

Roll No. 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Electronics & Information Technology) (Sem.-2)

**ANALOG CIRCUITS**

Subject Code : BVET-204-20

M.Code : 79549

Date of Examination : 20-12-2022

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a. Compare CB and CC amplifier.
- b. Explain the need of a biasing circuit.
- c. Write down the characteristics of a FET amplifier.
- d. What do you mean by phase margin? Explain.
- e. What do you mean by stability? Explain.
- f. Write down the basic requirements for the oscillation to occur.
- g. What do you mean by small signal analysis? Explain.
- h. Define  $I_{CBO}$  and  $I_{CEO}$ .
- i. What is the significance of input and output impedances? Explain.
- j. Comment upon the efficiency of a Class A power amplifier.

## SECTION-B

2. Draw and discuss CB transistor configuration. Also draw and explain its input and output characteristics.
3. Discuss the effect of feedback on gain, input and output impedances of an amplifier.
4. Explain the principle of operation and working of a Wien bridge oscillator.
5. Draw and explain the circuit diagrams of AB and C power amplifiers.
6. Draw the circuit diagram and explain the working of multistage amplifier.

## SECTION-C

7. Draw the circuit diagram and explain in detail Hartley and Colpitt oscillators. Compare the above two oscillators.
8. Explain :
  - a) Voltage series and current series feedback amplifier
  - b) CE transistor amplifier
9. Explain the different biasing schemes of FET in detail. Also write down their advantages and disadvantages.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**