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Fourth Semester Online Examination, May-June, 2022

M. Sc. GEOLOGY

Paper II

ENGINEERING GEOLOGY AND MINERAL BENEFICIATION

Time : Three Hours] [Maximum Marks : 80

Note : (i) Part A and B of each question in each Unit consist of very short answer type questions which are to be answered in one or two sentences.

(ii) Part C (Short answer type) (Word limit 200-250) and Part D (Long answer type) of each question should be answered within the word limit (400-450 words) mentioned.

UNIT-I

1. (A) Bhakhra Dam is which type of Dam ? 2
(B) For construction of road which property of rock is important ? 2

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- (C) What is the role of Engineering geology in civil construction ? 4

Or

What do you understand by metal and concrete aggregates ?

- (D) Discuss the engineering properties of rocks. 12

Or

Discuss the various geological problems related to foundation of Dam.

UNIT-II

2. (A) What is the spring line of a tunnel ? 2
(B) What is rock flows ? 2
(C) Describe the seismic zones of India. 4

Or

Discuss the major earthquakes of India.

- (D) Discuss the various causes of Dam failure. 12

Or

What are the geological condition which influence the foundation and design of buildings ?

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UNIT-III

3. (A) What is ore beneficiation ? 2
(B) Write only name of different types of crushers. 2
(C) Discuss the various properties of minerals utilised in ore dressing. 4

Or

Discuss various conditions for proper screening.

- (D) What are the principles of wet classification ? Describe the various types of classifiers. 12

Or

Discuss the principles and method of screening.

UNIT-IV

4. (A) What is scrubbing concentration ? 2
(B) What is Jigging. 2
(C) Write a note on magnetic separation. 4

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Or

Write a note on electric separation.

- (D) Discuss the flotation method of mineral, concentration in detail. 12

Or

What do you understand by flowsheet of ore dressing for various ore minerals ? Describe the flow sheet of Cu and Pb-Zn ore.

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