

Bachelor of Computer Application (B.C.A.-I) (CBCS) First Semester CBCS
UBCAT105.2-Elective - II : Paper - V : Linear Electronics

P. Pages : 2

Time : Three Hours



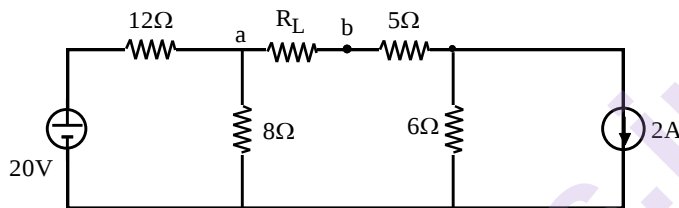
GUG/W/18/11748

Max. Marks : 80

- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and well labelled diagram wherever necessary.
 3. Avoid vague answers and write specific answers related to questions.

1. Either

- a) State and explain Kirchhoff's law. 8
- b) Find the Thevenin's equivalent current and circuit shown below. Observe the terminal a and b. 8



OR

- c) What is Ohm's law? Explain in detail with suitable example. 8
- d) What is the difference between Thevenin's and Norton equivalent circuit? Explain in detail. 8

2. Either

- a) What is semiconductor? Explain intrinsic and extrinsic semiconductor. 8
- b) Explain construction and working principles of Zener diode. 8

OR

- c) State the difference between forward biased and reverse biased characteristic of PN junction diodes. 8
- d) What is band theory? How it is classified. 8

3. Either

- a) Explain the construction and working principles of MOSFETS. 8
- b) What is transistor? Explain the working principles of PNP and NPN transistor. 8

OR

- c) Explain the switching action of transistor in detail. 8

- d) Explain the following configuration of transistor. 8
i) CE ii) CC
iii) CB

4. Either

- a) What is DC coupled amplifier? Explain in detail with suitable example. 8
b) Explain the Ideal characteristics of OPAMP as inverting and non inverting. 8

OR

- c) What is input and output impedance of difference amplifier? Explain. 8
d) Explain the following terms. 8

- i) Subtractor.
ii) Differentiator.

5. Solve all the questions.

- a) Explain Norton's theorem. 4
b) What is Rectifier? Explain in short. 4
c) Explain classification of amplifier in short. 4
d) Describe the advantages of difference amplifier. 4
