

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Term Examination – May 2022**

**Program: B.Tech APE (Gas)**

**Course: City Gas Distribution and Pipeline Network Analysis**

**Code: CHGS 3023**

**Max Marks :100**

**Assume data if necessary**

**Semester: VI**

**Time: 03 hrs.**

**SECTION A (5\*4=20)**

1	What is Wobbe Index? What is its significance?	04	CO1
2	Define attributes of Meters.	04	CO3
3	List advantages of PNG	04	CO2
4	Explain vortex flow meter with neat diagram	04	CO3
5	What are safety devices in CGS	04	CO5

**SECTION B (4\*10=40 Marks)**

6	Explain applications of natural gas in electricity sector in detail	10	CO1
7	What are common measurement problems in metering system? Give suggestions to overcome these problems.	10	CO3
8	An existing 140mm supplies gas from A to B a distance 1200m. It is proposed to double the demand at B & reinforce the existing pipe with parallel pipe so that original pressure remains constant. Determine length of reinforcement for 120mm, 140mm 180mm. Discuss your result	10	CO4
9	Prepare emergency and disaster management plan for CGD	10	CO5

**SECTION-C (2\*20=40)**

10

Starting with basic assumptions derive high, medium, & low pressure gas flow equations.

**20**

**CO2**

11

Solve following network by Hardy cross method.

**20**

**CO4**

