


Name: Enrolment No:		
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES Online End Semester Examination, May 2021		
Course: Res Eco & Risk Management in exploration Program: B. Tech. GSE Course Code: PEGS 4004	Semester: VIII Time: 03 hrs. Max. Marks: 100	
Instructions: All questions are compulsory.		
SECTION A		
1. Each question carry 5 marks		
2. Instruction: Select the correct answer(s)		
Q 1	<p>I. The bulk of the source material for hydrocarbons was deposited in a few geologic time periods</p> <p>A. Jurassic B. Cretaceous C. Both of the above D. None of the above</p> <p>II. Which produced more than one-fourth of world oil production in 1960</p> <p>A. United state B. Russia C. Middle East D. Venezuela</p> <p>III. Which of the following companies is among the first top 10 in Fortune Global 500 Ranking of World Largest Companies.</p> <p>A. ONGC B. Petronas C. British Petroleum D. Shell Oil</p> <p>IV. In ancient time, crude oil was being used by human beings for different purposes like</p> <p>A. Water repellent B. Binding things together C. Sealant in the joints of wooden boats D. All of the above</p> <p>V. In the beginning of modern Oil and gas industry which of the following was consider the main and useful product</p> <p>A. Kerosene B. Petrol C. Natural gas D. Diesel</p>	CO1

Q 2	<ul style="list-style-type: none"> I. The creaming curve is a useful tool for calibrating the estimate <ul style="list-style-type: none"> A. The remaining undiscovered resources B. The wells required for the development of filed C. The economic viability of project D. None of the above II. The calibration of probability factors by post-drill evaluation will provide <ul style="list-style-type: none"> A. Improved future exploration results B. Improved estimates of the remaining undiscovered resources C. Improved economic analysis and risk factor D. None of the above III. A reconstruction of the post-accumulation history of the trap is an important factor (slide 60) <ul style="list-style-type: none"> A. In determining the migration of oil column B. In determining the lithology of plays C. In determining the direction of migration of hydrocarbon column D. In determining the hydrocarbon column IV. The risk analysis is closely related to the interpretation of which of the following data as input to the volumetric calculation (slide 42). <ul style="list-style-type: none"> A. Porosity B. Permeability C. Pressure D. All of the above V. Stratified reservoir rocks generally comprise <ul style="list-style-type: none"> A. Thick carbonates B. Numerous sandstones within thick clastic formations C. Sandstone beds within a relatively confined stratigraphic interval D. All of the above 	CO2
Q 3	<ul style="list-style-type: none"> I. Select the correct statement from the following <ul style="list-style-type: none"> A. All reserve estimates involve some degree of uncertainty. B. Availability of reliable geologic and engineering data is chiefly responsible for the uncertainty in the estimation of reserve. C. Reserve estimation is dynamic process and estimation is refined at different stages in the life of field D. All of the above. II. Proven developed reserves are the reserves <ul style="list-style-type: none"> A. That can be produced with existing wells B. That can be produced after drilling required number of well C. That can be produced with existing wells after creating production facilities D. All of the above III. If any reserve is in P50 category, that means <ul style="list-style-type: none"> A. It needs further development B. It has the probability to exist C. Both (A) and (B) 	CO3

	<p>D. None of the above</p> <p>IV. Which method of reserve estimation has the minimum error</p> <p>A. Volumetric, B. Material balance C. Production performance. D. Comparative methods</p> <p>V. The basic properties of that determine a reservoir rock's hydrocarbon storage capacity are</p> <p>A. Porosity and permeability B. Porosity and water saturation C. Porosity and grain density D. Porosity and capillary pressure</p>	
Q 4	<p>I. A static reservoir study does not proceeds through</p> <p>A. Structural Modeling B. Stratigraphic Modeling C. Production Data Modeling D. Petro physical Modeling</p> <p>II. Find a false statement A reservoir simulation study involves:</p> <p>A. Selecting the model and approach B. Gathering, collecting and preparing the input data C. Planning the computer runs, in terms of history matching and/or performance prediction D. Economics and risk analysis.</p> <p>III. Black oil model assumes that the thermodynamic behavior of the reservoir hydrocarbon system can be well represented by:</p> <p>A. The stock tank oil B. The separator gas. C. Both A & B D. None of the above</p> <p>IV. Production profiles define</p> <p>A. How the oil flowrates will change with time for the whole field life B. How the water flowrates will change with time for the whole field life C. How the gas flowrates will change with time for the whole field life D. All of the above</p> <p>V. Which of the following is not a EOR process</p> <p>A. Artificial lift method B. Thermal recovery method C. Miscible flood method D. Microbial methods</p>	CO4
Q 5	<p>1 Which of the following item is not capital expenditure</p> <p>A. Purchase of new equipment B. Purchase of machinery</p>	CO5

	<p>C. Purchase of consumable D. Purchase of buildings</p> <p>I. Decisions of capital expenditure are very critical because</p> <p>A. Estimating the costs relating to capital expenditures may be quite complicated B. A lot of uncertainty usually characterizes the costs and benefits of capital expenditure decisions C. Both A & B D. None of the above</p> <p>II. Major capital expenditure of an oil and gas firm is generally in</p> <p>A. Development of oil gas field B. Exploration of Hydrocarbon C. Research and Development activities D. None of the above</p> <p>III. In the current scenario, the slowing capital spending and decreasing production growth, some of the companies are still performing better due to reasons that</p> <p>A. Companies are spending more on R & D B. Companies maintain a continuous focus and disciplined approach to investment C. Companies are doing other business D. All of the above</p> <p>IV. Operating Expenditure in oil and gas company include</p> <p>A. Purchase of equipment required for operation B. Purchase of land C. Operation and maintenance of the equipment D. All of the above</p>	
<p>Q 6</p>	<p>I. Exploration and production of hydrocarbons is a high-risk venture due to the uncertainty associated with</p> <p>A. Geological models B. Economic models C. Engineering models D. All of the above</p> <p>II. The problem involving decision-making for an oil and company is due to the fact that</p> <p>A. Conditions of operation are is very harsh B. Availability of easy oil is over C. Oil and gas business is no more economical D. None of the above</p> <p>III. The objective of the decision analysis methods is</p> <p>A. To provide a strategy to minimize the exposure of petroleum projects to risk and uncertainty B. To understand the risk associated with petroleum exploration ventures.</p>	<p>CO6</p>

	<p>C. To quantify an individual's financial preferences for exploration and production</p> <p>D. All of the above</p> <p>IV. Risk considerations in exploration involve</p> <p>A. Size of investment</p> <p>B. Potential gain or loss,</p> <p>C. Probability of outcome</p> <p>D. All of the above</p> <p>V. The concepts of risk analysis in an oil industry is applied</p> <p>A. In exploration phase</p> <p>B. In appraisal phase</p> <p>C. In development phase</p> <p>D. All of the above</p>	
SECTION B		
<p>1. Each question carry 10 marks</p> <p>2. Instruction: Write short / brief notes</p>		
S No.	Question	CO
Q 7	Describe the different stages of evolution of oil & gas industry from ancient time to modern age	CO1
Q 8	Explain in details the reasons of uncertainty associated with hydrocarbon assessment and methods of reducing the uncertainty.	CO2
Q 9	Present in brief the classification of reserve and various methods of hydrocarbon resource estimation	CO3
Q 10	Describe the following A. Static reservoir model B. Production profile under different stages of recovery	CO4
Q 11	Describe the risk associated in different stages of field life and possible ways that help in managing the risk.	CO6
SECTION C		
<p>1. Each Question carries 20 Marks.</p> <p>2. Instruction: Write long answer.</p>		
Q 12	Explain the challenges and complexities of capital expenditure in an oil industry present the cost benefit analysis of capital expenditure Present your understanding about the operating expenditure related to field development project, production operations and maintenance of oil and gas field	CO5