CMSE-201 problem session 18.03.2024

Ch 1. Introduction

1. What are the five indicators that a project goes wrong?
2. What is software?
3. What are the attributes of good software?
4. What is software engineering?
5. What are the five fundamental software engineering activities?
6. What is the difference between software engineering and computer science?
7. What is the difference between software engineering and system engineering
8. What are the three key challenges software engineering faces?
9. What are the three main contributors to the cost of software engineering?
10. What are the best software engineering techniques and methods?
11. What are challenges of web-oriented software engineering?
12. What is the difference between generic and custom software?
13. What software maintainability is?
14. What software dependability and security is?
15. What software efficiency is?
16. What software acceptability is?
17. What are the four reasons for software change?
18. What are the eight types of software systems?
19. What are the eight ACM/IEEE ethical principles?

Ch 2-A. SDLC models

1. What are the four general activities of a software process?
2. What are the ten detailed SDLC activities?
3. What the waterfall model is? Its benefits? Deficiencies?
4. What the incremental development model is? Its benefits? Deficiencies?
5. What the integration and configuration model is? Its benefits? Deficiencies?
6. What are the three types of reusable software?
7. What the V-shaped model is? Its benefits? Deficiencies?
8. What are the four phases of rapid application development (RAD) model? RAD benefits? Deficiencies?
9. What is the spiral development model? Its benefits? Deficiencies?
10. What are the features of Agile development SCRUM model?

Ch 3. Requirements engineering

1. What are the functional, non-functional and domain requirements?
2. What are the user and system requirements?
3. What is the use-case diagram? What are its elements?
4. What are four types of system stakeholders?
5. What are the three types of non-functional requirements?
6. What is the verifiable non-functional requirement?
7. What are the four phases of requirements elicitation and analysis process?
8. What are the five problems of requirements elicitation?
9. What are the two types of interview? Explain them
10. What are the five parts of a scenario description?
11. What are the five ways of writing requirements?
12. What are the problems with natural languages?
13. What the structured specification is?
14. What are the seven parts of a function description?
15. What the tabular specification is? Give an example
16. What the software requirement specification is?
17. What the requirement validation is?
18. What five checks are to be used in requirements validation?
19. What is the traceability of a requirement?
20. What are the four steps of requirements change?

Ch 4. Project management

1. What are the main three reasons for SW project management?
2. What are the four success criteria of the SW project management?
3. What are the three main difficulties of SW project management?
4. What are the six main factors influencing project management?
5. What are the five main activities of a SW project manager?
6. What are the three classes of risks for SW project management by impact?
7. Give at least one example of project, product, and business risks
8. What are the four risk management processes? What are the outcomes of each such a process?
9. What are the five types of risks?
10. What scales are used to measure risk probability and consequences?
11. What are the main three strategies in risk management?
12. What is the method of risk definition?
13. What are the indicators for estimation risks?
14. What are the indicators for organizations risks?
15. What are the indicators for people risks?
16. What are the indicators for requirements risks?
17. What are the indicators for technology risks?
18. What are the four main people management factors ?
19. What are the three types of people motivation?
20. What are the three personality types?
21. Explain the meaning of the statement: “A good group is consistent and has a team spirit”. What is group consistency? Team spirit?