B. TECH. SEM - III (PRODUCTION ENGG.) (2014 COURSE)
(CBCS) : SUMMER - 2018
SUBJECT: BASIC ELECTRONICS COMMUNICATION ENGINEERING

Day: **Tuesday** | Time: **02.30 PM TO 05.30 PM**
Date: **22/05/2018** | **S-2018-2260** | Max. Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labelled diagrams **WHEREVER** necessary.
4) Use of non-programmable **CALCULATOR** is allowed.

Q.1 a) With neat diagram explain V-I characteristics of P-N junction diode. **(06)**
b) Define resistor and name different fixed and variable resistors. **(04)**

OR

Q.1 a) What are the two breakdown mechanisms in Zener diode? **(06)**
b) Write in brief on tunnel diode. **(04)**

Q.2 Discuss half wave rectifier and full wave rectifier with capacitor filter. **(10)**

OR

Q.2 a) Draw and explain construction of SCR. **(06)**
b) Give the advantages and disadvantages of LED. **(04)**

Q.3 a) Perform following operations: **(06)**
i) Divide $(11011)_2$ by $(100)_2$
ii) Multiply $(1111)_2$ by $(1011)_2$
iii) Add $(111011)_2$ by $(0101101)_2$
b) Compare combinational & sequential circuit. **(04)**

OR

Q.3 a) Explain basic logic gates with the help of Boolean expression and truth table. **(06)**
b) Convert the following Hex into binary: **(04)**
i) 2 F 7 ii) BAB

Q.4 With the help of neat sketches describe difference between the frequency modulation and phase modulation. **(10)**

OR

Q.4 What is amplitude modulation? Briefly explain AM with neat sketch. **(10)**

Q.5 With the help of neat diagram explain the operation of PCM encoder and decoder. **(10)**

OR

Q.5 With the help of neat diagram explain the operation of delta modulation. **(10)**

Q.6 a) Explain briefly the concept of stack. **(06)**
b) Describe the following instruction: **(04)**
i) MOV A,B ii) ADD B

OR

Q.6 a) Explain addressing modes of 8085. **(06)**
b) Describe the following instruction: **(04)**
i)XCHG ii) DAA

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