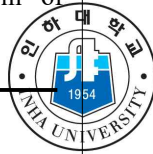


2021 IUT Admission Test(SOCIE)
Physics Examination (Sample)

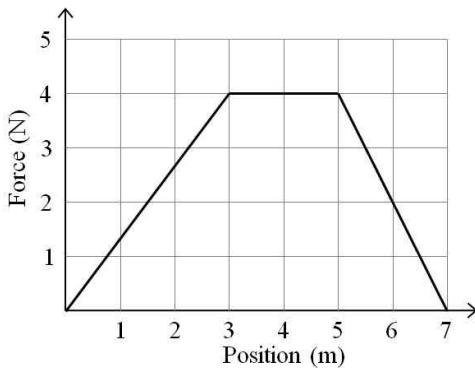
<Essay Types> Applicants should write detailed solving process. If there is no solution, you will receive 0 points regardless of the correct answer.

- The point for each question is indicated next to each question number.
- Be sure to use SI units (the international system of units) for all physical quantities.



8. [10 points]

A 5-kg block moves in a straight line on a horizontal frictionless surface under the influence of a force that varies with position as shown in the following figure. How much work is done by the force as the block moves from the origin to 7 m?



9. [10 points]

What is the wavelength of an electromagnetic wave with a frequency of 2.0 GHz? (Note that the speed of the electromagnetic wave is 3.0×10^8 m/s.)

10. [10 points]

In the circuit shown below, determine the power dissipated in the 4- Ω resistor.

