2028275(028)

Diploma In Engg. (Second Semester) Examination,

April-May 2021

NITTIR (New Scheme)

(ET & T Engg. Branch)

BASIC ELECTRONICS ENGINEERING

Time Allowed: Three hours

Maximum Marks: 70

Minimum Passing Marks: 25

Note: All questions are compulsory unless mentioned otherwise. In case of any doubt or dispute, English version question should be treated as final.

- 1. (a) The process of adding impurity in intrinsic semiconductor is called:
 - (i) Adding
 - (ii) Dopping would not oblige a subject makes (5)
 - (iii) Constructing
 - (iv) None of the above

[2]		
(b) Define semiconductor and explain types of extrinsic semiconductor.(c) Explain the formation of depletion layer, working of	3	(iii) Applications (iv) Advantaes an
pn junction diode and draw the equivalent circuit diagram. Or Explain barrier potential in pn junction diode and also explain VI characteristic of pn junction diode. 2. (a) The rectifier is a: (i) DC to AC converter (ii) AC to DC converter (iii) DC to DC converter (iv) None of the above	10	Explain full wave terms: (i) Working (ii) Circuit diagra (iii) Applications (iv) Advantages a 3. (a) The primary func (i) Introduce a d (ii) Suppress vari (iii) Clips both hal
(b) Define following terms of rectifier: (i) Ripple Factor	3	(iv) None of the a
(ii) Peak I Inverse Voltage (iii) Efficiency (c) Explain bridge rectifier in following terms: (i) Working (ii) Circuit diagram and waveform	0	(b) Explain clipper an(c) Explain Zener dio(i) Working(ii) Construction a(iii) Application
2022275/029		

	(iv) Advantaes and disadvantages	
	Or	
	Explain full wave rectifier with LC filter in following	
	terms:	
	(i) Working have been a large to all	
	(ii) Circuit diagram and waveform	
	(iii) Applications	
	(iv) Advantages and disadvantages	
3.	(a) The primary function of clamper circuit is	1
	(i) Introduce a dc level in to an ac signal	
	(ii) Suppress variation in signal voltage	
	(iii) Clips both half of input signal	
	(iv) None of the above	
	(b) Explain clipper and clamper circuit.	3
	(c) Explain Zener diode in following terms: (i) Working	10
	(ii) Construction and symbol	
	(iii) Application	

	L - 1	
4.	(a) FET consist of:	1
	(i) Source and from both house and the supplier of the second of the sec	
	(ii) Drain	
	univ (iii) Gate : 151), I sinve partico se vie 161 (iii) med	
	(iv) All of above	
	(b) Explain α and β in transistor and also write relation	
	between α and β .	3
	(c) Explain the CE configuration of transistor in following terms:	10
		10
	(i) Circuit diagrams of a neglection of a management of the	
	(ii) Working Pool of to Advis the continued app	
	(iii) Input and output characteristics	
	hange the Order that the english fifth	
	Explain JFET in following terms:	
	(i) Circuit diagram quality and cappit, along a (d)	
	(ii) Working (iii) Input and output characteristics	
5.	(a) The ideal opamp has the following characteristics:	1
	(i) $Ri = \infty$, $A = \infty$, $Ro = 0$	
	(ii) $Ri = 0, A = \infty, Ro = 0$	
	2028275(028)	

	(iii)	$Ri = \infty$, $A = \infty$, $Ro = \infty$			
	(iv)	None of the above			
(b)	Dei	fine following parameters of opamp:	3		
	(i)	Slew rate			
	(ii)	CMRR			
	(iii)	Differential mode gain			
(c)	Exp	plain differential amplifier in following terms	10		
	(i)	Working Principle			
	(ii)	Circuit diagram			
	(iii)	Application, advantage and disadvantages			
		Or			
	Explain following application of op amp:				
	(i)	As Integrator			

(ii) As differentiator