Week 3 Assignment

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-03-20, 23:59 IST.

1) Match the following.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Propulsion control systems</td>
<td>i) Requirements</td>
</tr>
<tr>
<td>B) Propulsion system rating</td>
<td>ii) Component Level</td>
</tr>
<tr>
<td>C) Range</td>
<td>iii) System Level</td>
</tr>
</tbody>
</table>

No, the answer is incorrect.
Score: 0

Accepted Answers:
A)-i), B)-ii), C)-iii)

2) Match the following.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Range</td>
<td>i) Torque</td>
</tr>
<tr>
<td>B) Acceleration</td>
<td>ii) Power</td>
</tr>
<tr>
<td>C) Top Speed</td>
<td>iii) Energy</td>
</tr>
</tbody>
</table>

No, the answer is incorrect.
Score: 0

Accepted Answers:
A)-i), B)-ii), C)-iii)
4) Answer in True/False.
A) If the vehicle speed is doubled, the aerodynamic power required goes up by a factor of four.
B) Forward movement of the vehicle increases pressure on the backside of the tyres.
C) Mud road has higher rolling resistance compared to tar road.

No, the answer is incorrect.
Score: 0
Accepted Answers:
A)-False, B)-True, C)-False

5) If the speed of the vehicle is 36 km/Hr, find the angular velocity of the motor for a wheel diameter of 0.2 m and gear ratio of 10. Choose the correct option.

- 1000 radians/sec
- 500 radians/sec
- 10 radians/sec
- 50 radians/sec

No, the answer is incorrect.
Score: 0
Accepted Answers:
1000 radians/sec

6) Answer in True/False.
A) The motor speed is greater than wheel speed.
B) The output power of the motor is positive during hill climbing.
C) The wheel torque is lower than motor torque.

No, the answer is incorrect.
Score: 0
Accepted Answers:
A)-True, B)-True, C)-False

7) If the wheel diameter, gear ratio and speed of the vehicle are all doubled, what will be its effect on the rpm of the electric motor? Choose the correct option.

- It will become twice.
It will become half.
No change.
It will become four times.

No, the answer is incorrect.
Score: 0
Accepted Answers:
It will become twice.

8) A constant tractive effort of 10 N is applied for 0.5 Hr, and total energy of 1 kWhr is consumed in doing so. Find the average velocity of the vehicle during this period.

100 m/sec
50 m/sec
200 m/sec
20 m/sec

No, the answer is incorrect.
Score: 0
Accepted Answers:
200 m/sec

9) Answer in True/False.
A) The rolling resistance coefficient of railway track is higher than asphalt road.
B) The aerodynamic force coefficient of railway train is higher compared to motorcycles.
C) Presence of liquid on the road increases the rolling resistance of the road.

A)-True, B)-True, C)-False
A)-False, B)-True, C)-False
A)-False, B)-False, C)-True
A)-True, B)-False, C)-False

No, the answer is incorrect.
Score: 0
Accepted Answers:
A)-False, B)-True, C)-False

10) Match the following.

A) IC Engine
B) Electric Motor
C) Battery

Column 1 | Column 2
--- | ---
A) | i) Electrical
B) | ii) Chemical
C) | iii) Mechanical

A)-iii), B)-i), C)-ii)
A)-i), B)-ii), C)-ii)
A)-ii), B)-i), C)-iii)
A)-ii), B)-iii), C)-ii)

No, the answer is incorrect.
Score: 0
Accepted Answers:
A)-iii), B)-i), C)-ii)