TUTORIAL DISCUSSION (4)

1. An experienced project leader has identified 6 SRIs inherent in his project and estimated their Est(dam) and Prob(mat). The results are listed in the following table:

No.	SRIs	Prob(mat)	Est(dam) $
1	Networking at the customer's 23 sites will not be completed on time	0.2	150,000
2	Subcontracted modules will fail the acceptance tests	0.5	12,000
3	The programming team will be 2-3 programmers short for more than 2 months	0.7	50,000
4	The software quality assurance activities will fail to detect major software errors in the complicated discount module; these errors will be discovered by the customer during the guarantee period	0.05	600,000
5	The final test of the user's guide will detect significant errors that will cause a delay of more than 2 weeks in delivery to the customer	0.3	2,500
6	The planned server's capacity will be found insufficient in the final system tests	0.25	40,000

   a) Determine the priorities for these SRIs.

   b) Can you suggest an alternative method for prioritizing the SRIs?

   c) Determine the SRI priorities according to the alternative method. Compare the resulting priority list with that obtained in (a), and discuss the implications of the differences, if any.

2. With respect to verification, validation and qualification:

   a) Explain the differences between these three aspects of SQA activities.

   b) Can a project that successfully passed verification and validation reviews but failed part of the qualification review adequately supply users with the information needed? Explain your answer.

   c) In which respects is the project described in (2) inferior to a project that passed all three reviews? In what way will this difference affect operation of the software system?

3. Consider the expected severity of software system failure.

   a) What are the main issues that cause the degree of severity?

   b) Referring to your answer to (1), can you list three examples of software development projects displaying highly severe failures?

   c) Referring to your answer to (1), can you list three examples of software development projects displaying low severity failures?