University of Mumbai
Online Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: MEDLO7033 and Course Name: Pumps Compressors and Fans

Time: 1hour   Max. Marks: 50

Note to the students:- All the Questions are compulsory and carry equal marks .

Q	Rotodynamic pump type is			
A	Reciprocating			
A	Centifugal			
A	lobe			
A	gear			
Q	The specific speed of a centrifugal pump if N= 200 rpm,Q=3 m3/min,H=40m			
A	28			
A	95			
A	55			
A	79			
Q	If the NPSH requirement for the pump is not satisfied then			
A	no flow will take place			
A	cavitation will be formed			
A	efficiency will be low			
A	efficiency will be high			
Q	The slip of a recirpocating pump is			
A	ratio of actual discharge to theoretical discharge			
A	product of actual discharge and theoretical discharge			
A	difference between thereotical discharge and actual discharge			

A	sum of thereotical discharge and actual discharge			
Q	The fluid coming into the centrifugal pump is accelerated by			
A	Throttle			
A	Impeller			
A	Nozzle			
A	Governer			
Q	Which of the following is not a rotary pump			
A	Gear			
A	Vane			
A	Screw			
A	Axial			
Q	When a reciprocating pump is used			
A	When quantity of liquid is small			
A	When quantity of liquid is large			
A	To pump high pressure			
A	To pump low pressure			
Q	If actual discharge is .00736 m3/s and theoretical discharge is 0..785m3/s then value of coeefficient of discharge is			
A	0.937			
A	0.867			
A	0.789			
A	0.637			
Q	If actual discharge is .00736 m3/s and theoretical discharge is 0..785m3/s then value of percentage of the slip is			
A	2.64%			
A	6.24%			
A	4.26%			
A	9.87%			

Q	The process of filling the liquid into the suction pipe and the pump casing up to the level of the delivery valve is called			
A	filling			
A	pumping			
A	priming			
A	levelling			
Q	The ratio of the water power to the shaft power is known as			
A	mechanical efficiency			
A	volumetric efficiency			
A	manometric efficiency			
A	overall efficiency			
Q	If D is the diameter of the impeller at the inlet, w is the width of the impeller at the inlet and Vf is the velocity of flow at the inlet, then discharge through a centrifugal pump is			
A	πDVf			
A	DVfw			
A	$\pi DVfw$			
A	πDw			
Q	In a centrifugal pump, the inlet angle will be designed to have			
A	relative velocity vector in the radial direction			
A	absolute velocity vector in the radial direction			
A	the velocity of flow to be zero			
A	peripheral velocity to be zero			
Q	Which of the following axial fan types is most efficient?			
A	Propeller			
A	Tube axial			
A	Vane axial			
A	Radial			

Q	Name the fan which is more suitable for high pressure application?			
A	Propeller type fans			
A	Tube-axial fans			
A	Forward curved centrifugal fan			
A	Backward curved centrifugal fan			
Q	Axial fans are best suitable for_____ application			
A	Large flow, low head			
A	Low flow, high head			
A	High head, large flow			
A	Low flow, low head			
Q	Unstable flow in axial compressors can be due to the seperation of flow from the bladse surfaces is called as			
A	Surging			
A	Stalling			
A	vortex			
A	Swirl			
Q	Typical design efficiency of aerofoil fan handling clean air is:			
A	40 to 50%			
A	80 to 90%			
A	60 to 70%			
A	70 to 80%			
Q	Which type of control gives maximum benefits for fan application from energy saving point of view?			
A	Discharge damper control			
A	Inlet guide vane control			
A	Variable pitch control			
A	Speed control			
Q	The clearance required for efficient operation of impeller of 1 meter plus diameter in Radial type fans is ____			

A	5 to 10 mm			
A	1 to 2 mm			
A	20 to 30 mm			
A	0.5 to 1.5 mm			
Q	In air compressor performance curve a surge line represents			
A	limits of compressor discharge			
A	limit of compressor efficiency			
A	limit of stable operation			
A	lower critical speed of shaft			
Q	In rotary compressors, slip factor is the ratio of			
A	stagnation pressure to static pressure			
A	isentropic work done to actual work			
A	outlet whirl velocity to the blade velocity			
A	actual work to isentropic work done			
Q	A pair of fixed blade and rotor blade in axial flow compressor is called as _____.			
A	step			
A	pair			
A	stage			
A	state			
Q	The blade passages in a compressor are _____			
A	converging			
A	diverging			
A	constant			
A	unpredictable			
Q	the ratio of the pressure rise in rotor blades to the pressure rise in stages in an axial flow compressor.			
A	Degree of pressure			
A	Degree of reaction			
A	Pressure ratio			

| A | Reaction ratio | | | | |