VITHALBHAI PATEL & RAJRATNA P.T. PATEL SCIENCE COLLEGE
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S.Y. B.Sc. SEM: IV | INTERNAL TEST | DATE: 16th March. 2016
SUB: ELECTRONICS | TIME: 03:00 pm to 4:30 pm
SUB CODE: US04CELE01 | TOTAL MARKS: 25

Q. 1 **Choose the correct answer.** [03]

(1) _____ is a unit of relative power change.
- (A) Decibel
- (B) Ampere
- (C) Volt
- (D) None of above

(2) In an n-channel Enhancement MOSFET the substrate is made of _____ type of material.
- (A) P
- (B) Z
- (C) N
- (D) None of above

(3) Common drain circuit is also known as _____ .
- (A) Source follower
- (B) Collector follower
- (C) Drain follower
- (D) None of above

Q.2 **Answer the following in short.(Attempt any two, each two marks)** [04]

(1) Draw the a.c. equivalent circuit of common source amplifier.
(2) Draw the symbols of n-channel Enhancement MOSFET.
(3) List different FET parameters.

Q.3 Draw a frequency response curve for transistor amplifier and explain the drawing necessary circuit why gain falls of at lower and upper frequency ends. [06]

OR

Q.3 (A) Draw the family of FET drain characteristics of various levels of gate source bias voltage and explain it. [03]

(B) Explain how you can draw transfer characteristics from FET drain characteristics. [03]

Q.4 Give an account of n-channel Enhancement MOSFET. [06]

OR

Q.4 Give an account of n-channel enhancement depletion MOSFET. [06]

Q.5 Draw the neat circuit of common source amplifier and explain its working also draw necessary wave forms. [06]

OR

Q. 5 Draw the neat circuit of common drain amplifier and explain its working also draw necessary wave forms. [03]

- : All the best: -