



Daffodil International University
Department of Computer Science and Engineering

Faculty of Science & Information Technology

Midterm Examination, Summer 2021 @ DIU Blended Learning Center

Course Code: PHY113/PHY114 (Day/Evening), Course Title: Physics I

Level: 1 Term: 1 Section: Retake(Old)/ Diploma

Instructor: SSK Modality: Open Book Exam

Two and half hours (2:30) to support online open/case study based assessment Marks: 25

1. (a) Which factors are associated with the change of momentum of any object? 2+3
(b) Write down the positive effects of frictional force in real life mechanics.

2. (a) A golf ball is hit from the ground at 30m/s at an angle of 60° . The ground is level. (i) How long is the ball in the air? (ii) What is the maximum height of the ball? 2+3
(b) How can you measure the resultant velocity of any projectile body?

3. (a) How can you find out the energy of any electromagnetic radiation? 2+3
(b) What is the viscosity of any liquid? How it affects the flow through the fluid?

4. (a) Calculate the path difference for nodes and antinodes in the formation of stationary wave. 4+1
(b) Which equation is used to find out the displacement of any progressive wave?

5. (a) How can you observe the combination of any two simple harmonic vibrations? 3+2
(b) Which law governs the mechanism of simple harmonic motion? Explain it mathematically.