

University of Mumbai
Online Examination 2020

Program: BE Chemical Engineering
Curriculum Scheme: Revised 2016
Examination: Third Year Semester V
Course Code: CHC605

Course Name: Plant Engineering & Industrial Safety

Time: 1 hour

Max. Marks: 50

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

Q1.	Combustion requires.....
Option A:	three ingredients: fuel, an oxidizing agent (typically oxygen in air), and heat (or ignition source)
Option B:	Only oxygen
Option C:	Only N ₂
Option D:	None
Q2.	What is the main objective of toxicity assessment?
Option A:	To determine source of pathway
Option B:	To determine chemical concentration
Option C:	To estimate how much of a substance does what kind of harm.
Option D:	To analyze chemical exposure

Q3.	The fusible plug in small boilers is located
Option A:	In the drum
Option B:	In the fire tubes
Option C:	Above steam dome
Option D:	Over the combustion chamber
Q4.	OSHA is part of the _____ department of labour.
Option A:	India
Option B:	US
Option C:	UK
Option D:	China
Q5.	An economizer in a boiler.....
Option A:	Increases steam pressure
Option B:	Increases steam flow
Option C:	Decreases fuel consumption
Option D:	Decreases steam pressure
Q6.	A static vacuum system is one in which the pressure remains essentially constant and the rate of evolution of gas is _____.
Option A:	Large
Option B:	Small
Option C:	Increasing
Option D:	None of these
Q7.	Why does site history have to be considered for hazard identification?
Option A:	To estimate the risk
Option B:	To calculate carcinogenic exposure
Option C:	To know the probable source and causes of contamination on site
Option D:	For determination of remedial actions
Q8.	Blow off cock in a boiler is used to.....
Option A:	Control the flow of steam from the boiler to the main pipe
Option B:	Empty the boiler when required and to discharge the mud, scale or sediments
Option C:	Put off fire in the furnace of the boiler
Option D:	Increase the temperature of saturated steam without raising its pressure
Q9.	What is the second stage of quantitative risk assessment?
Option A:	Hazard identification
Option B:	Exposure assessment
Option C:	Toxicity assessment
Option D:	Risk characterization
Q10.	Decibel (db) is a unit used to measure
Option A:	Light
Option B:	Sound
Option C:	Frequency
Option D:	Risk

Q11.	1. Sound cannot travel in vacuum because
Option A:	Dry Positive-displacement pumps.
Option B:	Wet Positive-displacement pumps.
Option C:	Reciprocating Pump
Option D:	Centrifugal Pumps
Q12.	Lancashire boiler is a.....
Option A:	Stationary fire tube boiler
Option B:	Stationary water tube boiler
Option C:	Water tube boiler with natural/forced circulation
Option D:	Mobile fire tube boiler
Option A:	Wood
Option B:	Oil
Option C:	Transformer
Option D:	Chemical
Q14.	Inerting is the process of
Option A:	Reducing an inert gas from a combustible mixture to reduce the concentration of oxygen below the limiting oxygen concentration
Option B:	Reducing an inert gas from a combustible mixture to reduce the concentration of oxygen above the limiting oxygen concentration
Option C:	Adding an inert gas to a combustible mixture to reduce the concentration of oxygen below the limiting oxygen concentration
Option D:	Adding an inert gas to a combustible mixture to reduce the concentration of oxygen above the limiting oxygen concentration
Q15.	During peak load periods, the best method of controlling compressors is.....
Option A:	Start-stop motor
Option B:	Constant speed unloader
Option C:	Relief valve
Option D:	Variable speed
Q16.	LD50 in a toxicity test stands for _____
Option A:	a dose that will kill 50% of an exposed population
Option B:	a dose that would not affect or harm 50% of an exposed population
Option C:	a dose that will kill 25% of an exposed population
Option D:	a dose that would not kill 25% of an exposed population
Q17.	Which of the following is a fire tube boiler?
Option A:	Locomotive boiler
Option B:	Babcock and Wilcox boiler

Option C:	Stirling boiler
Option D:	Simple vertical boiler
Q18.	The following risk assessment method involves experts brainstorming about "nodes" and "parameters":
Option A:	Failure Modes and Effects Analysis charts
Option B:	Hazard and operability (HAZOP) studies.
Option C:	Fault-tree analysis.
Option D:	Event-tree analysis
Q19.	The OSHA incidence rate is calculated from
Option A:	the number of occupational injuries and illnesses and the total number of employee hours worked during the applicable period.
Option B:	the number of occupational injuries and illnesses only.
Option C:	the total number of employee hours worked during the applicable period.
Option D:	the number of occupational injuries and illnesses and the total number of employee minutes worked during the applicable period.
Q20.	The volumetric efficiency of a compressor.....
Option A:	Increases with decrease in compression ratio
Option B:	Decreases with decrease in compression ratio
Option C:	Increases with increase in compression ratio
Option D:	Decrease with increase in compression ratio
Q21.	The lowest temperature at which a vapour above a liquid will continue to burn once ignited is defined as
Option A:	Flash Point
Option B:	Fire point
Option C:	Autoignition
Option D:	Ignition
Q22.	Benson boiler is a _____ steam boiler using forced circulation of water.
Option A:	Low pressure water tube
Option B:	High pressure water tube
Option C:	Low pressure fire tube
Option D:	High pressure fire tube
Q23.	Explosion results from the rapid combustion of fine solid particles
Option A:	Confined explosion
Option B:	Unconfined explosion
Option C:	BLEVE
Option D:	Dust explosion
Q24.	The maximum delivery pressure in a rotary air compression is.....
Option A:	10 bar
Option B:	30 bar

Option C:	40 bar
Option D:	20 bar
Q25.	What is the first stage of risk assessment?
Option A:	Exposure assessment
Option B:	Hazard identification
Option C:	Toxicity study
Option D:	Risk characterization

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	C
Q3.	D
Q4	B
Q5	C
Q6	B
Q7	C
Q8.	B
Q9.	B
Q10.	B
Q11.	D
Q12.	A
Q13.	A
Q14.	C
Q15.	B
Q16.	A
Q17.	A
Q18.	B
Q19.	A
Q20.	D
Q21.	B
Q22.	B
Q23.	D
Q24.	A
Q25.	B
