



# MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF PHYSICAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (TELECOMMUNICATION AND INFORMATION TECHNOLOGY)

SCH 200: ATOMIC STRUCTURE AND BONDING

DATE: 29/4/2019

TIME: 2.00-4.00 PM

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## INSTRUCTIONS TO CANDIDATES

*Answer Question One [Compulsory] And Any Other Two Questions.*

### USEFUL CONSTANTS:

$$\epsilon_0 = 8.854 \times 10^{-12} \text{ Fm}^{-1}$$

$$N_0 = 6.023 \times 10^{23} \text{ mol}^{-1}$$

$$1 \text{ eV} = 1.602 \times 10^{-19} \text{ J}$$

$$h = \text{Planck's constant} = 6.626 \times 10^{-34} \text{ J.s}$$

$$m = \text{mass of electron} = 9.1079 \times 10^{-31} \text{ kg}$$

$$e = \text{electronic charge} = 1.602 \times 10^{-19} \text{ C}$$

$$R = 109677.8 \text{ cm}^{-1}$$