

# Unit 9 - Week 7

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## Assignment 7

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2019-09-18, 23:59 IST.**

1) Which of the following centrifugal pumps has higher specific speed than the others? **1 point**

- a. Axial flow
- b. Radial flow
- c. Mixed flow
- d. All have the same specific speed

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a. Axial flow

2) Which of the following is NOT a type of positive displacement pumps? **1 point**

- a. Reciprocating pump
- b. Rotary displacement pump
- c. Centrifugal pump
- d. None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c. Centrifugal pump

3) A hydraulic ram is a pump which works on the principle of **1 point**

- a. Water hammer
- b. Centrifugal pump
- c. Reciprocating action
- d. None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a. Water hammer

4) The type of vanes in the open impeller is\_\_\_ **1 point**

- a. Attached to a central hub
- b. Free on both sides
- c. Free on one side and enclosed on the other
- d. Located between the two discs, all in a single casting

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b. Free on both sides

5) Rotary pumps are commonly used as **1 point**

- a. For lifting irrigation water
- b. For lifting lubricating oils
- c. For lifting air vapor mixture
- d. None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b. For lifting lubricating oils

6) A centrifugal pump having an impeller diameter of 35 cm delivers  $3 m^3/min$  of water when speed is 500 rpm and a power input of 4.5 kW. If the same pump is made to deliver  $4.5 m^3/min$ , the increase in speed and the percentage increase in power corresponding to this speed will be\_\_\_\_\_ **1 point**

- a. 500 rpm and 348%
- b. 1000 rpm and 338%
- c. 250 rpm and 248%
- d. 750 rpm and 238%

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d. 750 rpm and 238%

7) If a pump delivers 20 liters of water per second against a total head of 15 m and an efficiency of 50%, the water horsepower (in hp) and shaft horsepower (in hp) will be\_\_\_\_\_ and \_\_\_\_\_ respectively. **1 point**

- a. 8 and 4
- b. 4 and 8
- c. 6 and 12
- d. 12 and 6

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b. 4 and 8

8) A single-acting reciprocating pump has a piston diameter of 15 cm and stroke 25 cm. The piston makes 50 double strokes per minute. The suction and delivery heads are 5 m and 15 cm, respectively. Find the discharge capacity of the pump in liters per minute. **1 point**

- a. 0.22
- b. 2.2
- c. 22
- d. 220

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d. 220

9) A centrifugal pump delivers 30 lps of water through a 0.1 m diameter pipe to a vertical height of 14 m from the centerline of the pump. The pump is installed 6 m above the water level in the pump, and the head loss in the pipeline is found to be 5 m of water. If the overall efficiency is 72%, the power required (in kW) to run the pump will be\_\_\_\_\_ **1 point**

- a. 9.868
- b. 10.22
- c. 13.70
- d. 20.00

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b. 10.22

10) A centrifugal pump running 1450 rpm discharges 20 lps at 30 m total head. The specific speed of the pump will be\_\_\_\_\_ **1 point**

- a. 3-5 rpm
- b. 8-10 rpm
- c. 20-22 rpm
- d. 15-17 rpm

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d. 15-17 rpm