Seat No: _____   Enrollment No:_____

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCES
M.Sc. Winter 2019-20 Examination

Semester: 3   Date: 28 /11/2019
Subject Code: 11211202   Time: 02:00pm to 04:30pm
Subject Name: Mining Geology and Mineral Economics   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks)   **(08)**
   (a) Explain Concept of resource in detail.
   (b) Write a short note on Inorganic origin of a mineral & Solid substance.

Q.1. B) Answer the following questions (Any two)
   (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks)   **(04)**
   1. Define homogeneous nature of a mineral.
   2. Explain the relationship between Mineral deposits and political boundaries.
   (b) Short note on Mineral endowment.   **(04)**
   (c) Short note on Underground mining.   **(04)**

Q.2. A) Answer the following questions.
   (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks)   **(04)**
   1. _____ is the crustal abundance of Manganese.
   2. _____ method is based on dividing the deposits into a large number of cubes or
   rectangular prisms.
   (b) What are the properties of categorization curve model?   **(04)**

Q.2. B) Answer the following questions (Any two)
   (a) Short note/ Multiple choice questions.   (Each of 01 marks)   **(03)**
   1. What is the crustal abundance of Iron?
    a) 58,000 gram/tonne   b) 48,000gram/tonne   c)38,000 gram/tonne   d)28,000 gram/tonne
   2. Which point will be the flattening point in the categorization curve?
    a) Y   b) B   c) A   d) C
   3. _____ is the crustal abundance of Gold.
    a)0.0050 gram/tonne   b) 0.010 gram/tonne   c)0.0035 gram/tonne   d) 0.005 gram/tonne
   (b) Short note on surface mining.   **(03)**
   (c) Short note on discovered resource.   **(03)**

Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks)   **(08)**
   (a) Explain any four specialities of mineral deposits.
   (b) Explain Uncertainty about Quality & Uncertainty about Quantity.

Q.3. B) Answer the following questions (Any two)
   (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2)   (Each of 02 marks)   **(04)**
   1. Define Incidence.
   2. Define Economic resource.
   (b) Short note on Reclamation.   **(04)**
   (c) Short note on Vein Mining.   **(04)**

Q.4. A) Answer the following questions.

(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks)   **(04)**

    1. _____ can be considered as the recoverable component of economic resource.

    2. _____ is the crustal abundance of Aluminiun.

(b) Short note on Block caving.   **(04)**

Q.4. B) Answer the following questions (Any two)

(a) Short note/ Multiple choice questions.   (Each of 01 marks)   **(03)**

    1. _____ is the crustal abundance of Zinc.

    a) 94 gram/tone   b) 70 gram/tonne   c) 50 gram/tonne   d) 10 gram/tonne

    2. What is the crustal abundance of Titanium?

    a) 6400 gram/tonne   b) 2200 gram/tonne   c) 3200 gram/tonne   d) 2300 gram/tonne

    3. _____ method is based on vertical sections drawn along the length of the deposits.

    a) Longitudinal   b) Triangular   c) Block method   d) None of the above

    Vertical section methoc method

(b) Short note on Shrinkage stoping.   **(03)**

(c) Short note on Longwall mining.   **(03)**