ENGINEERING GRAPHICS AND DESIGN P2

NOVEMBER 2018

MARKING GUIDELINES

MARKS: 100

These marking guidelines consist of 7 pages.
# ANSWERS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WENDY 1</td>
</tr>
<tr>
<td>2</td>
<td>2018-02-10 1</td>
</tr>
<tr>
<td>3</td>
<td>APPROVING THE DRAWING 1</td>
</tr>
<tr>
<td>4</td>
<td>MC 25-V2018 1</td>
</tr>
<tr>
<td>5</td>
<td>TUNGSTEN 1</td>
</tr>
<tr>
<td>6</td>
<td>8 1</td>
</tr>
<tr>
<td>7</td>
<td>20 °C 1</td>
</tr>
<tr>
<td>8</td>
<td>25 or 25.00 1</td>
</tr>
<tr>
<td>9</td>
<td>REPRESENTING A PART NOT THERE 1</td>
</tr>
<tr>
<td>10</td>
<td>SHAFT CONTINUES/PART OF SHAFT 1</td>
</tr>
<tr>
<td>11</td>
<td>CENTRE OF CIRCLES OR ARCS - SHAFTS - SYMMETRY - PCD - POSITION - A CUTTING PLANE - ASSEMBLY 2</td>
</tr>
<tr>
<td>12</td>
<td>3 1</td>
</tr>
<tr>
<td>13</td>
<td>FRONT VIEW 1</td>
</tr>
<tr>
<td>14</td>
<td>C: 139 ✔ D: Ø15.85 E: Ø18 5</td>
</tr>
<tr>
<td>15</td>
<td>84° 1</td>
</tr>
<tr>
<td>16</td>
<td>REVOLVED SECTION 1</td>
</tr>
<tr>
<td>17</td>
<td>PART SECTION 1</td>
</tr>
<tr>
<td>18</td>
<td>SUCCESSIVE SECTIONS 2</td>
</tr>
<tr>
<td>19</td>
<td>2.9 mm 2</td>
</tr>
<tr>
<td>20</td>
<td>See below 4</td>
</tr>
</tbody>
</table>

**TOTAL 30**

---

**ANSWER 20**

![Freehand drawing with a circle and a cone]
DISPLACEMENT GRAPH
SCALE: 114 mm = 360° ROTATION

1 CONSTRUCTION
- LENGTH (114)
- LINE DIVISION CONSTRUCTION
- 114 INTO 12 EQUAL PARTS
- SIMPLE HARMONIC MOTION
  * SEMI CIRCLE
  * CIRCLE DIVISION
  * HORIZONTAL PROJECTION
TOTAL

ASSESSMENT CRITERIA 2.1

1 CONSTRUCTION 4
2 POINTS • CURVE 6
3 LABELS 1

PAPER 2 QUESTION 2.1
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

SUBTOTAL 11
1. GIVEN
AO, AB & CD ARE CONTINUOUS LINES
1

1. GIVEN
- HORIZONTAL LINE FG
  (30 mm MEASUREMENT)
  - CENTRE LINE
  ½

2. CONSTRUCTION
CIRCLE DIVISION 1
CONSTRUCTION OF AB 2
CONSTRUCTION OF CD THROUGH E 2
TOTAL 5

3. CURVE QUALITY
✓✓

CURVE THROUGH D

D 3

CURVE THROUGH C

1

O

A

B

G

C

F

E

ASSESSMENT CRITERIA 2.2

1 GIVEN 6
2 CONSTRUCTION 5
3 POINTS + CURVE 14
TOTAL 25

PAPER 2 QUESTION 2.2
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

1. GIVEN
CIRCLE MUST BE CHAIN LINE
FOR MARK TO BE ALLOCATED

1

Copyright reserved

Please turn over
PAPER 2 QUESTION 3
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

ASSESSMENT CRITERIA

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PLACEMENT + AUX. VIEW</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>FRONT PORTION</td>
<td>22\frac{1}{2}</td>
</tr>
<tr>
<td>3</td>
<td>BACK PORTION</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>CIRCLE +CIRCLE CONSTRUCTION + CL</td>
<td>8\frac{1}{2}</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>38</strong></td>
</tr>
</tbody>
</table>
3. ASSEMBLY
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (10 PARTS -1) = 9

1. CENTRE LINE MARK ALLOCATION
SANS COMPLIANT (LINE TYPE) 2
14 CENTRE LINES 2
TOTAL 4

DETAIL OF THE MARK ALLOCATION FOR PART OF THE PUMP PLUNGER

DETAIL OF THE MARK ALLOCATION FOR THE CONVENTIONAL REPRESENTATION OF THE WORM GEAR ASSEMBLY

ASSESSMENT CRITERIA

SECTIONAL RIGHT VIEW

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVER PLATE</td>
<td>11.5</td>
</tr>
<tr>
<td>PUMP BODY</td>
<td>11.5</td>
</tr>
<tr>
<td>CRANK GEAR + SHAFT</td>
<td>17</td>
</tr>
<tr>
<td>PUMP PLUNGER</td>
<td>7</td>
</tr>
<tr>
<td>SPLIT BUSH</td>
<td>3</td>
</tr>
<tr>
<td>PUMP HOUSING</td>
<td>10</td>
</tr>
</tbody>
</table>

SUBTOTAL 60

PAPER 2 QUESTION 4
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

Copyright reserved