

B.C.A.- I (C.B.C.S. Pattern) Sem-I
UBCAT105.2 - Elective-II : Linear Electronics : Paper-V

P. Pages : 2

Time : Three Hours



GUG/S/19/11748

Max. Marks : 80

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- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and labeled diagram and use supporting data wherever necessary.
 3. Avoid vague answer and write specific answer related to question.

- 1.** Either
- a) What is Kirchhoff's law ? Explain in detail. **8**
- b) Explain superposition maximum power transfer theorem for DC source. **8**

OR

- c) Distinguish between Thevenin's and Norton's equivalent circuit. **8**
- d) State and explain Ohm's law. **8**

- 2.** Either
- a) Explain forward and Reverse biased characteristics of PN junctions. **8**
- b) What is band theory ? How it is classified ? **8**

OR

- c) Write a note on : **8**
- i) Intrinsic Semiconductor.
- ii) Extrinsic Semiconductor.
- d) Explain Zener diode and its use as voltage regulator. **8**

- 3.** Either
- a) Explain load line concept for AC and DC. **8**
- b) Explain the construction and working principles of JEET. **8**

OR

- c) What is translator ? **8**
- Write a note on :
- i) PNP Translator
- ii) NPN Translator
- d) What is biasing ? Briefly explain the biasing of translator. **8**

- 4.** Either
- a) Draw and explain the block diagram of OPAMP. **8**
 - b) Write a note on : **8**
 - i) Comparator trigger.
 - ii) Schmitt trigger.

OR

- c) What is amplifier ? Explain construction and working of difference amplifier. **8**
 - d) Explain in brief : **8**
 - i) Input bias current.
 - ii) Input offset current.
- 5.** Solve all the questions.
- a) Explain Norton's theorem. **4**
 - b) Explain Diode as half wave. **4**
 - c) What is CC and CB configuration? Explain. **4**
 - d) Write a note on: **4**
 - i) Importance of GBW product.
