Total No. of Printed Pages—4

6 SEM TDC GEO M 1

2018

(May)

GEOLOGY

(Major)

Course : 601

(Mining and Engineering Geology)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

The figures in the margin indicate full marks for the questions

UNIT—19.1

(Mining Geology)

(*Marks* : 24)

1. Describe the geometric method of ore reserve estimation. 6

2. Write about different mine sampling methods. What are the precautions need to be taken during such sampling? 6+2=8

3. Write explanatory notes on any *two* of the following : 4×2=8

(a) Surface mining methods

(b) Box and pillar methods of mining

(c) Duties of a geologist in mining enterprises

(d) Caving method

4. *(a)* Choose the correct answer : 1

To ensure removal of poisonous gases and to maintain workable temperature in an underground mine, there should be a effective system of

(i) water discharge

(ii) ventilation

(iii) electrification

(iv) All of the above

(b) What is the full form of NMDC? 1

UNIT—19.2

(Engineering Geology)

(*Marks* : 24)

5. Discuss about different engineering properties need to be studied for the construction of highway along the bank of the river Brahmaputra. 6

6. Write about the important engineering properties of rocks and soil. Also describe the role of rock as construction material. 5+3=8

Or

What is landslide? Describe about different types of landslides and their causes. 1+4+3=8

7. Write notes on any *two* of the following : 4×2=8

(a) Types of dams

(b) Construction of tunnel in a shear zone

(c) Liquefaction of soil

(d) Mitigation of landslide

8. Choose the correct answer of the following : 1×2=2

(a) In the Mohr circle, the shear stress representation is along

(i) *x*-axis

(ii) *y*-axis

(iii) both the axes

(b) Seepage from a reservoir is less likely if the beds under the dam are

(i) horizontal

(ii) dipping upstream

(iii) dipping downstream

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