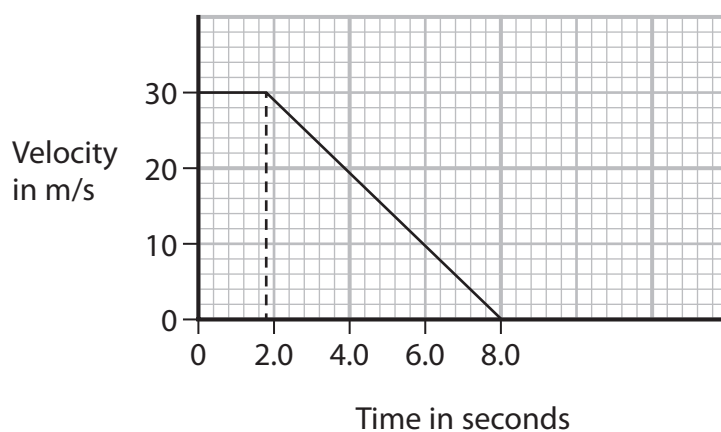


- 4 The diagram shows a velocity-time graph for a car from the time the driver sees an obstacle in the road until the car comes to rest.



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- (a) (i) Calculate the acceleration of the car between 1.8 and 8.0 seconds.

(3)

acceleration = m/s²

- (ii) Calculate the braking distance of the car.

(3)

braking distance = m



(iii) Explain the effect, if any, of increased driver tiredness on the thinking distance and on the braking distance of the car.

(4)

thinking distance

.....

.....

.....

braking distance

.....

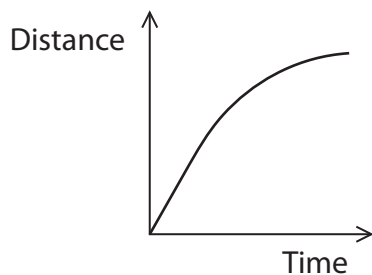
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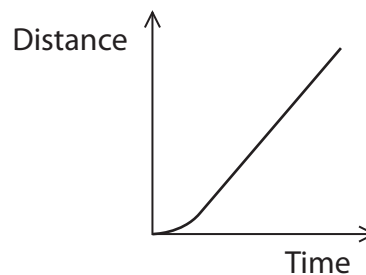
(b) Which of these represents the distance-time graph for the car?

(1)

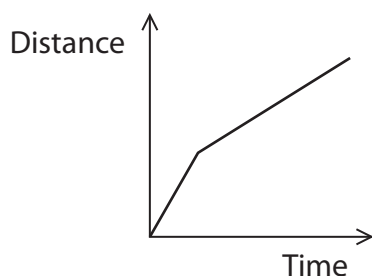
☐ A



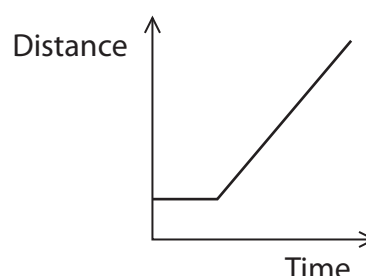
☐ B



☐ C



☐ D



(Total for Question 4 = 11 marks)



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