Expected Questions

1 **(a)** All variables, constants and other identifiers must have meaningful names.

(i) State **two** arrays you used for **Task 1**. State the data types and purpose of these arrays.

Array: .....

Data Type: .....

Purpose: .....

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Array: .....

Data Type: .....

Purpose: .....

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[4]

(ii) Describe, with the aid of a snippet of your solution for **Task 2**, how **one** of the arrays in **part (i)** is used to update the train data.

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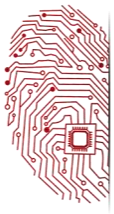

Expected Questions

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[4]

(b) Explain, with an example, how your code for **Task 2** ensures that the tickets purchase being made is valid, i.e. there are enough tickets available to be purchased.

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[5]

Expected Questions

(c) State and describe the effect caused on the data structures and their values used within your code by the 1600 return train having two extra coaches.

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[2]

(d) The train company requires you to use the following identifiers in your code for their specific data structure(s):

`leaveTrainPass`: array used to store the number of passengers on each departure train.

`leaveTrainTotal`: array used to store the total money taken for each departure train.

`returnTrainPass`: array used to store the number of passengers on each return train.

`returnTrainTotal`: array used to store the total money taken for each return train.

Write a pseudocode algorithm for **Task 3**. Implement the use of these identifiers to their relevant corresponding data structures.

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Expected Questions

[6]

Expected Questions

(e) Write an algorithm for **Task 2**, using **either** pseudocode, programming statements **or** a flowchart. Assume that **Task 1** has been completed.

Expected Questions

[5]

Expected Questions

(f) Explain the changes necessary to the solution for **Task 1** in order to also display the total money saved by group discount on each train.

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[4]