

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, July 2020

Course: Safety in Industrial Operations and Design

Program: M.Tech. -H.S.E. and M.Tech H.S.E-DM

Course Code: HSFS 7006

Semester: II

Time 03 hrs.

Max. Marks: 100

Instructions: Read the question properly and give the most relevant answer

MC	Red colour in NFPA diamond describes	special hazard	Incorrect	health hazard	Incorrect	flammability hazard	correct	Instability hazard	Incorrect		
MC	Yellow Colour in NFPA diamond describes	special hazard	Incorrect	health hazard	Incorrect	flammability hazard	Incorrect	Instability hazard	correct		
MC	Black colour in NFPA diamond describes	special hazard	CORRECT	health hazard	Incorrect	flammability hazard	Incorrect	Instability hazard	Incorrect		
MC	Property of ammonia_____	Pungent odour	Incorrect	lighter than air	Incorrect	heavier than air	Incorrect	odourless	Incorrect	both (a) and (b)	CORRECT
MC	Relevant media to put of Ammonia fire is	CO2	Incorrect	Dry chemical powder	Incorrect	both (a) and (b)	CORRECT	none of the above	Incorrect		
MC	Color rendering is better with	LED Light	INCORRECT	Flourscent light	INCORRECT	Sunlight	CORRECT	Light with white fixtures	INCORRECT		
MC	If there is no proper work platform the measurement should be done from floor at the height	0.9 m	INCORRECT	0.8ft	INCORRECT	0.78m	INCORRECT	0.8m	CORRECT		
MC	Unit of illuminance is	flux	INCORRECT	lux	CORRECT	luxer	INCORRECT	lumin	INCORRECT		

MC	Visible range of light is	380-750nm	CORRECT	350-740nm	INCORRECT	350-780nm	INCORRECT	380-720nm	INCORRECT		
MC	What type of lighting is preferred in high hazardous machines	local	CORRECT	general	INCORRECT	red colour lighting	INCORRECT	will be decided after a fatality	INCORRECT		
MC	One of the disadvantages of direct lighting is	glare	CORRECT	high heat	INCORRECT	very costly	INCORRECT	poor color rendering	INCORRECT		
MC	For larger areas it is for measuring the luminosity the area should be	divided into proper circles	INCORRECT	proper squares	INCORRECT	proper squares with as much as possible	CORRECT	proper rectangle	INCORRECT		
MC	During measurement of illuminance using luxmeter preferred value should be	highest	INCORRECT	average of highest and lowest	INCORRECT	lowest	CORRECT	upto the assessor	INCORRECT		
MC	Loudness depends on	Amplitude	CORRECT	medium of transmission	INCORRECT	frequency	INCORRECT	none of the above	INCORRECT		
MC	Threshold of hearing for human ear is	0.00002pa	CORRECT	0.0002pa	INCORRECT	0.002pa	INCORRECT	2000pa	INCORRECT		
MC	HYPOTHERMIA is defined as a body core temperature below _____ in humans	35 deg C	correct	37 deg C	INCORRECT	20 deg C	incorrect	25 deg C	INCORRECT		
MC	Walking with moderate lifting will come under _____ work activity while calculating thermal stress	Moderate	correct	heavy	INCORRECT	very heavy	INCORRECT	light	incorrect		

TF	Some medication interferes with acclimatization to the new temperature conditions	TRUE	CORRECT	FALSE	INCORRECT						
TF	Heat stress extremes more coincide with the extreme humidity values rather than the temperature	TRUE	correct	FALSE	INCORRECT						
MC	Sweating is a process of	cooling	CORRECT	heating	INCORRECT	cooling and heating	INCORRECT	balanceing of water	INCORRECT		
MC	Shivering is process of	generation of cooling	INCORRECT	warming	CORRECT	muscle contraction	INCORRECT	Spasmodism	INCORRECT		
MC	Thermometer used to measure the influence of humidity	wet bulb thermometer	CORRECT	dry bulb thermometer	Incorrect	sum of wet bulb and dry bulb thermometer readings	Incorrect	none of the above	Incorrect		
TF	Temperature of Wet bulb thermometer can sometime be higher than the temperature of dry bulb thermometer	TRUE	correct	FALSE	incorrect						
MC	Industry generates an average of 110 dB(A) in an 8 hrs operation what type of PPE will you be preferring	Ear muff	Incorrect	ear plug	correct	either (a) or (b)	Incorrect	Ear phone	Incorrect		
MC	For a welding operation generating	Localised	correct	general	Incorrect	both (a) and (b) have same effect	Incorrect	natural	Incorrect		

	huge fumes effective ventilation is										
MC	Two machines of noise level 80db(A) each is generated calculate the average noise generated by them	80 Db	Incorrect	83 db	Correct	85.5 db	Incorrect	86.3db	Incorrect		
MC	The noise dosimeter perceives the sound pressure of 0.02pa calculate the sound pressure level in db	100 Db	Incorrect	101 db	Incorrect	60db	Correct	81 db	Incorrect		
MC	Noise level in the industry can be reduced by	gaarding	Incorrect	lubricating	Incorrect	providing green belt	Incorrect	both (a) and (b)	Incorrect	All the above	Correct
MC	Annoyance Noise is felt about	75-85 db	correct	85-95db	Incorrect	70-80db	Incorrect	86.5db	Incorrect		
MC	Air velocity at any point in front of the hood necessary to overcome opposing air currents and to capture the contaminant at that point causing it to flow into the hood	Face velocity	Incorrect	capture velocity	correct	slot velocity	Incorrect	plenum velocity	Incorrect	duct velocity	Incorrect
TF	Installation of side baffles will decrease the capture velocity in ventilation hood	TRUE	Incorrect	FALSE	correct						

MC	The following is/are the hazards in crane operation	Power line contact	INCORRECT	Tip over	INCORRECT	Fire and Explosion	INCORRECT	Rigging failure	INCORRECT	only (a) (b) and (d)	CORRECT
MC	In wire rope 6x7 means	6 wires 7 strands	Incorrect	6 strands and 7 wires	correct	6 wires 1 core and 6 strands	Incorrect	none of the above	Incorrect		
MC	Electric fork lift vehicles are preferably designed for	Indoor	CORRECT	outdoor	Incorrect	off road	Incorrect	all the above	Incorrect	none of the above	Incorrect
MC	When multilayer winding couldnot be avoided the number of preferred windings is	Two	Incorrect	three	correct	four	Incorrect	five	Incorrect	none of the above	Incorrect
MC	When installing wire rope in drum how many minimum dead runs should be there	1	Incorrect	2	correct	3	Incorrect	4	Incorrect	does not matter	Incorrect
MC	In _____ rope, the wires in the strands are laid to the left, while the strands are laid to the right to form the wire rope.	right lang lay	incorrect	left regular lay	Incorrect	right regular lay	correct	left lang lay	Incorrect		
MC	In _____ rope, the wires in the strands are laid to the right, while the strands are laid to the left to form the wire rope. In this lay, each step of fabrication is	right lang lay	Incorrect	left regular lay	correct	right regular lay	Incorrect	left lang lay	Incorrect		

	exactly opposite from the right regular lay										
MC	The rated load capacity of the sling _____ sharply as the angle formed by the sling's leg and the horizontal becomes smaller	decreases	incorrect	increases	correct	remains same	Incorrect	none of the above	Incorrect		
MC	All metal slings are proof tested to a minimum _____ of their rated load capacity, which removes permanent stretching when used at rated load capacity	125%	Incorrect	150%	Incorrect	200%	Correct	225%	Incorrect		
MC	Disadvantage of using polymer fiber	Abrasion resistant	INCORRECT	Non flexible	INCORRECT	not resistant to UV rays	CORRECT	All the above	INCORRECT		
MC	Hazards in crane operation	Power line contact	INCORRECT	Tip over	INCORRECT	Fire and Explosion	INCORRECT	Rigging failure	INCORRECT	only (a) (b) and (d)	CORRECT
MC	The Industrial Truck Association has placed Internal combustion engine truck with pneumatic tires in	class 1	INCORRECT	Class 2	INCORRECT	Class 4	INCORRECT	Class 5	CORRECT		
MC	The lift capacity of truck is affected by	lift height	INCORRECT	load size	INCORRECT	weight of driver	INCORRECT	both (a) and (b)	CORRECT		
MC	Select the low cost conveyor system to carry light weight loads	Gravity flow	CORRECT	belt conveyor	INCORRECT	pallet conveyor	INCORRECT	None	INCORRECT		

MC	In fork lifts the drive the forks with the clearance of ____ from the ground	15cm	CORRECT	20cm	Incorrect	12cm	Incorrect	18cm	Incorrect		
MC	In Industry the size of the wide aisle is	greater than 11 feet	CORRECT	greater than 5 feet	INCORRECT	greater than 15 feet	INCORRECT	greater than 8 feet but less than 10 feet	INCORRECT		
MC	An anchorage for a personal fall-arrest system must support at least ____ pounds	2500	Incorrect	3000	Incorrect	5000	correct	5500	Incorrect		
TF	The anchorage can be used only as the attachment point for a personal fall-arrest system	TRUE	CORRECT	FALSE	INCORRECT						
MC	The minimum breaking strength of vertical life line is ____ pounds	2500	Incorrect	3000	Incorrect	5000	correct	5500	Incorrect		
MC	When crane operator comes in contact with powerline he dies after investigation it is found Voltage kills not the current. The investigated result is	TRUE	Incorrect	FALSE	correct						
MC	Safety nets must not be installed more than ____ below the working surface	30m	Incorrect	30feet	CORRECT	25m	Incorrect	25feet	Incorrect		

MC	An installed net must be able to withstand a drop test consisting of a _____ sandbag, _____ in diameter, dropped from the working surface	300 kg, 30 inch	Incorrect	400 pound ,30 inch	CORRECT	400kg.30cm	Incorrect	390 pound,30inch	Incorrect		
MC	The height of the toprail from the workplatform should be	42inch (+/- 3inch)	correct	41inch(+/-5 inch)	Incorrect	3.5m(+/- 0.2m)	Incorrect	none of the above	Incorrect		
MC	Stile is horizontal section which is used to place your foot	TRUE	Incorrect	FALSE	correct						
MC	Factor(s) that make roof fragile are	thickness of the material	Incorrect	design of the supoorting structures	Incorrect	weather condition	Incorrect	all the above	Correct		
MC	During working at height the free fall should not be more than	6m	incorrect	5.5ft	Incorrect	6feet	correct	5.5m	Incorrect		
MC	Crawling platforms will	avoid the discomfort of the person	Incorrect	equally distribute the load	correct	highly dangerous as it break the surface	Incorrect	none of the above	Incorrect		
MC	____equipments are used in working over fragile roofs	MEWP	correct	Cranes	Incorrect	elevators	Incorrect	human baskets	Incorrect	none of the above	Incorrect
MC	Place the ladder so that the horizontal	one : four	correct	four : one	Incorrect	one: three	Incorrect	doen not matter	Incorrect		

	distance from the wall to the vertical distance from the top of the edge to floor should be in the ratio _____										
MC	As per Indian Standard for scaffolds exceeding _____ height, stairways are the safest means of access.	3ft	Incorrect	3m	Incorrect	4m	correct	4ft	Incorrect		
MC	As per Indian Standard the Ladder rungs above the landing should be _____	minimum 1 meter extended	correct	minimum 1 feet extended	Incorrect	not more than 1 m extended	Incorrect	not more than 1.5 m extended	Incorrect		
MC	Maintaining distance is very important near electric line during crane operation because	to abide by the rules	INCORRECT	presence of emf	CORRECT	presence of resistance	INCORRECT	presence of high wavelength	INCORRECT	No matter as the current may not pass even the crane boom touched the wires as the tires are the base which could not pass current	INCORRECT
MC	Railings Should be provided for all working platforms higher than	2ft	Incorrect	2m	correct	2.5m	Incorrect	3ft	Incorrect		

