Total No. of Questions : 6]

SEAT No. : ____

P968

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APR - 17/BE/Insem.-49
B.E. (E & TC) (Semester - II)
RF CIRCUIT DESIGN (Elective - III (b))
(2012 Pattern)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates :

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain high frequency inductor with its equivalent circuit representation. **[4]**

b) Find the high frequency impedance behavior of a 500 ohm metal film resistor with 2.5 cm copper wire connections of AWG 26 and stray capacitance Ca of 5 pF. **[6]**

OR

Q2) a) Determine the radius of the AWG 26 wire if the diameter of the AWG 50 wire is 1.0mil (or 2.54×10^{-5} m) **[4]**

b) Discuss RF Behavior of surface mounted inductors. **[6]**

Q3) a) Deduce with Mathematical expression the relationship between rise time and bandwidth? **[4]**

b) Estimate the bandwidth of High pass single pole RC Network using Open circuit time constant method? **[6]**

OR

Q4) a) Discuss the method of short circuit time constants to estimate the bandwidth? **[6]**

b) How Bandwidth is computed? **[4]**

P.T.O.

Q5) a) Explain Stabilization methods with suitable example? **[6]**

b) Describe Neutralization and unilateralization. **[4]**

OR

Q6) a) With suitable diagram explain shunt peak amplifier? **[6]**

b) Enlist characteristics of RF Amplifier. **[4]**

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