



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2020

CC11-GEOLOGY
ECONOMIC GEOLOGY

Full Marks: 40

ASSIGNMENT

The figures in the margin indicate full marks.

Answer any four questions from the following

10×4 = 40

1. Using necessary sketches discuss about the role of partition coefficients and “R factor” in PGE- and Ni-sulfide mineralization associated with mafic-ultramafic rocks. 10
2. Discuss about the important features of spatial and temporal distribution of ore deposits over the globe through the geological time. 10
3. “Porphyry Cu deposit and associated potassic alteration are associated with I-type granites whereas porphyry Sn-W deposits are associated with S-type granites and sodic alteration”—Discuss. 10
4. Describe the different horizons/zones found in a well-developed lateritic regolith profile and discuss the mechanism of formation Ni-laterite deposits. 10
5. Discuss about the common source of fluid, metal and heat, and mechanism of ore mineral precipitation in volcanogenic massive sulphide (VMS) deposits. Explain the metal zoning pattern in such deposits. Use schematic sketches wherever necessary. 10
6. Discuss about the possible mechanism of (a) formation of chromitite layers in ultramafic rock-hosted chromite deposits, and (b) immiscibility of sulphide melt from a silicate melt. Use necessary sketches. 10

—x—