**Guitar Necks and Truss Rod PRE-ASSESSMENT**   
This assessment is to be taken before completing the Guitar Necks and Truss Rod activity

Student Institute ID\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Faculty Institute ID\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 1. | Using the neck model provided, placing a fixed surface on the neck pocket. Using a 3D modeling software determine the Head stock forces needed to get a displacement of about .15 inches displacement distance at the end of the head stock.  Select your closest answer  Using 6 pounds of force on the fretboard at fret 9, and 100 pounds of string tension force at the head stock, what is the vertical LB force that gets the vertical head stock displacement at .15? (2 points) |
|  | 3 Lbs Force if the force is applied at the top of the head stock  5Lbs Force if the force is applied at the top of the head stock  4 Lbs Force if the force is applied at the Bottom of the head  6 Lbs Force if the force is applied at the Bottom of the headstock  8 Lbs Force if the force is applied at the Bottom of the headstock |
| 2. | What direction is turned on the truss rod to place a valley (Relief) in the neck? (1 point) |
|  | Clockwise  Counterclockwise |
| 3. | Playable string tension has a role in the overall compression relief that is placed on the neck? (1 point) |
|  | True  False |
| 4. | What is Compression? (1 point) |
|  | when an object gets heated and expands  Occurs when objects are pushed together  Occurs when areObjects pulled apart  Occurs when objectsare being affected by gravity |
| 5. | What is Tension? (1 point) |
|  | Cross sectional area of an object  Occurs when objects are pushed together  Occurs when objects are pulled apart  Occurs when objects are being affected by gravity |
| 6. | Please match the letter with the equation meaning. (4 points) |
|  | \_\_\_\_\_ E  \_\_\_\_\_ M  \_\_\_\_\_ V  \_\_\_\_\_ δ    a. Deflection  b. Shear  c. Modulus of Elasticity  d. Moment |
| 7. | Fret 12 is the center of what? (1 point) |
|  | Neck  Scale length  The whole guitar  Fretboard |
| 8. | What is the neck relief target distance at fret 9?  (2 points) |
|  | .010 - .015 in  .020 - .030 in  .20 - .30 in  .10 -.15 in  0-.10 in |
| 9. | The XYZ Glyph has specific standardized colors what color is the Y axis? (1 point) |
|  | Black  Red  Blue  Green  Yellow |
| 10. | Fret 9 is the center of what? (1 point) |
|  | Neck  Body  Scale Length  whole guitar |