University of Mumbai

Examination 2020 under cluster ___ (APSIT)

Program: EXTC Engineering

Curriculum Scheme: Rev2016

Examination: Second Year Semester III

Course Code: ECC302 and Course Name: Electronic Devices and Circuits I

Time: 1 hour Max. Marks: 50

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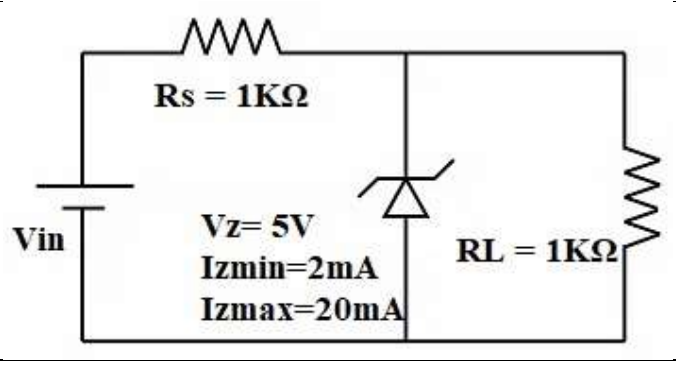
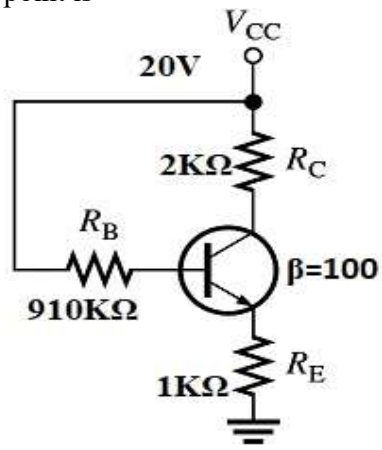
For the students:- All the Questions are compulsory and carry equal marks .

Q1.	Types of resistors are
Option A:	linear
Option B:	non-linear
Option C:	linear and non-linear
Option D:	None
Q2.	CLC filter also known as
Option A:	hybrid filter
Option B:	Pi filter
Option C:	T filter
Option D:	Z filter
Q3.	BJT is a bipolar device in which current flows due to
Option A:	Majority carriers
Option B:	Minority carriers
Option C:	Majority and minority carriers
Option D:	ions
Q4.	In C filter with rectifier ripple factor depends upon
Option A:	resistor
Option B:	capacitor
Option C:	resistor and capacitor
Option D:	inductor
Q5.	Variable capacitor also known as
Option A:	Condenser
Option B:	Inductor
Option C:	Transformer
Option D:	Tuner
Q6.	Stability factor of Fixed bias circuit for BJT is
Option A:	$\beta/2$
Option B:	$1/\beta$
Option C:	2β
Option D:	$1+\beta$
Q7.	BJT amplifiers configurations are
Option A:	Common Emitter amplifier
Option B:	Common Base amplifier
Option C:	Common Collector amplifier

Option D:	All
Q8.	For Zener diode as a voltage regulator , Zener diode must be
Option A:	Reverse biased
Option B:	Forward biased
Option C:	Zero biased
Option D:	No biased
Q9.	JFET is a _____ controlled device
Option A:	Current
Option B:	Voltage
Option C:	Power
Option D:	thermal
Q10.	In voltage regulator, line regulation means change in output voltage with respect to
Option A:	Load resistor
Option B:	Input voltage
Option C:	Output current
Option D:	Input current
Q11.	In JFET $I_D=I_{DSS}$ when $V_{GS}=$
Option A:	Pinch-off voltage
Option B:	Pinch-off current
Option C:	Saturation voltage
Option D:	Saturation current
Q12.	In Common Source amplifier using JFET input must be applied to
Option A:	Drain terminal
Option B:	Gate terminal
Option C:	Base terminal
Option D:	Collector terminal
Q13.	According to Miller's theorem , the output impedance Z_2 is approximately equal to
Option A:	2Z
Option B:	Z+1
Option C:	Z
Option D:	Z/2
Q14.	For Zener diode as a voltage regulator if R_S=1KΩ, R_L=1KΩ, V_Z=5V, I_{Zmin}=2mA and I_{Zmax}=20mA, then range for input voltage V_{IN} is

	
Option A:	12 to 30 V
Option B:	10 to 30 V
Option C:	10 to 20 V
Option D:	15 to 30 V
Q15.	Application of pn junction diode is
Option A:	amplifier
Option B:	voltage regulator
Option C:	voltage variable resistor
Option D:	switch
Q16.	Amplification factor μ of JFET can be calculated as
Option A:	$r_d + g_m$
Option B:	$r_d - g_m$
Option C:	$r_d \times g_m$
Option D:	r_d / g_m
Q17.	In frequency response of amplifier, the gain roll-off in low frequency region is due to
Option A:	Coupling and bypass capacitors
Option B:	Internal capacitors
Option C:	Stray capacitors
Option D:	Load capacitor
Q18.	In CE amplifier with bypassed R_E input impedance(R_i) of BJT is
Option A:	$(r_\Pi (1+\beta)R_E)$
Option B:	r_Π
Option C:	R_C
Option D:	R_E
Q19.	In frequency response of amplifier, maximum gain is available in
Option A:	low-frequency region
Option B:	high-frequency region
Option C:	Very high-frequency region
Option D:	Mid-frequency region
Q20.	In CS amplifier with unbypassed R_s input impedance Z_i is

Option A:	R_C
Option B:	R_D
Option C:	R_G
Option D:	R_{Ss}
Q21.	Lower and higher cut-off frequency are known as
Option A:	3-dB frequency
Option B:	4-dB frequency
Option C:	5-dB frequency
Option D:	3-dB frequency
Q22.	Common collector amplifier also known as
Option A:	Emitter follower
Option B:	Source follower
Option C:	Base follower
Option D:	Drain follower
Q23.	When amplifier transfer power to the load it is in terms of
Option A:	peak
Option B:	Peak to peak
Option C:	DC
Option D:	rms
Q24.	In CE and CS amplifier phase shift between input and output signal is
Option A:	0 degree
Option B:	360 degree
Option C:	180 degree
Option D:	90 degree
Q25.	Q point is 
Option A:	19.26V, 1.92mA
Option B:	10V,1mA
Option C:	20V,2mA
Option D:	19.26V, 19.2mA