Dr. V. S. Krishna Government Degree College (A), Visakhapatnam

Semester – II **I B.Sc (H) Physics**

Electronics – IV – Circuit theory and Electronic Devices – 23ELEM22

Time : 02.00 to 05.00 **Total : 60 Marks**

Section-A

Answer all the Following questions **(5X8=40M)**

1. (A) Derive phase relation between voltage and current when Ac phases through pure capacitance only.

(or)

(B) Derive Phase relation between voltage and current when Ac phases through pure resistance only.

2. (A) State and prove Thevenin's Theorem.

(or)

(B) State and prove Millman theorem.

3. (A) Write about the frequency response of RL Circuit?

(or)

(B) Write about the frequency response of LCR parallel Circuit?

4. (A) Write about the V-I characteristics of MOSFET?

(or)

(B) Write about the V-I Characteristics of JFET?

5. (A) Write about the II- Section filter?

(or)

(B) Write about three terminal fixed voltage I.C. regulation.

Section-B

Answer any Five of the Following **(5X4=20M)**

06. Write about difference between A.C. and D.C.
07. Explain Maximum power transform theorem.
08. Write about Branch Current method and nodal analysis
09. explain Q-factor of LCR Series Resonance Circuit?
10. Write about positive differentiating Circuit?
11. Write about hybrid equivalent Circuit of CE Transistor.
12. Write about Photo Diode.
13. Explain the Functioning of LDR?

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