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SUBJECT CODE NO:- CB-2347
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-I)
Examination December /January-2022-23
Electronics Paper-I ELE-011
Network Analysis and Semi Conductor Devices

[Time: 1:30 Hours]

[Max. Marks:40]

Please check whether you have got the right question paper.

- N.B
- 1) All questions are compulsory
 - 2) All questions carry equal marks
 - 3) Draw neat circuit diagram wherever necessary.
- Q.1 State and Thevenin's Theorem 10
- OR
- Explain in Brief fastatic & dynamic resistance of an diode photodiode 10
- Q.2 Which suitable circuit diagram the working of CE connections. 10
- OR
- Explain in brief 10
- a) Half wave rectifier
 - b) Regulated power supply
- Q.3 Write short notes on (any two) 10
- 1) Superposition theorem
 - 2) Tunnel diode
 - 3) Relation between α *dc* and β *dc*
 - 4) Ripple factor of halfwave rectifier
- Q.4 Attempt following multiple choice questions 10
- 1) The resister is measured in -----
- a) Ohm b) watts c) Ampere d) both a &b

- 2) The inductor is -----
a) Active component b) passive component c) both a & b d) None of above
- 3) Zener diode is used as -----
a) Rectifier b) filter c) voltage regulator d) none of the above
- 4) Holes in an N-type semiconductor are
a) Minority carriers b) Majority carriers c) both a & b d) None of the above
- 5) A current ratio I_C/I_E is usually less than one and is called
a) Beta b) Theta c) alpha d) omega
- 6) A FET has how many terminals -----
a) Two b) Three c) Four d) five
- 7) The Maximum efficiency of full wave rectifier is -----
a) 10% b) 40 % C) 100% D) 81.2%
- 8) The average dc current of full wave rectifier is -----
a) I_m/π b) $2I_m/\pi$ c) I_m d) $I_m/\sqrt{2}$
- 9) The transformer used in power supply for -----
a) Decrease value of ac voltage
b) Increase ac voltage
c) Decrease dc voltage
d) None of the above
- 10) A fuse interrupts ----
a) Excessive voltage b) excessive current c) low current d) none of the above