Enrolment No._____

SARVODAY POLYTECHNIC INSTITUTE, LIMBDI

Diploma Sem.-II [EC/Computer] G.T.U. Mid Term Exam, April 2009

Subject code : 320017

Subject Name : Electronics Devices and Circuit

Date – 09-04-2009 **Time – 14:00 to 15.00**

Total Marks – 20

Instructions –
1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English script of question paper shall be considered as authentic.

Q:-1 (A)DEFINE THE FOLLOWING TERMS :- (ANY FOUR) **{4}**

1) KNEE VOTAGE
2) BREAK DOWN VOLTAGE
3) DRIFT CURRENT
4) DIFFUSION CURRENT
5) D.C. FORWARD RESISTANCE
6) A.C. FORWARD RESISTANC

Q:-1 (B) DRAW & EXPLAIN VI CHARACTERISTICS OF PN JUNCTION DIODE ? **{4}**

Q:-2 (A) DERIVE RIPPLE FACTOR FOR HWR RECTIFIER ? **{3}**

Q:-2 (B) DERIVE RECTIFICATION EFFICIENCY OF FWR ? **{3}**

OR

Q:-2 (A) DRAW THE CIRCUIT DIAGRAM & EXPLAIN WORKING OF HWR ? **{3}**

Q:-2 (B) DIFFERENCIATE INSULATOR,CONDUCTOR AND SEMI- CONDUCTOR ACCORDING TO ENERGY BAND DIAGRAMS **{3}**

Q:-3 (A) EXPLAIN SHUNT TYPE CAPACITOR FILTER **{3}**

Q:-3 (B) GIVE COMPARISION OF HWR & FWR **{3}**

OR

Q:-3 (B) A HALF WAVE RECTIFIER IS FED FROM 230/12 V TRANSFORMER . **{3}**

IF THE LOAD RESISTANCE HAS AVALUE OF 50 OHMS ,

CALCULATE:-
1] D.C. VOLTAGE ACROSS THE LOAD
2] LOAD CURRENT
3] PIV OF HWR