Assignment 1 (Wednesday, 17 June 2020)

Due date: Monday, 22 June 2020 before 8.30 AM.

ส่งได้ทั้งในรูปแบบเขียนลงกระดาษ (ไม่ต้องลอกโจทย์) แล้วถ่ายรูป หรือใช้ ipad เขียนลงในไฟล์นี้แล้วส่งไปที่ email: ariyaphol.ji@ssru.ac.th

Problem 1:   The position of a particle of mass m = 2.0 kg is given by the expression

$$x = 0.1 \sin (\pi t)$$

where x is in meters and t is in seconds. Determine

a) the amplitude of the motion

b) the angular frequency

c) the frequency and period of the motion

d) the position of the particle at t = 1.0 s.

e) the time at which the particle is located at x = 0.05 m.

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   f) the velocity as functions of time

   g) the velocity of the particle at t = 1.0 s.

   h) the acceleration as functions of time

   i) the acceleration of the particle at t = 1.0 s.

   j) the maximum velocity

   k) the maximum acceleration

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l) the velocity of the particle at x = 0.05 m.

m) the acceleration of the particle at x = 0.05 m.

n) the total energy at the equilibrium position (x = 0 m).