

BOARD OF INTERMEDIATE & SECONDARY EDUCATION, SAKHAWAT

SUBJECT: Physics EXAM 2nd Annual 2022 CLASS: XII
GROUP: II DATE: 13/12/22

(GENERAL INSTRUCTIONS FOR MARKING KEY)

iii. $R = \frac{V^2}{P}$ so $R_1 = \frac{220^2}{500} = 96.8 \Omega$ & $R_2 = \frac{220^2}{100} = 484 \Omega \Rightarrow R_1 < R_2$

One mark for calculation and one for explanation

iv. Two marks for writing any three ~~rea~~ characteristics of series resonant circuit.

v. One mark for each definition and range

(Please award mark if student has written frequency range or range of signal.)

vi. One mark for each definition

vii. One mark for each definition

viii. one mark for each definition

ix. one mark for definition and one mark for explanation that area under graph gives value of strain energy

x. Two marks for explanation with reason

→ Silicon is indirect bandgap and electron-hole recombination gives out energy in the form of heat or lattice vibrations.

or
→ Silicon is opaque so radiations are not detectable.

xi. One mark for writing that net charge is zero and one mark for explanation that it is made of neutral atoms

xii. One mark for formula and one for calculation $\beta = \frac{I_C}{I_B} = \frac{10 \times 10^{-3}}{40 \times 10^{-6}} = 250$

Question No.4:

i. Two marks for statement (No deduction if no explanation is offered)

ii. One mark for definition and one for unit; $1 \text{ H} = 1 \text{ V s A}^{-1}$

iii. One mark for each answer; Induced emf does not depend on resistance while induced current depends on resistance

iv. Two marks for correct reason and explanation

v. Radiowave because of longer wavelength as $E = \frac{hc}{\lambda}$

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