These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai
Online Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: MEC604 and Course Name: Thermal & Fluid Power Engineering

Time: 1 hour Max. Marks: 50

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

Q1.	The amount of water evaporated in kg per kg of fuel burnt is called ……
Option A:	equivalent evaporation 'from and at 100° C'
Option B:	evaporative capacity of a boiler
Option C:	boiler efficiency
Option D:	boiler draught
Q2.	The ratio of heat actually used in producing the steam to the heat liberated in the furnace is known as …….
Option A:	equivalent evaporation 'from and at l00° C'
Option B:	evaporative capacity of a boiler
Option C:	boiler efficiency
Option D:	boiler draught
Q3.	In a boiler, various heat losses take place. The biggest loss is due to …….
Option A:	moisture in fuel
Option B:	dry flue gases
Option C:	steam formation
Option D:	unburnt carbon
Q4.	Which of the following is a water tube boiler ?
Option A:	Lancashire boiler
Option B:	Babcock and Wilcox boiler
Option C:	Locomotive boiler
Option D:	Cochran boiler
Q5.	A device used toput off fire in the furnace of the boiler when the level of water in the boiler falls to an unsafe limit, is called ……
Option A:	blow of cock

Option B:	fusible plug
Option C:	super heater
Option D:	economizer
Q6.	The purpose of governing in steam turbines is to …….
Option A:	reduce the effective heat drop
Option B:	reheat the steam and improve its quality
Option C:	completely balance against end thrust
Option D:	maintain the speed of the turbine
Q7.	The ratio of work done on the blades per kg of steam to the energy supplied to the blades is called ……
Option A:	diagram or blading efficiency
Option B:	nozzle efficiency
Option C:	gross or stage efficiency
Option D:	mechanical efficiency
Q8.	In a reaction turbine, when the degree of reaction is zero, then there is ……
Option A:	no heat drop in the moving blades
Option B:	no heat drop in the fixed blades
Option C:	maximum heat drop in the moving blades
Option D:	maximum heat drop in the fixed blades
Q9.	The difference of supersaturated temperature and saturation temperature at that pressure is known as …….
Option A:	degree of super saturation
Option B:	degree of superheat
Option C:	degree of under cooling
Option D:	degree of sub cooling
Q10.	In impulse turbines, when friction is neglected, the relative velocity of steam at outlet tip of the blade is …… the relative velocity of steam at inlet tip of the blade
Option A:	equal to
Option B:	less than
Option C:	greater than
Option D:	close to
Q11.	The flow of steam in a steam nozzle is subsonic at …….
Option A:	throat
Option B:	entrance
Option C:	convergent section
Option D:	divergent section

Q12.	Find no. of buckets on runner of a Pelton turbine if wheel diameter is 0.95 m & jet diameter is 0.158 m
Option A:	20
Option B:	18
Option C:	15
Option D:	25
Q13.	Which of the following turbines is suitable for specific speed ranging from 300 to 1000 and heads below 30 m?
Option A:	Francis
Option B:	Kaplan
Option C:	Propeller
Option D:	Pelton.
Q14.	The value of flow ratio (K) in case of a Francis turbine varies from ……..
Option A:	0.1 to 0.14
Option B:	0.15 to 0.30
Option C:	0.35 to 0.5
Option D:	0.6 to 0.9.
Q15.	Low specific speed of turbine implies to …….
Option A:	propeller turbine
Option B:	Francis turbine
Option C:	impulse turbine
Option D:	reaction turbine
Q16.	The water which acts on the runner blades of a reaction turbine is under a pressure …….
Option A:	equal to atmospheric
Option B:	below atmospheric
Option C:	above atmospheric
Option D:	independent of atmospheric
Q17.	The runner passages of a reaction turbine are …….
Option A:	partially filled with water
Option B:	always completely filled with water
Option C:	never filled with water
Option D:	bent at right angle
Q18.	Which of the following draft tubes is suited particularly for helical flow?
Option A:	Conical type draft tube.

Option B:	Elbow type draft tube.
Option C:	Moody's spreading draft tube.
Option D:	Bent type spill way
Q19.	Which of the following surge tank is also called a throttled surge tank?
Option A:	Inclined surge tank.
Option B:	Expansion chamber surge tank.
Option C:	Restricted orifice surge tank.
Option D:	Spill way tank
Q20.	Gas turbine works on …….
Option A:	Brayton
Option B:	Carnot cycle
Option C:	Rankine cycle
Option D:	Erricsson cycle
Q21.	For a gas turbine the pressure ratio is in the range of …….
Option A:	2 to 3
Option B:	3 to 5
Option C:	16 to 18
Option D:	18 to 22
Q22.	Maximum temperature of a gas turbine plant is of the order of ……
Option A:	700°C
Option B:	900°C
Option C:	2100°C
Option D:	2500°C
Q23.	For a gas turbine with pressure ratio of 6 & isentropic index of 1.4 for air, cycle efficiency in % will be …….
Option A:	30
Option B:	50
Option C:	40
Option D:	70
Q24.	A jet engine works on the principle of conservation of ……..
Option A:	mass
Option B:	energy
Option C:	flow
Option D:	linear momentum
Q25.	Ram-jet engine …….

Option A:	is self-operating at zero flight speed
Option B:	is not self-operating at zero flight speed
Option C:	requires no air for its operation
Option D:	produces a jet consisting of plasma