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Question Paper Code : 85526

M.B.A. DEGREE EXAMINATION, FEBRUARY 2012.

Elective

DBA 1728 — SOFTWARE PROJECT AND QUALITY MANAGEMENT

(Regulation 2007/2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How do linear and iterative process models differ?

2. What are the advantages of prototype model?

3. What issues should we consider when we plan to reuse existing software Components?

4. What are the categories of risk in software project?

5. Differentiate between high level and low level design?

6. What are the different software maintenance activities?

7. What is Software quality control?

8. What is defect amplification and removal?

9. Differentiate between personal software process and Team software Process?

10. What are the advantages of CMM over ISO 9000?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Assume that you have been appointed a project manager within an information systems organization. Your job is to build an application that is quite similar to others your team has built, although this one is larger and more complex. Requirements have been thoroughly documented by the customer. What team structure would you choose and why? What software process model(s) would you choose and why? (8)

(ii) Assume that you have been appointed a project manager for a major software products company. Your job is to manage the development of the next generation version of its widely used word - processing software. Because competition is intense, tight deadlines have been established and announced. What team structure would you choose and why? What software process model(s) would you choose and why? (8)

Or

(b) Compare and contrast the software process models? Why does the linear sequential model sometimes fail? What are the drawbacks of RAD model? Compare the benefits and drawbacks of the software models? (16)

12. (a) (i) Develop a list of software characteristics (e.g., concurrent operation, graphical output) that affect the complexity of a project. Prioritize the list. (8)

(ii) Assume that you are the project manager for a company that builds software for consumer products. You have been contracted to build the software for a home security system. Write a statement of scope that describes the software. (8)

Or

(b) Explain project planning and tracking? Performance is an important consideration during planning. Discuss how performance can be interpreted differently depending upon the software application area?(16)

13. (a) (i) Suggest a set of detailed guidelines for requirements Elicitation? (8)

(ii) Describe how project management for Web-based systems and applications differs from project management for conventional software. How is it similar? (8)

Or

(b) Explain the project management in testing phase? What guidelines lead to a successful software testing? (16)

14. (a) (i) Compute the function point value for a project with the following information domain characteristics (8)

Number of user inputs: 32

Number of user outputs: 60

Number of user inquiries: 24

Number of files: 8

Number of external interfaces: 2

Assume that all complexity adjustment values are average.

(ii) Explain Statistical software quality assurance? What steps are required to perform statistical SQA? (8)

Or

(b) Explain the various reliability models used for ensuring quality? (16)

15. (a) What are the major types of quality factors that are being considered as part of product quality? You are developing an on-line banking system to be integrated with the core banking system. Explain the relevance of each of the quality factors and suggest good approaches to ensure desired outcomes? (16)

Or

(b) (i) Explain the People capability maturity model? How do PCMM and CMMI differ? (8)

(ii) Explain constructive cost model? How do you compute the basic constructive cost model? (8)
