VISAYAS STATE UNIVERSITY

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# TABLE OF SPECIFICATIONS

Phys 32 – Wave Mechanics and Optics

*1st Semester AY 2021-2022*

Examination: _X_ Midterm ____Final

Date of Examination: November 17, 2021

| Content | No. of Meetings | Course Outcome/Learning Outcome (CO/LO) | % | Taxonomy of Objectives | | | | | | Total Items |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Remembering | Understanding | Applying | Analyzing | Evaluating | Creating | |
| | | | | 46% | 36% | __% | 18% | __% | __% | |
| Periodic Motion | 1 | 1. Describe the force in an elastic spring.<br>2. Determine the energy stored in an elastic spring.<br>3. Compare simple harmonic motion and the motion of a pendulum. | 14.3% | 7 | 4 | | 7 | | | **18** |
| Wave Properties | 1 | 1. Identify how waves transfer energy without transferring matter.<br>2. Contrast transverse and longitudinal waves.<br>3. Relate wave speed, wavelength, and frequency. | 14.3% | 10 | 4 | | 4 | | | **18** |
| Wave Behavior | 1 | 1. Relate a wave's speed to the medium in which the wave travels.<br>2. Describe how waves are reflected and refracted at boundaries between media.<br>3. Apply the principle of superposition to the phenomenon of interference. | 14.3% | 12 | 5 | | 1 | | | **18** |
| Properties and Detection of Sound | 1 | 1. Demonstrate the properties that sound shares with other waves.<br>2. Relate the physical properties of sound waves to our perception of sound.<br>3. Identify some applications of the Doppler effect. | 14.3% | 6 | 8 | | 4 | | | **18** |
| The Physics of Music | 1 | 1. Describe the origin of sound.<br>2. Demonstrate an understanding of resonance, especially as | 14.3% | 7 | 10 | | 1 | | | **18** |