any type of biasing circuit gate of FET is always _____ biased.
(A) Reversed (C) Forward
(B) Saturated. (D) None of these
5. _____ type of biasing circuit is used in common source amplifier. .
(A) Potential divider. (C) Self bias.
(B) fixed bias. (D) None of these
6. Common drain amplifier circuit is also known as _____.
(A) Source follower (C) Emitter follower.
(B) Collector follower. (D) None of these
7. Unit of light intensity is _____.
(A) Lumens (C) Volts
(B) Ampere. (D) None of these
8. In photomultiplier tube several additional electrodes are called _____.
(A) Dynodes. (C) Plate
(B) Capacitor. (D) None of above

Q-2 Short answer type question. (any Five)

[10]

1. List different FET parameters.
2. Draw the common source FET circuit using fixed voltage bias.
3. Draw the Self bias circuit for n-channel FET.
4. Draw the FET equivalent circuit,
5. Draw the input and output waveform of Common source amplifier circuit.
6. Draw the input and output waveform of Common drain amplifier circuit.
7. Draw the symbol of Photodiode, Solar cell & LED.
8. Explain what you mean by Photoconductive cell, Give Example.

Q.3 Draw frequency response curve for BJT amplifier and explain it also explain why gain of an amplifier fall's off at lower and upper frequency ends. [08]

OR

Q.3(a) Draw the family of FET drain characteristics for various levels of gate source voltage and explain it. [04]

Q.3(b) Explain how you can draw transfer characteristics from FET drain characteristics. [04]

Q.4 Draw the neat circuit of FET of potential divider basing circuit and explain its working. [08]

OR

Q.4 Give an account of n-channel enhancement MOSFET. [08]

Q.5 Draw a neat circuit of Common drain amplifier and explain its working. [08]

OR

Q.5 Draw a neat circuit of Common Source amplifier and explain its working. [08]

Q.6 Give an account of photomultiplier tube. [08]

OR

Q.6 Give an account fo LCD in detail. [08]

