

# Written Quiz

	<b><u>POINTS</u></b>
1. List three (3) types of positive displacement pumps.	<u>10</u>
2. List four (4) characteristics of a positive displacement pump.	<u>10</u>
3. What is slippage?	<u>5</u>
4. What is the purpose of a relief valve?	<u>10</u>
5. What are four (4) characteristics of a centrifugal pump?	<u>10</u>
1. _____	
2. _____	
3. _____	
4. _____	
6. Define the term volute.	<u>10</u>
7. Define centrifugal force.	<u>10</u>
8. As the volute approaches the discharge outlet of the pump casing, does it increase or decrease in size?	<u>10</u>
9. Is a single stage centrifugal pump designed to produce high volume or high pressure?	<u>10</u>

# Written Quiz

**POINTS**

10. What is the purpose of the transfer valve? 10

11. To avoid injury or damage to the pump, do not operate the transfer valve if engine pressure exceeds \_\_\_\_\_ PSI. 5

**POINTS POSSIBLE:** 100

**POINTS DEDUCTED:**

**FINAL SCORE:**

**POINTS**

1. List three (3) types of positive displacement pumps. 10

**PISTON, ROTARY GEAR, ROTARY VANE**

2. List four (4) characteristics of a positive displacement pump. 10

**WILL PUMP AIR OR WATER  
PUMPS CONSTANT VOLUME WITH EACH CYCLE  
REQUIRES TIGHT TOLERANCES  
REQUIRES A RELIEF VALVE  
MAXIMUM SLIPPAGE IS 10%  
HIGH MAINTENANCE REQUIREMENTS**

3. What is slippage? 5

**THE AMOUNT OF WATER NOT PUMPED FROM A PUMP  
BECAUSE IT ESCAPES THROUGH INNER-WORKINGS OF  
PUMP.**

4. What is the purpose of a relief valve? 10

**TO PREVENT DAMAGE TO PUMP WHEN DISCHARGE IS SHUT  
OFF. WATER SHUNTED BACK TO SUCTION SIDE OF PUMP.**

5. What are four (4) characteristics of a centrifugal pump? 10

**WILL NOT PUMP AIR, THEREFORE, REQUIRES A POSITIVE  
DISPLACEMENT PRIMER**

**ALL WATER IS NOT DISCHARGED WITH EACH FULL CYCLE**

**HAS 100% SLIPPAGE**

**NEED NOT HAVE CLOSE OR TIGHT PART TOLERANCE**

**LOW MAINTENANCE REQUIREMENTS  
DOES NOT REQUIRE RELIEF VALVE**

# Written Quiz - Key

- |   | <b><u>POINTS</u></b> |
|---|----------------------|
| 6. Define the term volute.<br><br><b>THAT PORTION OF THE PUMP BETWEEN THE IMPELLER AND THE INNER PUMP CASING FROM THE SUCTION INLET TO THE DISCHARGE OUTLET</b>         | <u>10</u>            |
| 7. Define centrifugal force.<br><br><b>THAT FORCE WHICH CAUSES A RAPIDLY ROTATING ITEM TO FLY FROM THE CENTER OF THE DISK TO THE OUTER EDGE IN A STRAIGHT LINE</b>      | <u>10</u>            |
| 8. As the volute approaches the discharge outlet of the pump casing, does it increase or decrease in size?<br><br><b>INCREASE TO ACCOMMODATE LARGER VOLUME OF WATER</b> | <u>10</u>            |
| 9. Is a single stage centrifugal pump designed to produce high volume or high pressure?<br><br><b>HIGH VOLUME</b>   | <u>10</u>            |
| 10. What is the purpose of the transfer valve?<br><br><b>ALLOWS PUMP OPERATOR TO SWITCH FROM PARALLEL TO SERIES MODE OR FROM VOLUME TO PRESSURE MODE</b>                | <u>10</u>            |
| 11. To avoid injury or damage to the pump, do not operate the transfer valve if engine pressure exceeds <b>50</b> PSI.  | <u>5</u>             |

**POINTS POSSIBLE:** 100

**POINTS DEDUCTED:**

**FINAL SCORE:**