

Question for Internal exam.

B.Sc. sem. IV (2019-2022)

Modimate

Date _____

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Core paper (8)

Answer any two questions

2 X 5 = 10

- (1) What do you mean by a Complex no. ? Give Some of its important properties give its graphical representation
- (2) State and prove De Moivre's Theorem.
- (3) What are the Cauchy-Riemann Conditions for a function of a Complex variable to be an analytic function
- (4) Prove that a function of Complex variable $w = f(z) = z^2$, where $z = x + iy$ is an analytic function

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B.Sc. Sem IV (2019-2022)

Core paper - (9)

Answer any two questions

2x5=10

- (1) What is a black body? Give the characteristics of a black body radiation.
- (2) What do you mean by photo electric effect? Write the main characteristics of photo electric effect.
- (3) What is Compton effect? Derive the expression for the change in wavelength of scattered X-rays.
- (4) Establish Schrodinger's time independent equation for a particle. Give physical interpretation of wave function.

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Physics Hon. Sem. IV (2019, 2022)

Core paper (10)

Answer any two questions

2x5 = (10)

- ① Describe with block diagram the construction and working of a C.R.O.
- ② Distinguish Analog circuit and Digital circuit
- ③ Describe with truth table different types of basic logic gates.
- ④ What is Boolean Algebra? Write the main laws of Boolean Algebra.