[A-15] SEAT No._____ No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY - 388120

M. Sc. (Industrial Hygiene and Safety)

PS02CIHS23: Physical Aspects of Environment.

Saturday , 23 – 03 – 2019, Saturday Time: 02:00 pm to 5:00 pm

Total Marks: 70

Note: Figures to the right indicate maximum marks.

Q1. ***Multiple Choice Questions-*** ***[8]***

(1) High level exposure to EMFs causes _____. [1]
(a)Measles b)None c) Silicosis d) Leukemia.

(2) High Level Waste accounts for over _____ of the total radioactivity produced in the process of electricity generation. [1]
(a)5% b)99% c) 97% d) 95%

[1]

(3) The body's physiological response to heat stress is heat strain.
(a) Shrinyus b)None c)False d) True

[1]

(4) The most desirable method of controlling a noise problem is to minimize the noise at the _____ (a)Path b) Shield c)Person d) Source

(5) Sound waves are a particular form of a general class of waves known as [1]
____waves
(a)Magnetic b)Plastic c) Elastic d) Schlostic

[1]

(6) Vibration transmitted through the seat or feet is called _____
(a) Whole Body b)None c)Segmental d) Hand Arm

[1]

(7) Tractors can produces _____vibration
(a) Plural b) Hand Arm c) Whole body d) Singular

[1]

(8) _____ are caused by the body's depleted salt and water levels from excessive sweating
(a) Heat Cramps b) Heat Rash c)Heat Stroke d)Heat Exhaustion

Q2. ***Short answer type questions — attempt any 7*** ***[14]***

(a) Exchange Rate [2]
(b) What is noise mapping? [2]
(c) Explain Hand Arm Vibration . [2]
(d) Raynaud's phenomenon [2]
(e) Heat Cramp [2]
(f) Acclimatization [2]
(g) Hyperthermia [2]
(h) Draw Radiation Symbol [2]
(i) Genetic effects [2]

Descriptive questions- ***[48]***

Q3. (a) Explain Noise Surveying in detail [6]

(b) Explain Noise Control in detail with specific examples. [6]

OR

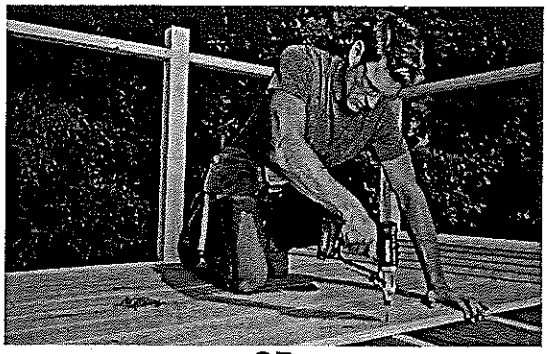
(c) A machine is generating sound at a power level of 105 dB in a corner of a large room. What is estimated Sound Pressure level at a distance of 15 Ft. Q=10 . Assume Where necessary . [6]

Q4. (a) Explain Taylor- Pelmear classification of vibration-induced white finger by stages . [6]

(b) Write Hazards exposed by the person shown in the picture and suggest safety measures . [6]

(1)

(P.T.O.)



OR

(c) A worker uses three tools during a working day: [6]
1. An hand grinder: 5m/s² for 2½ hours
2. An angle cutter for 2 m/s² for 1 hour
3. A chipping hammer 20 m/s² for 15 minutes
Calculate partial vibration exposures for the three tasks ,daily exposures and conclude.

Q5. (a) How heat related illness can be prevented . Explain . [6]
(b) Explain Engineering controls for heat stress. [6]

OR

(c) Write heat balancing equation and Explain the four primary ways in which the human body releases heat. [6]

Q6. (a) Explain EMF exposure . [6]

(b) Types of Radioactive wastes. Explain High Level Wastes [6]

OR

(c) What is Non-Ionizing radiation. Explain What is the difference between non-ionizing radiation and ionizing radiation and give examples? [6]

— X —

(2)