

1.2 SOFTWARE & SOFTWARE DEVELOPMENT · 1.2.3

Software development methodologies

Original practice questions · 36 marks · about 50 minutes · spec 1.2.3(a)(b)

Instructions. Answer all questions. The number of marks is shown in brackets []. Quality of written communication is assessed in the extended-response question.

1 Total: 4 marks

This question is about software development.

(a) State what is meant by a software development methodology. [1]

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.....

(b) State **three** stages of the software development lifecycle. [3]

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2 Total: 6 marks

This question is about the waterfall lifecycle model.

(a) Describe the waterfall lifecycle model. [3]

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(b) State one type of project for which the waterfall model is suitable. [1]

.....

(c) State one drawback of the waterfall model. [2]

.....

.....

3

Total: 5 marks

This question is about agile methodologies.

(a) Explain what is meant by agile methodologies. **[2]**

(b) Explain why an agile approach copes well with changing requirements. **[3]**

4

Total: 4 marks

This question is about extreme programming (XP).

(a) Explain what is meant by extreme programming. **[2]**

(b) Describe one feature of XP and how it helps the development. **[2]**

5

Total: 5 marks

This question is about the spiral model and RAD.

(a) Describe the spiral model. **[2]**

(b) State one type of project for which the spiral model is suitable. **[1]**

(c) Describe the Rapid Application Development (RAD) process. **[2]**

A software company is starting a project for a client whose **requirements are likely to change frequently** during development. It is choosing between **extreme programming** and the **waterfall lifecycle** model.

[12]

END OF QUESTIONS