

sec + Phy + Che + Bot + Zoo + Math + Stats

tal No. of Printed Pages—4

6 SEM TDC GEO M 1



Geo = 601, 602, 603, 604, 607
G = 601
2014 Phy = 601, 602, 603, 604
G = 601

(May) Che = 601, 603, 605, 607
G = 601

Bot = 601, 603, 604, 606
G = 601

GEOLOGY

Zoo = 601, 604, 606 G = 601
(Major)

Math = 601, 602, 603, 604
G = 601

Course : 601 Stats 601, 602, 603
G = 601

(Mining and Engineering Geology)

Full Marks : 48

Pass Marks : 19

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—19.1

(Mining Geology)

(Marks : 24)

What do you mean by sampling? Describe the procedures and techniques of sampling employed in assessing an ore deposit. 1+7=8

(2)

Or

Give a short account of the graphical method of estimation of ore reserves. What method would you suggest for estimating the ore reserve of bedded limestone deposits? Give reasons.

6+2=8

2. Write short notes on any *two* of the following :

4×2=8

- (a) Breast stoping
- (b) Shrinkage stoping
- (c) Block caving
- (d) Strip mining

3. Write explanatory notes on any *two* of the following :

3½×2=7

- (a) Opencast mining *vs.* Underground mining
- (b) Calculation of average grade and tonnage of ore deposit
- (c) Cut-off grade and Run-of-mine (RoM) grade
- (d) Bulk density and Tonnage factor

4. Fill in the blank :

1

Drift is an underground roadway either level or inclined usually driven along — of the ore deposit.

(3)

UNIT—19.2

(Engineering Geology)

(Marks : 24)

5. Discuss the geological consideration for the location of a suitable dam site. Illustrate your answer with neat sketches.

8

Or

Describe the geological aspects which are to be considered in the site selection for construction of a bridge. Give suitable sketches.

6. Write in detail about the engineering properties of soil and mention about a standard soil classification system.

6+2=8

Or

Write a short account on the engineering properties of rock mass and their evaluation.

5+3=8

7. Write short notes on any *two* of the following :

$3\frac{1}{2} \times 2 = 7$

- (a) Uniaxial compressive strength
- (b) Concrete aggregates
- (c) Mohr circle of stress
- (d) Rock Quality Designation (RQD)

8. Choose the correct answer :

1

An element of hill slope is

- (a) free space
- (b) nick point
- (c) knoll
- (d) reentrant



Figure 1. A large, mostly blank white rectangular area, possibly representing a blank page or a very faded image.