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INCOSE Certification Program Knowledge Exam Update 2015

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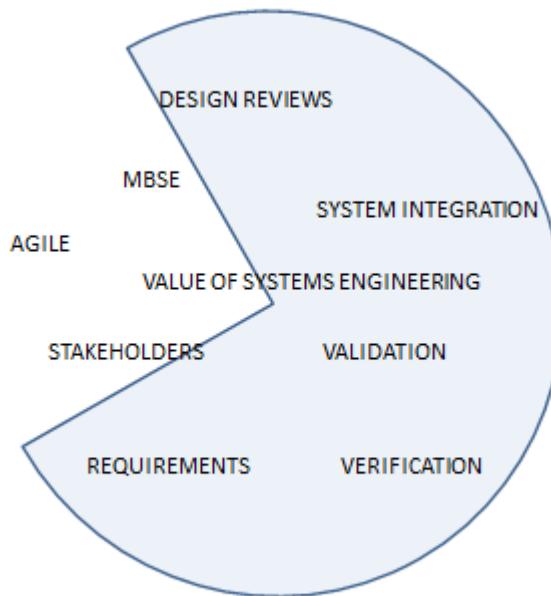
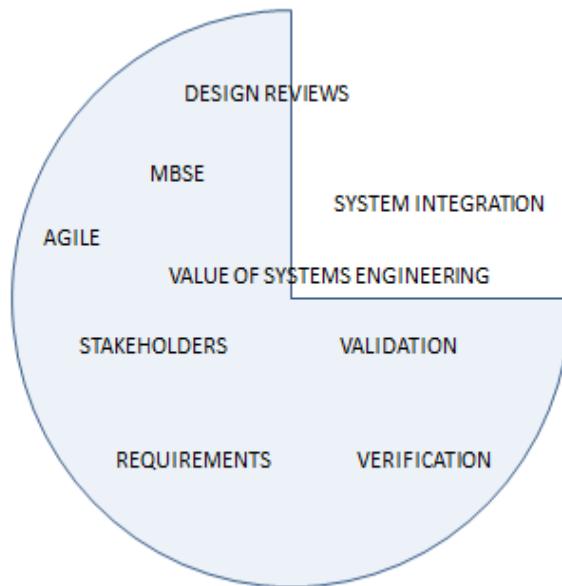


Background

- What problem were we solving?
- How was it different from previous problems?

Body of Knowledge

- INCOSE SE Handbook version 4, which aligns to ISO/IEC 15288



Exam Format

- 120 questions to be completed in 2 hours
- If more than one answer is correct, the number of correct answers is stated in the question. (e.g., “choose three”)
- All questions are written in multiple-choice format.
- All correct answers are traceable to handbook version 4.
- All statements are positive, avoiding the word “not.”
- Text is reviewed by non-native-English speakers to confirm its readability.
- Acronyms are rarely used.

Process

- Engaged testing experts (psychometricians)
- Defined volunteer roles
- Recruited volunteers (SEPs)
- Assigned roles and tasks to volunteers
- Identified beta exam events
- Hosted beta events
- Evaluated beta exam test results to determine which questions to score
- Evaluated individual results against scored items on beta exams
- Updated exam questions
- Sent updated questions to Prometric

Sample “Bad” Question 1

What is the purpose of the Operation Process?

- A. plan for system disposal
- B. optimize the maintenance process
- C. ensure the quality of user training
- D. use the system to deliver its services



Why Question 1 is Bad

- In the beta exams, 94% of the candidates got this question right.

Source:

- The correct answer, D, came from section 4.12.1.1 in the INCOSE Systems Engineering Handbook version 4.

Sample “Bad” Question 2

What are three purposes of Technical Performance Measures (TPMs)? (Choose three)

- A. Assess system quality.
- B. Assess design progress.
- C. Assess cost and schedule.
- D. Enable effective management.
- E. Monitor a set of critical requirements.

Why Question 2 is Bad

- In the beta exams, 17% of the candidates got this question right.

Source:

- The correct answers, B, D, and E, come from section 5.7 in the INCOSE Systems Engineering Handbook version 4.

Sample “Bad” Question 3

Which are outputs of the Disposal Process?

- A. Disposal Concept, Operation Analysis, Disposed System
- B. Disposal Strategy, Disposal Constraints, Operation Report
- C. Life Cycle Strategy, Validated System, Disposal Concept of Operations
- D. Disposal Enabling System Requirements, Disposal Report, Disposal Record

Why Question 3 is Bad

- The success rate for native English speakers was over 90%, while the success for non-native-English-speakers was less than 50%.

Source:

- The correct answer, “D”, comes from section 4.14.1.2 in the INCOSE Systems Engineering Handbook version 4.

Future Considerations

- Alternate paths to meet INCOSE certification requirements
 - University coursework as alternative to knowledge exam (based on GfSE equivalency model)
- Paper testing at INCOSE events, like beta exam