

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2020 (Online Mode)

Course: Developing LNG Production & Handling (PTEG 461) (Program Elective-5)

Programme: B.Tech. APE UP

No. of pages: 02

Instruction: Assume suitable data, if necessary.

Semester: VIII

Time: 3 hrs

Max. Marks: 100

SECTION A

(Multiple choice, Fill in the blanks and True or False Type Questions)

Q. No.	Answer all questions. [5 X 6 = 30 marks]	Marks	CO
Q. 1	Which Indian code covers the safety and design aspects of all the major components of LNG receiving terminal such as Unloading, Storage, Regasification and Send out? a) OISD 194 b) 49 CFR 193 c) EN 1474 d) None of these	5	CO1
Q. 2	In LNG feed gas, Nitrogen and other inert gases are limited to ----- mol% (max.). a) 1.2 b) 1.5 c) 1 d) None of these	5	CO2
Q.3	What is the material of construction of primary and secondary barrier of Gaz Transport Tank? a) 35% Nickel-steel alloy b) 36% Nickel-steel alloy c) 37% Aluminium-steel alloy d) None of these	5	CO3
Q. 4	Sea water is used as heating medium in an open rack vaporizer – True or False	5	CO4
Q.5	Term of sale in line with Ex-Ship model signifies that the price invoiced or quoted by the seller includes all charges up to the port of destination but the buyer pays the charges for unloading the goods off the ship and all subsequent charges such as customs duty and taxes-True or False	5	CO5
Q.6	In case LNG supplier not fulfilling his annual supply commitment , as broken down to monthly averages, then there has to a penalty levied on him for not meeting the contractual obligations and also has to supply the quantity at a later date –True or false	5	CO5

SECTION B
(Short Answer Type Questions)

Q. No.	Q.7 to 10 are compulsory. Out of Q.11 & 12 answer any one. [10 X 5 = 50 Marks]	Marks	CO
Q. 7	Give the advantages and areas of concern of 'APCI Propane Pre-cooled Mixed Refrigerant Process' for LNG production.	10	CO2
Q. 8	Describe the construction of a 'Full Containment LNG Storage Tank'. Diagram is not required.	10	CO3
Q.9	Explain without flow diagram, 'Intermediate Fluid LNG Vaporizer with Rankine Cycle'. Also give its merits and demerits.	10	CO4
Q.10	Analyze and discuss the marine facilities required for LNG receiving terminal.	10	CO4
Q. 11	Elaborate on 'LNG Pricing Conceptualization'. Diagrams are not necessary.	10	CO5
Q. 12	Discuss 'Gas Reserves' and 'Gas Quality' as important considerations for LNG contract, from buyer's view point.	10	CO5

SECTION-C
(Long Answer Type Questions)

Answer any one question. [20 X 1 = 20 marks]			
Q. 13	Describe without flow diagram, 'Simplified Cascade Liquefaction Process' for LNG production. Also give its advantages and areas of concern.	20	CO2
Q. 14	Explain without flow diagram, 'BHP Nitrogen Expander Process' for LNG production. Also give its advantages and areas of concern.	20	CO2

