Assignment No. 9

The due date for submitting this assignment has passed. Due on 2019-10-02, 23:59 IST. As per our records you have not submitted this assignment.

1) Diffusion wear is caused because of
   I. High temp. near tool-chip interface
   II. Compositional gradient across the tool-chip interface
   No, the answer is incorrect. Score: 0
   Accepted Answers: "Both (I) and (II)"

2) The tool material best suited for machining of 0.2% Carbon steel at high speed (100-300 m/min.) is
   No, the answer is incorrect. Score: 0
   Accepted Answers: "CBN"
3) Cemented carbide tool of straight Co-WC is not suitable for steel cutting, because
   - Steel has high hardness
   - Cutting of steel generates very high temperature
   - Steel contains Fe which reacts with C and promote diffusive wear
   - Steel contains Fe which reacts with Co and promote abrasive wear

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   Steel contains Fe which reacts with C and promote diffusive wear

4) Choose the correct option regarding the characteristic of the grinding process
   - Low MRR
   - Low surface roughness
   - Close dimensional tolerance
   - All of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   All of the above

5) Coarse abrasive grinding wheel results in
   - High MRR, High surface finish
   - High MRR, Low surface finish
   - Low MRR, Low surface finish
   - Low MRR, High surface finish

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   High MRR, Low surface finish

6) A typical metallic bonding material used in grinding wheels is
   - Alumina
   - Silicate
   - Vitrified
   - Bronze

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   Bronze

7) Heating of the workpiece takes places in grinding primarily due to
   - Cutting and ploughing
   - Cutting and rubbing
   - Ploughing and rubbing
   - All cutting, ploughing and rubbing

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   Ploughing and rubbing

8) Specific energy required in cylindrical grinding is greater than milling due to
   - Cutting and ploughing
   - Cutting and rubbing
   - Ploughing and rubbing
   - All cutting, ploughing and rubbing

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   Ploughing and rubbing
1. Fine chip removal in grinding than milling
2. High clearance angle of grinding abrasives
3. All abrasives remove material
4. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Fine chip removal in grinding than milling

9) Increase in grinding speed within a certain limit (up to 1800 m/min.) will

1. Increase grinding ratio & decrease surface finish
2. Decrease grinding ratio & increase surface finish
3. Increase grinding ratio & increase surface finish
4. Decrease grinding ratio & decrease surface finish

No, the answer is incorrect.
Score: 0
Accepted Answers:
Increase grinding ratio & increase surface finish

10) Match the following for selection of suitable grinding wheel for a good finish and close tolerance in given workpiece materials

<table>
<thead>
<tr>
<th>Workpiece material</th>
<th>Grit size</th>
<th>Bond grade</th>
<th>Abrasive material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Aluminium</td>
<td>Fine</td>
<td>Soft</td>
<td>SiC</td>
</tr>
<tr>
<td>B. HSS</td>
<td>Coarse</td>
<td>Hard</td>
<td>CBN</td>
</tr>
</tbody>
</table>

A-2-4-5, B-1-3-6
A-1-4-6, B-2-3-5
A-2-3-5, B-2-4-6
A-1-3-6, B-1-4-5

No, the answer is incorrect.
Score: 0
Accepted Answers:
A-2-4-5, B-1-3-6