Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2018

Programme Name: B. Tech Applied Petroleum Engineering. (Spl. in Gas) **Semester : VII**
Course Name : Risk Management in Energy Industries **Time : 03 hrs**
Course Code : PSEG 374 **Max. Marks : 100**
Nos. of page(s) : 2
Instructions: *Please answer to the point and use facts, figures and examples wherever necessary.*

SECTION - A [20]

S. No.		Marks	CO
Q1.	Give the different phases of oil and gas production. Why do these phases occur?	**5**	**CO2**
Q2.	What are the different methods of drilling used in oil and gas sector?	**5**	**CO1**
Q3.	Describe in brief the various methods of enhanced oil recovery.	**5**	**CO1**
Q4.	List down the various safety precautions engaged for flare systems in oil refineries.	**5**	**CO4**
	SECTION - B [40]		
Q5.	Discuss in detail the "BP Deepwater Horizon" offshore disaster. Give your recommendations on "How could it had been avoided?"	**10**	**CO4**
Q6.	Being the CEO of a multinational oil company, what all financial risks your company may face in the current volatile market?	**10**	**CO3**
Q7.	As the Chief Safety Officer, you and your group are working on identifying the risk explosion in a high-pressure vessel containing methane in an oil refinery. (*Hint: identify the causes and the consequences.)* Do the "Fault tree analysis" for the above event. OR Do the "Bow Tie analysis" for the above event.	**10**	**CO4**
Q8.	a) List the risks associated with pipeline transportation system. *(5)*	**10**	**CO3**
	b) Why is quantification of risk required? Give its various steps. *(5)*		**CO4**
	SECTION - C [40]		
Q9.	Discuss the "Fukusima Nuclear Disaster". If you are the safety analysist for a Nuclear power plant what all precautions will you take to ensure that the event doesn't occur again?	**20**	**CO4**

	OR Discuss the "Dhanbad Coal Mine Disaster, 1965". If you are the safety analysist for coal mining company what all precautions will you take to ensure that the event doesn't occur again?		
Q10.	Discuss in detail the current global and Indian oil and gas market scenario w.r.t price, availability, trading, policies and political scenarios.	**20**	**CO5**

Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2018

Programme Name: B. Tech Applied Petroleum Engineering. (Spl. in Gas) **Semester : VII**
Course Name : Risk Management in Energy Industries **Time : 03 hrs**
Course Code : PSEG 374 **Max. Marks : 100**
Nos. of page(s) : 2
Instructions: *Please answer to the point and use facts, figures and examples wherever necessary.*

SECTION - A [20]

S. No.		Marks	CO
Q1.	What are the various decisions made during the development phase of an oil reserve	**5**	**CO1**
Q2.	List down the various safety precautions engaged for particulate matter handling in oil refineries.	**5**	**CO4**
Q3.	Give the different phases of oil and gas production. Why do these phases occur?	**5**	**CO2**
Q4.	What are risks associated with pipeline transportation system?	**5**	**CO3**
	SECTION - B [40]		
Q5.	As the Chief Safety Officer, you and your group are working on identifying the risk explosion in a high-pressure vessel containing methane in an oil refinery. (*Hint: identify the causes and the consequences.)* Do the "Fault tree analysis" for the above event. OR Do the "Failure Mode and Effect Analysis" for the above event.	**10**	**CO4**
Q6.	Discuss in detail the "Bombay High North Platform 2005" offshore disaster. Give your recommendations on "How could it had been avoided?"	**10**	**CO4**
Q7.	a) Why is quantification of risk required? Give the steps of risk analysis. *(5)*	**10**	**CO3**
	b) How are "fault-tree analysis", "Event tree analysis" and "Bow-tie analysis" different from each other? *(5)*		**CO4**
Q8.	Being the CEO of a multinational oil company, what all financial risks your company may face in the current volatile market?	**10**	**CO3**
	SECTION - C [40]		
Q9.	Discuss in detail the current global and Indian oil and gas market scenario w.r.t price, availability, trading, policies and political scenarios.	**20**	**CO5**

Q10.	Discuss the "LPG pipeline incident, Ufa Russia, 1989". If you are the safety analysist for the pipeline company what all precautions will you take to ensure that the event doesn't occur again? OR Discuss the "Fukusima Nuclear Disaster". If you are the safety analysist for a Nuclear power plant what all precautions will you take to ensure that the event doesn't occur again?	**20**	**CO4**