Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1) The correct relationship between count [3] expressed in tex and denier is
   - $[\text{Tex} = 0.111 \times \text{Denier}]$
   - $[\text{Tex} = \frac{1}{3} \times \text{Denier}]$
   - $[\text{Tex} = 1200 \times \text{Denier}]$
   - $[\text{Tex} = 0.06 \times \text{Denier}]$

   Accepted Answers:
   - $[\text{Tex} = 0.111 \times \text{Denier}]$
   - $[\text{Tex} = \frac{1}{3} \times \text{Denier}]$
   - $[\text{Tex} = 1200 \times \text{Denier}]$
   - $[\text{Tex} = 0.06 \times \text{Denier}]$

   No, the answer is incorrect.
   Score: 0

2) From a geometrical point of view, the fineness or coarseness of a yarn should be judged by the size of the yarn. The size of a yarn can be characterized by the volume occupied by the fibers in a given length of yarn. With a view to this an experiment was carried out to compare the fineness of four yarns and the following result was obtained:

<table>
<thead>
<tr>
<th>Count (tex)</th>
<th>13</th>
<th>34</th>
<th>55</th>
<th>88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber density (kg/m³)</td>
<td>1140</td>
<td>1160</td>
<td>1170</td>
<td></td>
</tr>
</tbody>
</table>

   - $[\text{Vtex} = -0.15]$  
   - $[\text{Vtex} = 0.15]$  
   - $[\text{Vtex} = 0.21]$  
   - $[\text{Vtex} = 0.24]$  

   Accepted Answers:
   - $[\text{Vtex} = -0.15]$  
   - $[\text{Vtex} = 0.15]$  
   - $[\text{Vtex} = 0.21]$  
   - $[\text{Vtex} = 0.24]$  

   No, the answer is incorrect.
   Score: 0

3) Consider an idealized staple fibre yarn where all fibers are inclined at an angle of 20° from the axis of the yarn. The coefficient $k_y$ of this yarn is approximately

   - $[0.85]$  
   - $[0.91]$  
   - $[0.95]$  
   - $[1]$  

   Accepted Answers:
   - $[0.85]$  
   - $[0.91]$  
   - $[0.95]$  
   - $[1]$  

   No, the answer is incorrect.
   Score: 0

4) A cotton yarn of 16 tex count is prepared from fibers of 23 mm length, 0.12 tex fineness, and 1300 kg/m³ density. In this yarn, all fibers are inclined at an angle of 20° from the axis of the yarn. The number of fibers present in the cross-section of this yarn is approximately

   - $[67]$  
   - $[94]$  
   - $[100]$  
   - $[130]$  

   Accepted Answers:
   - $[67]$  
   - $[94]$  
   - $[100]$  
   - $[130]$  

   No, the answer is incorrect.
   Score: 0

5) Consider an idealized polyester yarn where fibers of 2 tex fineness and 110 kg/m³ density follow hexagonal packing arrangement. The center-to-center distance between fibers is 20 µm. The packing density of the yarn is approximately

   - $[0.37]$  
   - $[0.43]$  
   - $[0.49]$  
   - $[0.54]$  

   Accepted Answers:
   - $[0.37]$  
   - $[0.43]$  
   - $[0.49]$  
   - $[0.54]$  

   No, the answer is incorrect.
   Score: 0

6) A cotton yarn with count of 30 tex and packing density of 0.45 is prepared from fibers with length of 28 mm, fineness of 0.16 tex, and density of 1500 kg/m³. The diameter of yarn of this yarn is approximately

   - $[0.18]$  
   - $[0.18]$  
   - $[0.21]$  
   - $[0.24]$  

   Accepted Answers:
   - $[0.18]$  
   - $[0.18]$  
   - $[0.21]$  
   - $[0.24]$  

   No, the answer is incorrect.
   Score: 0

7) A cotton yarn with count of 25 tex, twist of 1000 m², and packing density of 0.60 is prepared from fibers with length of 25 mm, fineness of 0.15 tex, and density of 1520 kg/m³. The twist intensity of this yarn is approximately

   - $[0.37]$  
   - $[0.43]$  
   - $[0.51]$  
   - $[0.58]$  

   Accepted Answers:
   - $[0.37]$  
   - $[0.43]$  
   - $[0.51]$  
   - $[0.58]$  

   No, the answer is incorrect.
   Score: 0