Ref. No.: Ex/PG/EBT/T/1210D/2018

## M. TECH. ENVIRONMENTAL BIOTECHNOLOGY 1ST YEAR 2ND SEM. EXAM. - 2018

## Sub: SAFETY ENGINEERING

Time: Three hours

Full Marks: 100

Q. No.	
	Answer any four questions:
1.	Define as per the Factories Act 1948 (As Amended) (5X5=25)  a) Factory b) Hazardous process. c) Manufacturing process. d) Near miss accident.
	e) Competent person
2.	<ul> <li>a) Name five hazardous processes as per the Factories Act 1948 (As Amended). (10)</li> <li>b) Define notifiable disease? Name any two of the notifiable disease as per the Factories Act 1948 (As Amended) and explain the preventive measures to be taken to curb them. (5)</li> </ul>
	<ul> <li>c) What are the different types of hazards/risks encounter in various building construction sites and pharmaceutical industries? (10)</li> </ul>
3.	<ul> <li>a) What is health and safety policy? (5)</li> <li>b) Write a short note on the workers' participation for ensuring safety in industries. (10)</li> <li>c) What is the management role for implementing safety policy? (5)</li> <li>d) When the revision of health and safety policy is required? (5)</li> </ul>
4.	<ul> <li>a) What is PPE and where it is needed? (5)</li> <li>b) What are the basic requirements of PPE? (5)</li> <li>c) What are the factors to be considered before selecting PPEs for working in confined spaces? (5)</li> <li>d) What are the factors to be considered before selecting PPE for electrical maintenance (repairing electrical wiring/machineries)? (10)</li> </ul>
5.	<ul> <li>a) What is WORK PERMIT and where it is applicable? (10)</li> <li>b) What are the safety methods or procedures to be followed before issuing a work permit for: <ol> <li>i) Working inside a confined space.</li> <li>ii) Working at height. (10)</li> </ol> </li> <li>c) Who are the persons who can issue work permit and restrict its validity and restrict its time. (5)</li> </ul>
6.	<ul> <li>a) Define OCCUPIER as per the Factories Act 1948 (As Amended). (5)</li> <li>b) What are the obligations of the occupier to prevent accident and occupational health problems in industry and construction sites? (10)</li> <li>c) What are the obligations of the workers to help the occupier/management to prevent accident? (10)</li> </ul>