(b) Draw the block d ı of CRO and explain the function of each bl detail. 10

SEC – D

8. What is LED ? Disc ɜ principle, construction, working, advantages isadvantages. Also make comparison between L d LCD. 20

9. (a) Make a comparis ween dynamic scattering and field effect LC ɔlays. 10

(b) Write short note o teen segment display. 10

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24004

B. Tech. 2nd Semester
(Common for all Branches)
Examination – May, 2017

BASICS OF ELECTRONICS

Paper : ECE-101-F

Time : Three Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt ***five*** questions in all, selecting ***one*** question from each Section. Question No. **1** is ***compulsory***. All questions carry equal marks.

1. (a) What is an ideal diode ? 2

(b) Give definition of forbidden energy gap and knee voltage. 4

(c) Define common mode rejection ratio. 3

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(d) What is the difference between amplifier and oscillator 2

(e) Discuss the d ck of S-R flip-flop. 2

(f) Write about b gic gates. 3

(g) Why LED em t of different colours. 2

(h) Define dot ma isplay. 2

ON – A

2. (a) What is PN ju diode ? Draw and explain its terminal char tics. 10

(b) Make a comp between the following : 10

(i) Intrinsic trinsic semiconductors.

(ii) Drift and ion currents.

3. (a) Draw the cir f an R-C coupled amplifier. Draw its gain frequency characteristics and indicate cutof ency and bandwidth. 10

(b) An amplifier negative feedback provides an output vol f 5 V with an input voltage of 0.2 V. On rem f feedback, it needs only 0.1 V input to give t ne output. Determine :

(i) Gain with edback.

(ii) Gain with feedback.

(iii) Feedback ratio. 10

SECTION – B

4. (a) Describe the principle of operation of a wein bridge oscillator and give the condition for sustained oscillation. 10

(b) Explain use of Op-Amp as a summing, scaling, and average amplifier. 10

5. (a) Draw the pin diagram of IC 741 used as an Op-Amp and explain the function of each pin. 10

(b) Write a short notes on voltage regulator. 10

SECTION – C

6. (a) Realize EX-OR gate using four NAND gates only. 10

(b) Draw and explain the circuit diagram of J-K flip-flop. Give its truth table also. 10

7. (a) Make a comparison between combinational and sequential circuits. 10

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