

Spring 2009

1. This question pertains to the evolution and/or revolution of academic perception and sentiment concerning scholarly research employing the TAM model and associated models (models developed using the TAM or one of its descendents as a base).

*Please answer the following related questions. Cite pertinent literature wherever possible (author(s), journal, year is sufficient). In parts 'A' and 'B' I want you to judiciously choose your points and be brief. Half of the credit for this question is part 'C' so be **certain to leave time to answer that part completely***

- a) (25%) *Briefly* describe the initial goals of Davis' Technology Acceptance Model (TAM) when it was first introduced in the late 1980's (no reason to describe the model itself except as and if needed to answer other questions).
- b) (25%) *Briefly* describe how research has shaped, extended, and/or modified the original model and conclusions over the last 20 years. Focus on the major trends in this research (rather than specific studies) using examples where appropriate.
- c) (50%) What are the current (approximately the last 5 years) main "schools of thought" concerning the TAM? Describe who are amongst those researchers in each school and what their main point(s) is/are. Finally, based on your understanding of these schools of thought and the history of research in this area, if *you* were embarking on research in this area now, which school(s) would you be most likely to employ? **Why?**

2. This is a three-part question, (a), (b) and (c).
 - a) Discuss reliability. What is its importance in measuring variables for empirical studies? How can it be measured? What steps can be taken to improve reliability? Thinking mainly of designed experiments, Kerlinger and Lee (2000) mentioned the maxmincon principle. How would you explain that principle?
 - b) List and discuss the kinds of validity. What measures can be used to assess these? Discuss the relationship between reliability and validity.
 - c) Discuss 2-3 research methodologies, or general approaches to research. How does each attempt to achieve or demonstrate validity in its results? Mention some distinctive strengths and weaknesses of each approach.

3. Write your answers providing support and thoroughly describing the concepts in your own words. Cite at least five papers from the predesignated readings and five from your own readings (you must be able to provide full citations later, not needed during the exam). Now answer the questions succinctly:

1. Begin by drawing a model linking CDP, DM, and MCS. ***Identify*** (no need for explanation) the constructs and their relationships.
2. What is customer demand planning (CDP)? Explain thoroughly. Differentiate personalization, mass customization, and mass production strategies. Using literature support, *arrive at one (at least) key proposition (each) linking customer demand planning to each of the three mass customization strategies (MCS).*
3. ***Tabulate*** each data mining (DM) class, namely classification, clustering, regression, association rule-based reasoning, and neural networks based on two strengths and two weaknesses. How does DM help when dealing with CDP uncertainty? *Arrive at at least three propositions linking DM to CDP uncertainty.*

4. This is a two part question:

- a) Research design is often governed by positivist or interpretivist philosophies. Tabulate the core differences (explain) between the two and point to (and explain) at least two strengths and two weaknesses.
- b) In light of the alignment model, explain how you would investigate it using a positivist paradigm. Explain each construct in your model thoroughly supported by at least two references each. Arrive at a core set of propositions substantiated by at least three references (each) that lead to your conviction on the existence and direction (+/-) of each of the three relationships.

5. Answer the following questions in order:
- a) How is the Open Source Software (OSS) process fundamentally different from other software production processes? What are the key characteristics that define OSS? Why does OSS even exist?
 - b) What aspects of software production allows the open source process to be successful?
 - c) Now, define a domain of interest different from software production.
 - d) Apply the OSS process to this newly defined domain. Using both your understanding of OSS and your domain, critically illustrate how the OSS process can be applied to this domain. What limitations do you foresee? Define both your domain and the application of OSS process to this domain in enough detail so that your understanding of the subject matter is clear to the reader.