

SE/III/CB&S/INST/ Analog Electronics/ 01-06-15



Q.P. Code : 4854

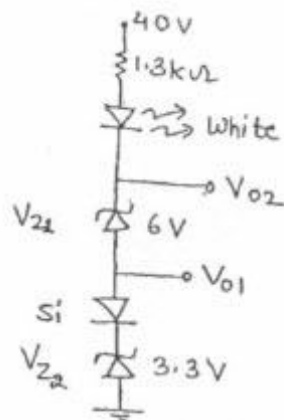
(3 Hours)

[Total Marks : 80]

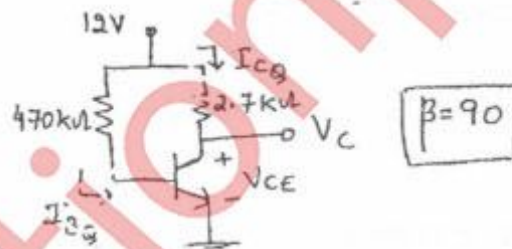
- N.B. : (1) Question No. 1 is compulsory.
 (2) Attempt any ~~four~~ ^{three} questions out of remaining questions.
 (3) Assume suitable data if necessary.

1. Attempt any ~~four~~ ^{four} ~~three~~ ^{three} 20

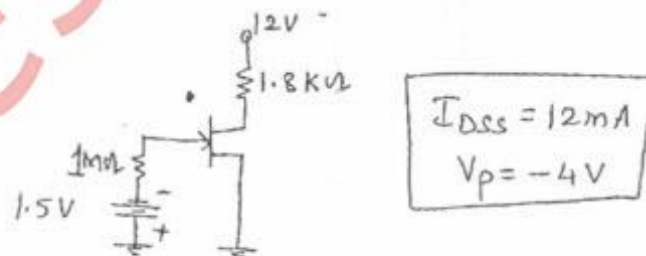
- (a) For the network given below find V_{o1} and V_{o2} . consider practical diodes.



- (b) Find $S(I_{co})$ and $S(V_{BE})$ for the given circuit.



- (c) Find I_{DQ} and V_{DSQ} for the given network.



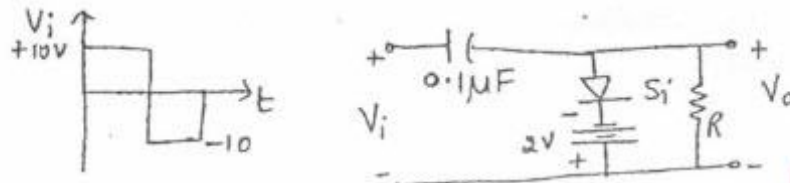
- (d) Draw the circuit diagram of a low pass filter circuit. Also draw its response plot.

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(e) What is harmonic distortion? Write the equation for total harmonic distortion (THD)

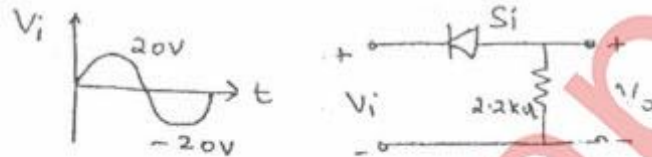
2. (a) Find V_o for the circuit given below.

5



(b) Find V_o :

5



(c) Draw and explain instrumentation amplifier and logarithmic amplifier using opamps.

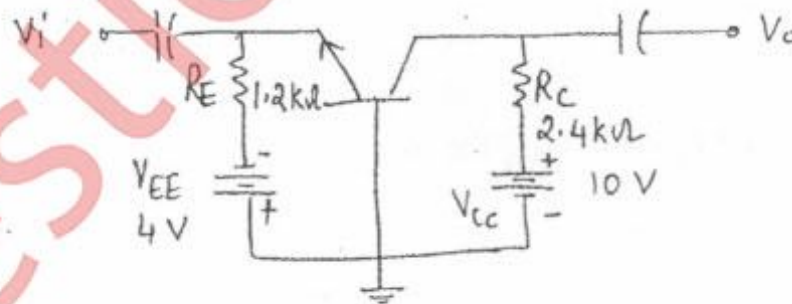
10

3. (a) Explain thermal runaway in the case of BJT. How can we do compensation for the same.

10

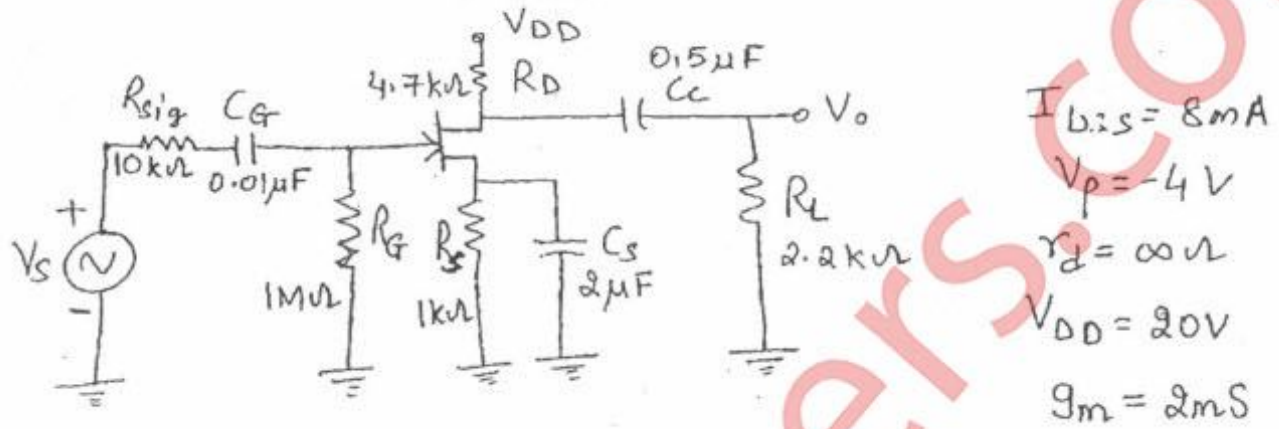
(b) Find V_{CE} , V_{CB} , I_E and I_B for the following circuit

10



[TURN OVER

4. (a) Explain the working of a junction FET with its VI characteristics. 10
 (b) Determine the lower cut off frequency for the network given below :- 10



5. (a) Explain four types of controlled sources using opamps. 10
 (b) Explain circuits for weighted summation, integrator and differentiator using opamps. 10
6. (a) Write short note on Class A amplifier and Class A amplifier. 10
 (b) Draw and explain a series voltage regulator. 10

Course: S.E. (SEM-III)(CBSGS)(INSTRUMENTATION
ENGG.)(Prog-740 TO 754)

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Correction:

Q. No. (2)(c)

Read as:

Draw and explain.....using Op Amps.

Instead of:

Draw and explain.....using popams.

Q. No. (3)(b)

Assume current gain = 0.98

Q. No. (6)(a)

Read as:

Write short note on class A Amplifier and Class **B**
Amplifier.

Instead of: Write short note on class A Amplifier and Class A Amplifier.

Query Update Time: 01/06/2015 03:29 PM

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