

U.G. 3rd Semester Examination - 2020

PHYSICS
[PROGRAMME]

Course Code: PHY-G-CC-P-03
(PRACTICAL)

10x2 = 20

Answer any Two question:

- a) Draw the circuit arrangement for drawing the characteristics curves of an npn transistor in CB mode. Draw the input and output characteristics curves. Discuss about the different operating region in the output characteristics curve. What is early effect?
2+2+5+1
- b) What are the characteristics of an ideal OPAMP? Calculate the gain of an inverting and non-inverting amplifiers. Draw a circuit diagram of an adder using OPAMP and find an expression of the output voltage.
2+5+3
- c) i) Find out the relation between alpha (α) and beta (β). A transistor has a collector current of 5mA and base current of 20 μ A. Find the values of α and β .
3+2
- ii) Define class A amplifier. Draw the frequency response curve of a RC coupled amplifier.
2+3.