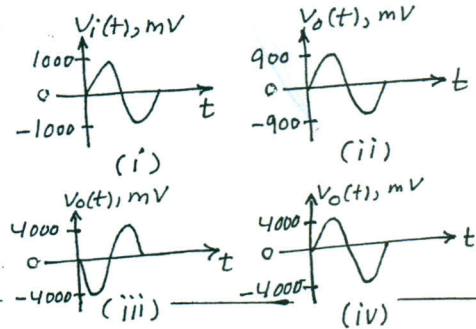


- 1] A BJT amplifier stage has the input waveform in Fig. i. State the type of the amplifier (CE, CB or CC) if the output waveform is as shown in:
(a) Fig. ii (b) Fig. iii (c) Fig. iv •



- 2] (a) Which of the following BJT amplifiers has good input impedance and/or good output impedance: (i) CE (ii) CC (iii) CB •
(b) In terms of Hi or Lo, what is meant by the word "good" in (a).
- 3] State some situations where FETs are preferred to BJTs.
- 4] In an op-amp circuit (excluding the comparator), mention the ideal values of: (a) I_+ , (b) I_- , (c) $V_+ - V_-$ •
- 5] (a) Sketch a voltage follower op-amp circuit.
(b) Give another name for the circuit in (a) and the reason for that name.
- 6] It is required to sketch an op-amp circuit having inputs $V_1(t)$ and $V_2(t)$ and output $V_2(t) - V_1(t)$, using:
(a) two op-amps (b) single op-amp.
- 7] Give one more name and state one application for each of the following multivibrators:
(a) mono stable (b) bistable (c) astable •
- 8] (a) Show how to construct an astable multivibrator using IC 555, necessary resistors, capacitors and power supply.
(b) Write (without proof) expressions for the frequency and duty cycle of the multivibrator in (a) •

END