**Week 1 - Assignment**

The cut-off date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

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### Question 1.1

<table>
<thead>
<tr>
<th>Material</th>
<th>WH/kg</th>
<th>WH/km</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>[a]</td>
<td>[8]</td>
</tr>
<tr>
<td>Coal</td>
<td>[6]</td>
<td>[4]</td>
</tr>
<tr>
<td>Wood</td>
<td>[2]</td>
<td>[1]</td>
</tr>
</tbody>
</table>

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1. [a] - No, the person is incorrect. Accepted Answers: Type: Range: 2000-3000

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2. [a] - No, the person is incorrect. Accepted Answers: Type: Range: 5000-10000

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3. [b] - No, the person is incorrect. Accepted Answers: Type: Range: 4000-7000

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4. [c] - No, the person is incorrect. Accepted Answers: Type: Range: 6000-7000

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5. [d] - No, the person is incorrect. Accepted Answers: Type: Range: 10000-15000

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6. [d] - No, the person is incorrect. Accepted Answers: Type: Range: 15000-20000

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7. Using the above process, compute the ratio of battery weight and petrol weight per km of travel by two vehicles (Correct up to 2 decimal places)

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8. U: Using the above process, compute the ratio of battery volume and petrol volume per km (Correct up to 2 decimal places)

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9. 1.2 A two-wheeler uses 25 WH/km. We need a battery with 60 km range.

10. Calculate the size of battery required (corrected up to 2 decimal places)

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11. Estimate the cost of the battery (use reasonable estimation when required). Use the data given in the lecture to reach to this answer.

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12. A 4.5 kWh battery costs Rs 10,000. The purchasing cost makes borrowing money from bank at interest rate of 12% per annum. The battery charged discharged once a day, lasts for 3 years to be depreciated over this time.

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**A.** 

1. Estimated cost of battery.

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2. PMT is approximated as

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3. Assume 40% per lakh as electricity charge, Battery 2 kWh is 0.25. Vehicle uses 20 WH/km. What is the fuel cost per km (Correct up to 2 decimal places)

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4. [b] - No, the person is incorrect. Accepted Answers: Type: Range: 10000-15000