Assignment 3

Due on 2019-06-21, 20:09 IST.

1) What is the typical carbon percentage in crude oil? [2 marks]
   - 85-88%
   - 65-78%
   - 55-65%
   - 45-55%
   
   Accepted Answer: 85-88%

2) What is the API gravity of medium oil? [2 marks]
   - Between 22.3° and 26.1° API
   - Between 14.3° and 18.1° API
   - Between 26.3° and 41° API
   - Between 41° and 80° API
   
   Accepted Answer: Between 22.3° and 26.1° API

3) What are the influencing factors for crude oil pricing? [2 marks]
   - Supply
   - Demand
   - Political/economic developments in the exporting / consuming countries
   - Weather conditions
   
   Accepted Answer: All of these

4) In what technique crude oil is separated? [2 marks]
   - Distillation
   - Fractional distillation
   - Dehydration
   - Sublimation
   
   Accepted Answer: Fractional distillation

5) The table shows the number of some hydrocarbons. Hexane has the lower isomer number of the four compounds listed. [2 marks]

<table>
<thead>
<tr>
<th>Compound</th>
<th>Isomer Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>25</td>
</tr>
<tr>
<td>C5H12</td>
<td>25</td>
</tr>
<tr>
<td>Kerosene</td>
<td>508</td>
</tr>
<tr>
<td>2,4-Dimethylpentane</td>
<td>508</td>
</tr>
</tbody>
</table>

   - Hexane has a straight chain.
   - It does not contain oxygen.
   - It does not contain lead.
   - Contains a ring structure.
   
   Accepted Answer: Hexane has a straight chain.

6) Equal volumes of gasoline and diesel oil which mixed at room temperature (during summer) was found to be completely miscible. It meant that the boiling point of the diesel is ________ to the room temperature. [2 marks]
   - higher as to lower as
   - Less than
   - More than
   - same as
   
   Accepted Answer: Same as

7) The API gravity of natural gas and kerosene are 65 and 55 respectively. Determine the difference in their specific gravity. [2 marks]
   - 0.678
   - 0.653
   - 0.185
   - None of these
   
   Accepted Answer: 0.185

8) Some amount of gasoline and kerosene is heated under specified conditions and these are mixed at 100°C. If the specific gravity of the kerosene is 0.86. Determine the density of the gasoline. [2 marks]
   - 0.657
   - 0.627
   - 0.787
   - 0.797
   
   Accepted Answer: 0.787

9) During distillation process, after condensation, the water droplets containing salt settle down in a beaker. How would you settle rate of these droplets change if the viscosity is reduced to one third times by increasing the temperature? [2 marks]
   - No change
   - Double
   - Triple
   - None of these
   
   Accepted Answer: None of these

10) The API gravity of West Texas Intermediate crude oil is 41.6. What will be volume of one metric tonne of this crude oil in barrel? [2 marks]
    - 77 barrel
    - 7.70 barrel
    - 770 barrel
    - None of these
    
    Accepted Answer: 770 barrel