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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**MAKE UP EXAMINATION – JAN 2023**

**Course Code:** CIV2002

**Course Name:** Occupational Health and Safety

**Program :** B. Tech

**Date:** 27-JAN-2023

**Time:** 01.00 PM to 04.00 PM

**Max Marks:** 100

**Weightage:** 50%

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**Instructions:**

*(i) Read the all questions carefully and answer accordingly.*

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**Part A [Memory Recall Questions]**

**Answer all the Questions. Each question carries 05 marks.**

**(8Qx 5M=40M)**

- Occupational Environment should be safe and hygienic for workers. Define occupational environment and enlist the elements of occupational environment? (C.O.No.1) [Knowledge]
- Ultra Violet and Ionizing radiations are physical hazards and several disorders to human health at workplace. Enlist any five health of it. (C.O.No.2) [Knowledge]
- Chemicals may catch fire, explode or react and cause physical injuries to users. What are flammable and combustibles. Write any five flammable and combustibles with one example each. (C.O.No.2) [Knowledge]
- The National Policy was declared on 20<sup>th</sup> February 2009. Explain the challenges to National policy on OSHA at workplace. (C.O.No.1) [Knowledge]
- An electrical accident is an undesired event caused by electric current resulting to injury to a person or damage to property. Write a note on fibrillation and arc flash electrical hazards. (C.O.No.2) [Knowledge]
- Combination of heat, fuel and oxygen is known as triangle of fire. Enlist the types of fire with examples. (C.O.No.3) [Knowledge]
- Employers must protect employees by providing personal protection Equipments (PPE). Identify the types of goggle and respirators used at workplace as PPE. (C.O.No.3) [Knowledge]
- Ergonomics derived from Greek words, means laws of work. Define ergonomics and write any four the objectives of ergonomics. (C.O.No.2) [Knowledge]

**Part B [Thought Provoking Questions]**

**Answer all the Questions. Each question carries 10 marks.**

**(3Qx10M=30M)**

- Hazard may be realized or unrealized in workplace. Enlist the hazard analysis methods and explain any two of it. (C.O.No.2) [Comprehension]
- International Labour organization has provided core occupational health and safety principles addressing issues related to law, medicine, technology, economics and industry specific concerns. Delineate any five principles of Occupational Health and Safety, applicable in workplace. (C.O.No.1) [Comprehension]

11. Bar screen and anaerobic digesters generates slime and methane respectively, are the major risks in Sewage Treatment Plant (STP) maintenance. Explain the safety measures required in bar screen and anaerobic digesters. (C.O.No.4) [Comprehension]

**Part C [Problem Solving Questions]**

**Answer ANY ONE Question. Each question carries 10 marks. (2Qx15M=30M)**

12. Fire accidents can occur from faulty wiring, defective products, and discarded cigarettes left on flammable materials. Identify the suitable fire extinguishers for different classes of fire and discuss by plotting chart of it.

(C.O.No.3) [Comprehension]

13. Good design and the use of safety equipment will not prevent physical injuries in sewerage works, unless safety practices are understood by the entire crew or team and are enforced.

- a) Why we should use forced ventilation in sewage pit or tank cleaning?
- b) Write the onsite procedure to follow for confined spaces in maintenance or cleaning

(C.O.No.4) [Comprehension]