SY C 2022-23 ECA(2020pattern) CIE test on UNIT No. 03 and UNIT No 04 (Duration 1.30 Hrs)

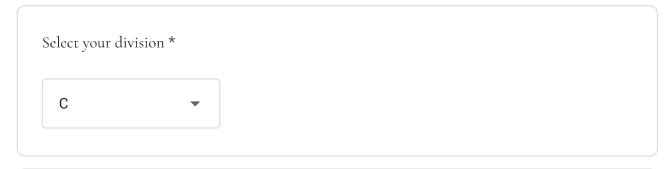
Note: All the questions are mandatory. You can give this test only once and it can not be resubmitted. Solve all problems and upload the PDF or image of the solution. Write your name and Roll no. on each page.

aniket.22110125@viit.ac.in Switch account



The name, email, and photo associated with your Google account will be recorded when you upload files and submit this form

* Required



Enter your Complete GR number * 0 points

22110125

Enter your complete name *

Aniket Uday Supekar

Enter your complete Roll number *
213045
Higher the quality factor of a series LCR circuit, greater is the operating bandwidth * 1 point of the resonant circuit.
O True
False
A coil of inductance 0.1H and resistance of 10Ω is connected in series with a $*2$ points capacitor of $0.1\mu F$. Find quality factor of the circuit at resonance.
O 103
O 102
100
O 98
A 12 Ω resistor, a 40 μF capacitor, and an 8 mH coil are in series across an ac source. * 2 points The resonant frequency is
O 28.1 Hz
281 Hz
2,810 Hz
O 10 kHz

The device parameters for an n-Channel JFET are: Maximum current IDSS = $10mA$, * 2 points Pinch off voltage Vp = $-4V$. Calculate the drain current for VGS = -1.0 V.
● 5.6 mA
O.56 mA
O 6.5 mA
O 6.66 mA
The pinch off voltage for a n – channel JFET is 4 V, when VGS = 1 V, the pinch – off \star 2 points occurs for VDS equal to
3A
○ 6V
An n – channel JFET has $IDSSS = 2$ mA and $Vp = -4$ V . An applied GATE to source * 2 points voltage VGS is – 2V. Find it's transconductance $gm(in \ mA/V)$.
0.25
0.50
0.75
O 1.0

When drain voltage equals the pinch-off-voltage, then drain current with the * 1 point increase in drain voltage
decreases
o increases
remains constant
onone of the above
If the reverse bias on the gate of a JFET is increased, then width of the conducting * 1 point channel
is decreased
is increased
remains the same
Odoubles
A JFET has a drain current of 5 mA. If IDSS = 10 mA and VGS (off) = -6 V, find the 2 points value of (i) VGS and (ii) VP.
● -1.76 V, 6V
O -1.67 V, 6.6V
○ -1.87 V, 7V
O 1.67 V, 6.4V
Other:
Clear selection

When VGS of JFET changes from -3.1 V to -3 V, the drain current changes from 1 mA 2 points to 1.3 mA. What is the value of transconductance?
3000 μ mho
O 3000 m mho
O 3500 mho
O 3698 mho
Clear selection
The datasheet of a JFET gives the following information: IDSS = 3 mA, VGS (off) = $-$ 3 points 6V and gm (max) = 5000 μ S. Determine the transconductance for VGS = $-$ 4V and find drain current ID at this point.
gm = 1167 μS and Id = 333 μA
O gm = 333 μS and Id = 1167 μA
gm = 1167 mS and Id = 333 mA
Gm = 1107 μS and Id = 321 μA
Option 5
Clear selection
Upload solution as image or PDF (Max file size 10 MB) * Δ Add file
Send me a copy of my responses.

Submit Clear form

Never submit passwords through Google Forms.

This form was created inside of Vishwakarma Institute of Information Technology. Report Abuse

Google Forms