The Logistics of 50 per cent

You are going to listen to a 12 and a half minute interview with Frank Szanto, a mechanical engineer based in Sydney. He discusses the history and future of the Australian rail system.

Presenter: Robyn Williams

Audio Source:

https://www.abc.net.au/radionational/programs/ockhamsrazor/the-logistics-of-5025/4620576

Listen to the recording and do the activities below.

Questions 1 - 2

1. How long was the gridlock South of Nowra on the last day of Easter?

2. South of Kiama?

Questions 3 - 13

Listen to the next segment and fill in the gaps with a missing word. You should use only one word per gap.

Please note, the passage below is very close to the recording and only some sentences have been changed.

Frank Szanto: On the evening of 3 February 2003, after a ^{3}_____ electric train reached the end of its ^{4}_____ at Broadmeadows station, north of Melbourne, the driver started shutting down the controls, but got ^{5}_____. As a result, the procedure was not completed correctly, which allowed the brakes to slowly ^{6}_____.

When the driver ^{7}_____ from the loo three minutes later, he saw his train ^{8}_____ out of the station. As the almost ^{9}_____ incline gradually became steeper, the train began to ^{10}_____. About 15 hair-raising minutes later, after reaching speeds in ^{11}_____ of 100 km/h, it crashed into another train, in the ^{12}_____ of the city. Fortunately, there were no ^{13}_____ or major injuries.

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14. How does this story demonstrate the eco efficiency of rail transport?

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15. How much CO_2 would a train going back to Broadmeadows with a load of 800 passengers emit, compared to a fleet of buses carrying the same passenger load?

16. What is the reason behind the train comeback in most Australian cities?

17. What is the main mode for transporting goods between the capital cities and what is the overall trend?

Questions 18 - 24

Listen to the next segment and fill in the blanks with the numbers. Use one number per gap.

B-double. Image source:
http://www.hankstruckpictures.com/pix/trucks/r_mohr/volvo_fl12_b
_double_at_warwick.jpg

What does this mean in terms of fuel? A B-double truck may travel Melbourne to Sydney in under **18**_____ hours, consuming around **19**_____ litres of diesel fuel to carry a **20**_____ -tonne load. A pair of modern diesel locomotives may haul **21**_____ times this load for **22**_____ litres of fuel. In this case, rail has an efficiency advantage of over two to one. The carbon dioxide released is proportional to the fuel used. While the truck emits around **23**_____ kg of CO_2, for the same load, the locomotives emit **24**_____ kg.

25. How much fuel can be saved if all the freight between Sydney and Melbourne were moved by rail?

26. What is the most obvious advantage of road transport over rail transport?

27. Realistically, how much of market share can rail transport hope to capture?

28. Surprisingly, according to Frank Szanto, it takes trucks 9 hours to do the Sydney to Melbourne run while train takes 13 hours. What is the reason/s behind the difference in time?

Questions 29 - 36

There are four issues that need to be addressed if a government decided to commit to rail. Give the *reasons for those issues* and what steps *should be taken to tackle them*.

Pricing Inequities.

29. Reasons: _____

30. Remedies:

_____

Capacity to handle more intercity freight trains.

31. Reasons: _____

32. Remedies: _____

The curfew on freight trains.

33. Reasons: _____

34. Remedies: _____

Track alignment

35. Reasons: _____

36. Remedies: _____

37. What would happen if one of the ideas is neglected?

38. According to Frank Szanto, what can help unit costs decrease?

Questions 39 -40

39. If Australia was to upgrade the rail to match the Pioneer Zephyr of 1934, how long would a

trip from Sydney to Melbourne would take?

40. How long does it take now?