

**B.Tech. Degree VIII Semester Examination, April 2008****SE 801 HAZARD CONTROL TECHNOLOGY***(1999 – 2001 Scheme)*

Time: 3 Hours

Maximum Marks: 100

- I a) Discuss the principle safety requirements for building exists and stairs. (10)  
 b) Explain the advantages of colour coding of pipelines in a process industry. (10)  
**OR**
- II a) How will you ensure safe storage and handling of hazardous solid materials? (10)  
 b) Discuss the various aspects of plant lighting and explain how there influence the efficient and safe working of the plant. (10)
- III a) What are the basic requirements for a mechanical guard? (10)  
 b) Discuss the role of safety trips in hazard control. (10)  
**OR**
- IV a) How do enclosures and barriers control mechanical hazards? (10)  
 b) Enumerate the merits and demerits of hand removal devices employed as a safety device. (10)
- V a) Explain the reasons for furnace explosions. How are they controlled? (10)  
 b) Explain the hydrostatic test procedure for a pressure vessel. (10)  
**OR**
- VI a) Discuss the role of boiler mountings and accessories in the safe operation of a boiler. (10)  
 b) Explain fire tube and water tube boilers and its applications. (10)
- VII a) What are the hazards associated with ionizing radiations? Explain briefly the safety mechanisms. (10)  
 b) What are the units to express radiation? Explain the units of radiation measurement. (10)  
**OR**
- VIII Write notes on:  
 i) Biological effects of radiation  
 ii) Electromagnetic radiation  
 iii) Development of atomic power  
 iv) Safety mechanism for non ionizing radiations (4 x 5 = 20)
- IX a) What are the precautions to be taken while transporting radioactive materials? (10)  
 b) With a neat diagram explain the working principle of ionization chamber. (10)  
**OR**
- X a) Explain the working principle of a crystal dosimeter and Geiger Counter. (10)  
 b) What is LASER? What are the biological effects from exposure to laser? (10)

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