Earth Systems 3209
June 2013 Public Exam Outcome Report

Unit 1 – Introduction
Unit 2 – Historical Geology
Unit 3 – Earth Materials
Unit 4 – Forces Within Earth
Unit 5 – Earth Resources

PART I – Total Value: 75%

| Item | Cognitive Level | Curriculum Guide Page | Unit | Outcome Topic |
|---|---|---|---|---|
| 1 | L1 | 28/72/140 | 1 | Branch of Earth Science |
| 2 | L2 | 30 | 1 | Stages of the Nebular Hypothesis |
| 3 | L1 | 32 | 1 | Earth's layered structure |
| 4 | L2 | 34 | 1 | Interactions among the spheres |
| 5 | L2 | 32 | 1 | Characteristics of Earth's layers |
| 6 | L2 | 42 | 2 | Cross-sectional diagram - application of a geological concept |
| 7 | L1 | 40 | 2 | Scientist - contribution |
| 8 | L1 | 40 | 2 | Example of relative time |
| 9 | L2 | 42 | 2 | Cross-sectional diagram - application of a geological concept |
| 10 | L3 | 48 | 2 | Radioactive dating problem |
| 11 | L2 | 48 | 2 | Radiometric dating and sources of error |
| 12 | L1 | 48 | 2 | Radiometric dating - related term |
| 13 | L2 | 58/60 | 2 | Geological time scale and associated life forms |
| 14 | L1 | 52 | 2 | Definition of fossil |
| 15 | L1 | 56 | 2 | Geological time scale |
| 16 | L1 | 52 | 2 | Conditions of fossilization |
| 17 | L3 | 52/58 | 2 | Dominant life forms over geological time |
| 18 | L2 | 60 | 2 | Mass extinction event |
| 19 | L1 | 66 | 3 | Mineral chemistry - related term |
| 20 | L1 | 66 | 3 | The abundance of elements comprising Earth's crust |
| 21 | L1 | 68 | 3 | Definition of a mineral |
| 22 | L2 | 68 | 3 | Major mineral groups |
| 23 | L1 | 68 and 74 | 3 | Mineral identification |
| 24 | L3 | 70 and Core Lab 3 | 3 | Specific gravity calculation |
| 25 | L2 | 70 and Core Lab 3 | 3 | Mineral identification and properties |
| 26 | L2 | 70 | 3 | Mineral identification and properties |
| 27 | L1 | 70 | 3 | Mineral identification and properties |
| 28 | L2 | 74 | 3 | Rock cycle |
| 29 | L1 | 74 & 86 | 3 | Rock cycle |
| 30 | L2 | 76 | 3 | Igneous rocks - composition and texture |
| 31 | L1 | 76 | 3 | Branch of Earth Science |
| 32 | L1 | 76 | 3 | Igneous rocks - composition |
| 33 | L1 | 78 | 3 | Igneous rocks – texture |
| 34 | L2 | 72 | 3 | Minerals and properties |
| 35 | L3 | 76 and 78 | 3 | Igneous rocks - composition |
| 36 | L2 | 86 | 3 | Sediment particle size and current velocity |
| 37 | L1 | 86 and 88 | 3 | Sediment, current velocity, and erosion |
| 38 | L3 | 86 | 3 | Identification and properties of sedimentary rocks |
| 39 | L1 | 86 | 3 | Igneous rocks |
| 40 | L1 | 90 and 92 | 3 | Sedimentary rocks and environments |
| 41 | L1 | 78 | 3 | Igneous rocks - texture |
| 42 | L1 | 94 | 3 | Metamorphism |
| 43 | L1 | 94 | 3 | Metamorphism - textures |
| 44 | L2 | 94 | 3 | Metamorphism and grades of increasing metamorphism |
| 45 | L1 | 104 | 4 | Plate tectonics - scientist - contribution |
| 46 | L1 | 104 | 4 | Continental Drift - evidence |
| 47 | L1 | 136 | 4 | Plate boundaries and rock types |
| 48 | L1 | 108 | 4 | Earth's layers and characteristics |
| 49 | L1 | 114 | 4 | Plate boundaries and features |
| 50 | L1 | 120 | 4 | Deformation |
| 51 | L2 | 112 | 4 | Plate boundaries - collisions |
| 52 | L1 | 124 | 4 | Faults |
| 53 | L1 | 104/STSE | 4 | Supercontinents |
| 54 | L2 | 112/120 | 4 | Forces and plate boundaries |
| 55 | L2 | 124 | 4 | Faults |
| 56 | L2 | 136 | 4 | Plate boundaries and world example |
| 57 | L2 | 128 | 4 | Earthquake scales |
| 58 | L3 | 130 | 4 | Earthquakes and properties |

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| 59 | L1 | 134 | 4 | Volcano types |
| 60 | L3 | 114 | 4 | Magnetic reversals |
| 61 | L3 | 136 | 4 | Volcano types and characteristics |
| 62 | L2 | 134 | 4 | The nature of volcanoes |
| 63 | L1 | 136 | 4 | Volcano types, plate boundaries, and a world example |
| 64 | L1 | 110 | 4 | Branch of Earth Science |
| 65 | L1 | 146 | 5 | Economic minerals |
| 66 | L2 | 146 | 5 | Mineral deposit types |
| 67 | L2 | 146 | 5 | Economic mineral deposits - factors |
| 68 | L1 | 156/158 | 5 | Petroleum and rock types |
| 69 | L3 | 164 | 5 | Refining petroleum |
| 70 | L1 | 154 | 5 | Petroleum-related terminology |
| 71 | L1 | 162 | 5 | Petroleum extraction techniques |
| 72 | L1 | 156 | 5 | Characteristics of rocks |
| 73 | L3 | 160 | 5 | Petroleum traps |
| 74 | L2 | 146 | 5 | Mineral deposit types |
| 75 | L1 | 152 | 5 | Mineral processing methods |

PART II – Value: 25%

| Item | L1 | Curriculum Guide Page | Unit | Value | Outcome Topic |
|---|---|---|---|---|---|
| 76 | L3 | 30 and 34 | 1 | 2% | Solar Nebular Hypothesis and Earth's layered structure |
| 77 (a) | L2 | 40 | 2 | 3% | Geological concept and example |
| 77 (b) | L3 | 48 | 2 | 2% | Radioactive decay |
| 78 (a) | L2 | 86 | 3 | 1% | Sedimentary rock classification |
| 78 (b) | L2 | 86 | 3 | 2% | Formation of sedimentary rocks |
| 78 (c) | L2 | 94 | 3 | 2% | Similarities and differences between rocks |
| 78 (d) | L3 | 70 | 3 | 2% | Specific gravity |
| 79 (a) | L3 | 126 | 4 | 2% | Plate boundaries, geological processes, and earthquakes |
| 79 (b) | L2 | 112 and 136 | 4 | 2% | Plate boundaries and rock types |
| 79 (c) | L2 | 114 | 4 | 2% | Hotspot volcanism |
| 80 (a) | L2 | 156 | 5 | 3% | Formation of petroleum |
| 80 (b) | L3 | 146 | 5 | 2% | Type of mining and scenario |