Blitz, Light, Chs 14-16 Form T-Z

Name _____ Per____

You may use your Notes, PowerPoint, or Text on this exam but NO help from human beings! You MUST HAND WRITE THESE EXAMS in INK!! NO PRINTED or PENCIL PAPERS WILL BE ACCEPTED! EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES! MATH CALCULATIONS MUST SHOW THE Hup, Two, Three, Four.

1. Illustrate the FIVE cases of *OBJECTS* and *IMAGES* in the *CONCAVE MIRROR*.

2. Illustrate and explain FIVE sources of light.

3. Diagram a *telescope* and show how the object produces its images.

4. Diagram and explain *Plane Polarization* of Light and give a practical example of its use.

5. Illustrate and explain why we have *Blue Skies* and *Red Sunsets*.

6. Define these terms: *Rectilinear Propagation*, *Reflection*, *Refraction*, *Interference*, *Diffraction*.

7. Illustrate and explain how the *Umbra* and *Penumbra* cause a *Total* and *Partial Eclipse* of the Sun.

8. Diagram and explain how *Michelson* measured the *Speed of Light* using an octagonal mirror system between two California mountains.

9. What was Maxwell's big discovery about light and what did the *Quantum Theory* contribute to the theories of light?

10. Diagram and explain how the *LASER* works. Give two practical uses for it.

11. Diagram and explain why the moon glows red when totally eclipsed.

12. Describe how the *Doppler Effect* applies to light. What two things does it show us about stars?

13. Diagram and explain how primary and secondary rainbows are formed.

   SHOW YOUR METHOD OF SOLUTION TO THESE PROBLEMS, (The 1, 2, 3, 4).

14. Equal illumination is caused by a 14 cd source at 50 cm and an unknown light at 82 cm. Find the intensity of the unknown.

15. An object 25 cm high is placed 80 cm from a concave mirror, focal length 40 cm. Calculate a) the location of the image, and b) the height of the image.

When finished, STAPLE this exam onto your papers and turn it in on the due date.