Assignment 3
The due date for submitting this assignment has passed.

Due on 2021-02-10, 23:59 IST.

As per our records you have not submitted this assignment.

1) Which of these are the hydrodynamic pumps?
   - water pump
   - axial pump
   - centrifugal pump
   - piston pump
   No, the answer is incorrect. Score: 0

   Accepted Answer: water pump, axial pump, centrifugal pump

2) Which of these are the features of hydrodynamic pump?
   - high pressure and high volume flow
   - having single circumferential space between rotating element and stationary element
   - self-priming
   - high pressure and low volume flow
   No, the answer is incorrect. Score: 0

   Accepted Answer: high pressure and high volume flow

3) An ideal pump is the one having
   - no gap between rotor and stator and also no axial deformation
   - no elastic deformation and gap area between rotor and stator
   - no gap between rotor and stator but elastic deformation is there
   - rheological fluid flow to be independent on rheological pressure across the pump
   No, the answer is incorrect. Score: 0

   Accepted Answer: no gap between rotor and stator and also no elastic deformation

4) Which of these is a low flow positive displacement pump?
   - gear pump
   - balanced vane pump
   - screw pump
   - piston pump
   No, the answer is incorrect. Score: 0

   Accepted Answer: gear pump

5) In case of vane pumps, when discharge pressure is zero
   - zero eccentricity between cam ring axis and rotor axis and it results in no flow
   - maximum eccentricity between cam ring axis and rotor axis and it results in no flow
   - minimum eccentricity between cam ring axis and rotor axis and it results in no flow
   - maximum eccentricity between cam ring axis and rotor axis and it results in more flow
   No, the answer is incorrect. Score: 0

   Accepted Answer: minimum eccentricity between cam ring axis and rotor axis and it results in more flow

6) Calculate the rheological delivery of a gear pump. Module of the gear teeth is 8 mm and width of a gear tooth is 50 mm. Number of teeth on outer gear is 19 and pressure angle of the gear is 20°. Pump speed is 1800 rpm. Outer diameter of gear is 156 mm, and volumetric efficiency is 98% at 1 Mpa.
   - 0.77275 m³/min
   - 0.7225 m³/min
   - 0.7275 m³/min
   - 0.71275 m³/min
   No, the answer is incorrect. Score: 0

   Accepted Answer: 0.77275 m³/min

7) A vane pump is to have a volumetric displacement of 8000 cc/min. It has a rotor diameter of 63.8 mm, a casing ring diameter of 76.2 mm, and a vane width of 0.33 mm. What must be the eccentricity?
   - 80.004 mm
   - 63.80 mm
   - 4.98 mm
   - 7.02 mm
   No, the answer is incorrect. Score: 0

   Accepted Answer: 4.98 mm

8) The piston pump is one having
   - internal slippage is less
   - back pressure in the case drain line is very high
   - back pressure in the case drain line is very high
   - basic pressure in the case drain line is very high
   No, the answer is incorrect. Score: 0

   Accepted Answer: basic pressure in the case drain line is very high

9) Which one of these hold good for flat head pumps
   - high pressure low displacement pumps
   - low pressure low displacement pumps
   - geometrical displacement depends on piston size alone
   - geometrical displacement depends on piston size and stroke length
   No, the answer is incorrect. Score: 0

   Accepted Answer: geometrical displacement depends on piston size and stroke length

10) Which one of these hold good for pump cavitation
   - it occurs because suction lift is excessive and the inlet pressure falls below the vapor pressure of the fluid
   - it occurs because suction lift is excessive and the inlet pressure falls below the vapor pressure of the fluid
   - it produces low noise
   - creating a positive head on the inlet will completely eliminate cavitation
   No, the answer is incorrect. Score: 0

   Accepted Answer: it occurs because suction lift is excessive and the inlet pressure falls below the vapor pressure of the fluid creating a positive head on the inlet will completely eliminate cavitation