Mental Workload Study Questions

1. Using the five criteria for evaluating mental workload assessment techniques, write a “report card” for the physiological approach. [or any of the other approaches specified by the prof.]

2. What strategies can one employ to increase the sensitivity of primary task measures of mental workload.

3. Describe the theoretical relationship between operator workload and task performance. Use this relationship to describe the major problem associated with using primary task performance to estimate mental workload demands.

4. Describe the Subjective Workload Assessment Technique (SWAT). Discuss its unique properties that distinguish it from other subjective assessment techniques. [Same question for NASA-TLX]

5. Describe the four major approaches to mental workload assessment. Note the relative strengths and weaknesses of each approach.

6. Describe the role of memory in the implementation of subjective mental workload assessment techniques.

7. Describe four physiological indices of mental workload and discuss the assumptions linking each to the mental workload construct.

8. Which approach to mental workload assessment has the most diagnostic power? Fully justify the rationale behind your selection.

9. How would you go about demonstrating the mental workload costs of conversing on a cell phone while attempting to safely operate an automobile?

10. Discuss the major assumptions inherent in the subsidiary task approach to measurement of mental workload.


12. Describe two loading tasks that would partially deplete (1) visual-spatial cognition and (2) verbal-symbolic cognition (re: Wickens’ cube). Provide a rationale to support your selections.