SANT GADGE BABA AMRAVATI UNIVERSITY
BACHELOR OF ENGINEERING SEMESTER VI (CGS) EXAMINATION OF S-2020

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H.V.P.Mandal's College of Engineering & Technology, Amravati
Department of Mechanical Engineering

Academic Session: 2019-20 **Semesters: VI**
Unit- I ,II ,III, IV ,V,VI **Date: 30/10/2020**
Subject Name: Fluid Power –II . **Subject Code:**
Max Marks:

Note: Solve any 2 Questions out of 4 Question.
All question Carry equal marks

Ques 01

a.	Explain with neat sketch construction and working of a hydraulic coupling.	(03M)
b.	Explain with neat sketches the working of rotary pump, External gear pump	(03M)
c.	Draw indicator diagram for single acting reciprocating pump considering the effect of acceleration and friction.	(01M)
d	Draw a neat sketch of an air lift pump	(01M)
e.	Differentiate between Radial flow & axial flow turbine	(01M)
f.	Define NPSH and Priming of centrifugal Pump.	(01M)

Ques 02

a.	Explain with sketch construction, operation and utility of hydraulic lift.	(03M)
b.	Derive an expression for velocity of sound wave in a compressible fluid and show that for isothermal process $C=\sqrt{RT}$	(03M)
c.	Compare with two points between Centrifugal pump and reciprocating pump.	(01M)
d	What are the important applications of CFD in engineering	(01M)
e.	Differentiate between Impulse and reaction turbine.	(01M)
f.	Manometric head and Manometric efficiency of centrifugal pump.	(01M)

Ques 03

a.	Explain with neat sketch the working of inverted hydraulic press	(03M)
b.	The static and stagnation temperatures of a stream of air are $15^{o}C$ and $50^{0}C$ respectively. Estimate the Mach number and flow velocity.	(03M)
c.	What is negative slip in a reciprocating pump?	(01M)
d	Describe the working of Hydraulic Ram	(01M)
e.	Write the equation for efficiency of Kaplan turbine	(01M)
f.	Explain with neat Casing with guide blades	(01M)

Ques 04

a.	Describe with neat schematic diagrams the working of Hydraulic lift	(03M)
b.	Explain the following term in the context of compressible flow with the help of sketches. i) Mach number ii) Mach angle iii) Mach cone	(03M)
c.	Explain in brief separation of flow in a reciprocating pump	(01M)
d	Describe the working of Axial flow pump.	(01M)
e.	What are the ranges of the specific speeds for Pelton, Francis and Kaplan turbine?	(01M)
f.	Explain with neat sketches Vortex casing	(01M)