2.2 Critical Path Analysis: Network Diagrams and the Critical Path: 10-minute Pack

AQA 7132 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions in the spaces provided. Show working for every calculation.

1 Which one of the following best describes the critical path in a project network diagram?

- ☐ A) The path with the greatest number of activities
- ☐ B) The sequence of activities that has the longest total duration and zero float
- ☐ C) The path that finishes first
- ☐ D) The sequence of activities with the smallest durations

(Total for Question 1 is 1 mark)

2 State the meaning of 'float' (also called slack) for an activity in a network diagram.

(Total for Question 2 is 1 mark)

3 Identify one benefit of using critical path analysis (CPA) for project planning in a small business.

(Total for Question 3 is 1 mark)

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4 State two limitations of critical path analysis as a planning tool.

(Total for Question 4 is 2 marks)

5 Name the two passes used in critical path calculation and state briefly what each pass finds.

(Total for Question 5 is 2 marks)

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Mark scheme · 2.2 Critical Path Analysis: Network Diagrams and the Critical Path: 10-minute Pack

Question 1

B cao **B1**

Answer: B

Question 2

float is the amount of time an activity can be delayed without delaying the project completion **B1**

Answer: Float is the amount of time an activity can be delayed without delaying the project completion date.

Question 3

identifies a correct benefit, e.g. shows the shortest possible completion time or helps prioritise resources **B1**

Answer: Shows the shortest possible project completion time and helps prioritise resources for critical activities.

Question 4

it requires accurate duration estimates which may be hard to predict **B1**

it ignores some qualitative risks and resource conflicts unless these are modelled separately **B1**

Answer: It needs accurate duration estimates which may be hard to predict; it can ignore qualitative risks and resource conflicts unless modelled separately.

Question 5

forward pass, which finds earliest start and earliest finish times **B1**

backward pass, which finds latest finish and latest start times **B1**

Answer: Forward pass finds earliest start and earliest finish times; backward pass finds latest finish and latest start times.

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