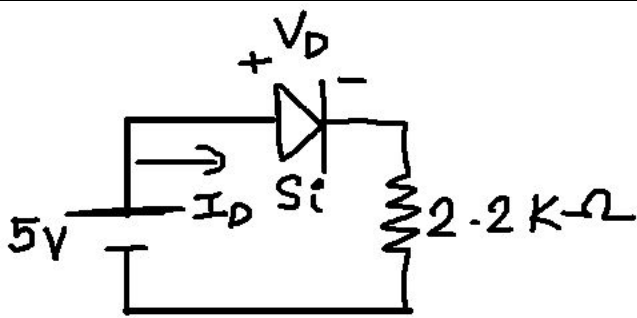
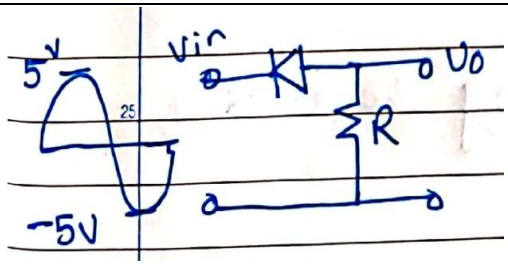
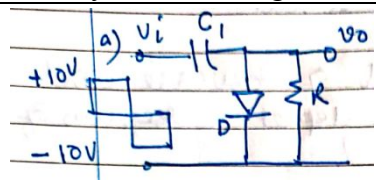
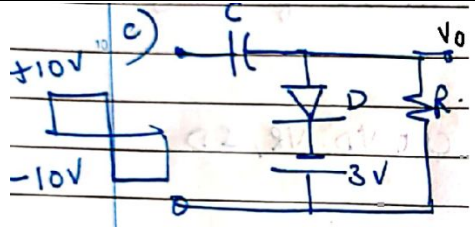
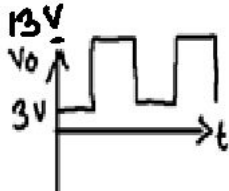
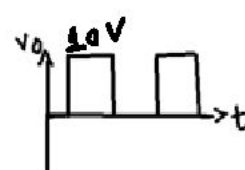
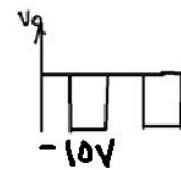
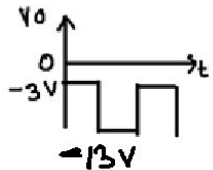
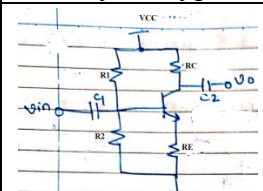


SAMPLE QUESTION PAPER
SUBJECT: EDC-1 REV C-SCHEME 2019
SEM- III
ELECTRONICS ENGINEERING

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Forbidden energy gap is highest in
Option A:	Metal
Option B:	Insulator
Option C:	Semiconductor
Option D:	All of the mentioned
2.	Clipper circuit has which of the following components: i) Diode ii) Resistor iii) Capacitor
Option A:	i
Option B:	i and ii
Option C:	ii and iii
Option D:	i,ii,iii
3.	Clamper circuit has which of the following components i) Diode ii) Resistor iii) Capacitor
Option A:	i
Option B:	i and ii
Option C:	ii and iii
Option D:	i,ii,iii
4.	BJT is bipolar junction transistor because current in BJT is due to
Option A:	majority and minority charge carriers
Option B:	minority charge carriers only
Option C:	majority charge carriers
Option D:	None of the mentioned
5.	Current in FET is due to
Option A:	majority and minority charge carriers
Option B:	minority charge carriers only
Option C:	majority charge carriers

Option D:	None of the mentioned
6.	To operate BJT in active region emitter base junction is And collector base junction is.....
Option A:	Forward Bias and reverse bias
Option B:	Forward Bias and Forward bias
Option C:	Reverse Bias and Forward bias
Option D:	Forward Bias and reverse bias
7.	Width of depletion region in PN junction diode decreases when PN junction is
Option A:	Forward Bias
Option B:	Reverse bias
Option C:	Zero Bias
Option D:	None of the mentioned
8.	Calculate the value of I_D in n channel JFET if $V_{GS} = -2V$, $I_{DSS} = 8mA$, and $V_p = -4V$
Option A:	1 mA
Option B:	2mA
Option C:	3mA
Option D:	4mA
9.	Calculate the value of I_D in n channel E-MOSFET if threshold voltage = 2V, $K_n = 1.5mA/V^2$, $V_{GS} = 4V$
Option A:	2mA
Option B:	4mA
Option C:	6mA
Option D:	8mA
10.	For the following circuit calculate V_D , I_D , and V_R
	
Option A:	$V_D = 0.7V$, $I_D = 1.95mA$, $V_R = 4.29V$
Option B:	$V_D = 0.7V$, $I_D = 3mA$, $V_R = 4V$
Option C:	$V_D = 0.7V$, $I_D = 5mA$, $V_R = 4V$

Option D:	$V_D = 0.7V$, $I_D = 1mA$, $V_R = 4.29V$
11.	Identify the following circuit
	
Option A:	Shunt positive Clipper
Option B:	Series positive clipper
Option C:	Series negative clipper
Option D:	Shunt negative Clipper
12.	Identify the following circuit
	
Option A:	Negative shunt clipper
Option B:	Positive clamper
Option C:	Negative clamper
Option D:	Positive shunt clipper
13.	What is the output of following circuit?
	

Option A:	
Option B:	 b.
Option C:	
Option D:	
15.	In CB configuration of BJT input is appliedand output is collected at.... with base terminal common
Option A:	B and C
Option B:	E and C
Option C:	C and B
Option D:	B and E
16.	Identify the type of biasing used in the following circuit diagram
	
Option A:	Fixed bias
Option B:	Emitter stabilized bias
Option C:	Feedback bias
Option D:	Voltage divider bias

17.	β is the ratio of
Option A:	I_B/I_C
Option B:	I_C/I_E
Option C:	I_C/I_B
Option D:	I_E/I_B
18.	α is the ratio of
Option A:	I_B/I_C
Option B:	I_C/I_E
Option C:	I_C/I_B
Option D:	I_E/I_B
19.	What is the value of I_{Csat} for the following circuit
Option A:	6.67mA
Option B:	0.067 mA
Option C:	66.7mA
Option D:	0.667 mA
20.	Determine V_{CC} , R_B and R_C for the following network
Option A:	10 V, 200K, 2.4K
Option B:	20V, 482.5K, 2.5K
Option C:	20V, 267K, 3.2 K
Option D:	None of the above

Q2 (10 Marks Each)	Solve any two out of four questions:
A	Find I_{DQ}, V_{DSQ}, V_{GSQ}, if $V_{GS(th)} = 5V$, $I_{D(on)} = 3mA$, $V_{GS(on)} = 10V$.
B	Compare CB, CE and CC configuration.
C	Explain working of full wave rectifier with LC filter. Draw output waveform. Also derive expression for ripple factor.
D	Find I_C, I_B, V_C, V_E and V_{CE} for the following circuit.
Q3 (10 Marks Each)	Solve any two out of four questions:
A	Find Z_i , Z_o , A_v using hybrid π model. ($V_{BE} = 0.7V$, $\beta=100$)

B	Compare full wave, half wave and bridge rectifier.
C	Find Q point if $\beta=120$. Draw DC load line.
D	Draw AC equivalent of following circuit and derive the equation of Z_i and Z_o .