



Performance Examination - Soils

Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) (ASTM D2488-17e1)

Candidate Name: _____ NICET ID: _____

| Apparatus | Trial 1 | Trial 2 |
|---|------------|------------|
| Pocket Knife or Spatula | | |
| Purity of Water City water supply or natural source, including non-potable water | | |
| Hand Lens | | |
| Shallow Pan | | |
| Dilute Hydrochloric Acid 1 part HCl: 3 parts H ₂ O | | |
| Test Tube and Stopper or Jar with Lid | | |

| Procedures | Trial 1 | Trial 2 |
|---|------------|------------|
| Visual Procedure - Describe soil based on: | | |
| 1. Angularity (angular, subangular, subrounded, rounded) | | |
| 2. Shape (flat, elongated, flat & elongated) | | |
| 3. Color | | |
| 4. Odor (organic, oil product, chemical) | | |
| 5. Moisture condition (dry, moist, wet) | | |
| 6. HCl reaction (none, weak, strong) | | |
| 7. Consistency (very soft, soft, firm, hard, very hard) | | |
| 8. Cementation (weak, moderate, strong) | | |
| 9. Structure (stratified, laminated, fissured, slickensided, blocky, lensed, homogeneous) | | |
| 10. Particle sizes (range of particle sizes, max. particle size, sand, gravel, cobble) | | |
| 11. Maximum particle size (sand – fine, Med., or coarse) (gravel – smallest sieve pass) (cobble or boulder) | | |
| 12. Hardness (fracture, crumble, or hard) | | |
| 13. Dry strength (none, low, medium, high, very high) | | |
| 14. Dilatancy (none, slow, rapid) | | |
| 15. Toughness (low, medium, high) | | |
| 16. Plasticity (non - plastic, low, medium, high) | | |
| Peat: If Peat is Found, Not Subjected to Further Testing | | |
| 1. Identification based on the portion of soil passing the 3-in. (75-mm) sieve | | |
| 2. Percentage (by volume) of cobbles (between 12- & 3-in sieves) and boulders (+12-in.) estimated and noted | | |

Examiner Name: _____ Examiner Signature: _____ Date: _____



Performance Examination - Soils

Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) (ASTM D2488-17e1)

Candidate Name: _____ NICET ID: _____

| Procedures (continued) | Trial 1 | Trial 2 |
|---|------------|------------|
| 3. Percentages (by dry mass) of gravels, sands, and fines estimated and noted (<5% components "trace") | | |
| 4. Total percentages (excluding trace amounts) add up to 100% | | |
| 5. Identification of fine-grained soils (Particles larger than the No. 40 sieve removed from a representative sample) | | |
| 6. Identification of coarse-grained soils | | |

First Attempt: Pass: _____ Fail: _____ Second Attempt: Pass: _____ Fail: _____

Exam Administration: Remote _____ In-Person _____

Comments:

Examiner Name: _____ Examiner Signature: _____ Date: _____