

SF Sem-IV - old - EDC

EDC - II

4/12/15

QP Code : 1421

(3 Hours)

[Total Marks :100

N.B. : (1) Question no. 1 is compulsory.

(2) Attempt any **three** questions out of remaining questions.

(3) **Figures** to the **right** indicate **full** marks.

(4) Assume suitable **data** if required.

1. Design two stage R-C coupled CE amplifier for the following specifications: **20**
 $AV \geq 1600$ $V_0 = 3.2V$.
Determine voltage gain input impedance and total current supplied by source V_{cc} .
2. Design two stage RC coupled amplifier for the following parameters $AV \geq 75$, **20**
frequency = 20Hz $V_0 = 3$ volts, $I_{oa} = 1.38$ mA, $R_i = 1m\Omega$ used Bf w11 JFET
3. (a) Design large signal transformer coupled class A power amplifier to provide 6W **10**
output power to the 4Ω load.
(b) For dual input balanced output differential amplifier analyze and derive the expression **10**
for (i) Differential mode gain (A_d) (ii) Common mode gain (A_c) (iii) CMRR
4. (a) Explain the working principle of a Wein Bridge oscillator. Derive the expression **10**
for the frequency of oscillation.
(b) Write short notes on (i) Colpitts Oscillator (ii) Clapp Oscillator **10**
5. (a) Design a RC phase shift oscillator using JFET for frequency of oscillation of 1 kHz **10**
(b) Explain why a voltage amplifier cannot be used as a good power amplifier **10**
6. (a) Discuss Darlington pair. What are its primary features? Obtain Expression for **10**
 A_v , A_i and R_i
(b) Explain the practical cascode amplifier and derive the expression for A_v , R_i and **10**
 R_o
7. Write short note on following:- **20**
 - (a) Negative feedback topologies
 - (b) Class 'C' power amplifier
 - (c) Frequency Response of RC coupled amplifier
 - (d) Hartely oscillator

QP-Con. 9883-15.

5413

Course: S.E. (SEM. IV) (E&TC ENGG.) (Prog-T1414)

QP Code: 1421

Correction:

Read as:

N.B. (1)....

(2) Attempt any four questions out of remaining questions.

(3).....

(4).....

Instead of:

N.B. (1)....

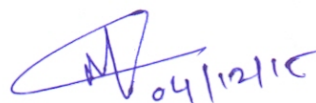
(2) Attempt any three questions out of remaining questions.

(3).....

(4).....

Query Update time: 04/12/2015 03:50 PM

Student is absent

 04/12/15

Block No:-10

Course: S.E. (SEM. IV) (Old) (E&TC ENGG.) (Prog-T1414)

QP Code: 1421

Correction:

Note:

The data sheet required for the Q. No.(1) and Q. No.(2) has to be provided by the colleges.

Query Update time: 04/12/2015 04:05 PM

Student

Absent


04/10/15

Block No: 10