Name: Enrolment No:	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2019
Course: SAFETY, HEALTH AND ENVIRONMENT MANAGEMENT
Semester: VI Semester
Program:B.Tech(APE with Gas Specialization)
Time 03 hrs.
Course Code: ENVO405 **Max. Marks: 100**

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Define safety, hazard and risk	4	CO1
Q2	Interpret in brief occupational injury and occupational illness.	4	CO1
Q3	Define and elucidate three step accident process.	4	CO2
Q4	What do you mean by risk analysis and risk assessment?	4	CO2
Q5	What do you mean by intensification in chemical process safety?	4	CO3
	SECTION B		
Q 6	Explain entry routes of toxicants and methods of control.	8	CO4
Q7	Analyse dispersion models.	8	CO4
Q8	Interpret in details OSHA's Right of Enforcement.	8	CO3
Q9	Elucidate in details HAZAN and HAZOP . OR How will you evaluate worker exposure to dusts?	8	CO4
Q10	Explain evaluation in industrial hygiene. OR How will you evaluate worker exposure to toxic vapors?	8	CO4
	SECTION-C		
Q11	Describe in details all the types of source models.	20	CO5
Q12	Analyse puff and plume models in dispersion of pollutants. OR Discuss neutrally buoyant dispersion models.	20	CO5

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SECTION A

S. No.		Marks	CO
Q 1	What do you mean by safety or loss prevention?	**4**	**CO1**
Q2	Define accident and loss statistics.	**4**	**CO1**
Q3	What do you mean by inherent safety?	**4**	**CO2**
Q4	What does respiratory system play in toxicants entry into the biological organisms?	**4**	**CO2**
Q5	Define in brief Forced Vital Capacity?	**4**	**CO3**
	SECTION B		
Q 6	Analyse source models in details.	**8**	**CO4**
Q7	Discuss and describe OSHA Act and NIOSH.	**8**	**CO4**
Q8	Elucidate Hazard and Operability Analysis.	**8**	**CO3**
Q9	Discuss in details Preliminary Hazard Analysis. OR Explain What-If analysis.	**8**	**CO4**
Q10	Explain different types of hazards. OR Discuss HAZAN and HAZOP.	**8**	**CO4**
	SECTION-C		
Q11	Elucidate in details worker exposures during vessel filling operations. OR Discuss in details neutrally buoyant dispersion models.	**20**	**CO5**
Q12	Describe release mitigation. What do you mean by fires, explosions and fire triangle in details?	**20**	**CO5**