**GEOG 1301 UNIT 3 REVIEW**

**1. FIELD SAMPLING TECHNIQUES**

A. SAMPLING TECHNIQUES

1. RANDOM SAMPLING

A. Random Point Sampling

B. Random Line Sampling

C. Random Area Sampling

D. Advantages and Disadvantages of Random Sampling

2. SYSTEMATIC SAMPLING

A. Systematic Point Sampling

B. Systematic Line Sampling

C. Systematic Area Sampling

D. Advantages and Disadvantages of Systematic Sampling

3. STRATIFIED SAMPLING

A. Stratified Systematic Sampling

B. Stratified Random Sampling

C. Advantages and Disadvantages of Stratified Sampling

B. FIELD SAMPLING METHODS

#### 1. vertical transect

#### 2. random sample points in a permanent area

3. random walk

4. flagged transect

5. succession transects

C. FIELD DATA COLLECTION METHODS

#### 1. species abundance at random sample points

2. total counts of species abundance

3. succession studies

[*Stages of Plant Succession and Associated Wildlife Species in a Typical South Plains Habitat* handout, *Vertical Layering in a Typical South Plains Habitat* handout]

4. data collection using equipment

**2. FIELD WORK PROTOCOLS**

[see *Field Work Protocols* handout]

**3. HYDROSPHERE FIELD WORK**

channel width – current, bank-full

depth

wetted perimeter

velocity

bed load size

cross-sectional area

discharge

efficiency

obtaining water samples

water temperature

lake water chemistry and turbidity

stream water chemistry and turbidity

**4. BIOSPHERE FIELD WORK**

algae identification

invertebrate sampling

animal, herb and shrub plots

random pairs tree analysis

presence of particulate pollution

lichen identification

[*Map of Texas Ecosystems* handout]

**5. ATMOSPHERE FIELD WORK**

wind direction and velocity

air temperature

relative humidity

dew point

light level / intensity

amount of cloud cover and cloud type

precipitation

**6. SOIL FIELD WORK**

obtaining a soil sample

moisture content

soil structure, color, consistence and texture

presence of roots and rocks

test for free carbonates

soil chemistry

infiltration rate

soil temperature

earthworm census

**7. OPTIONAL FIELD WORK HANDOUTS**

*Field Sketching*

*Diagramming a Study Site*

*Writing a Formal Investigation*

*Creating a Scientific Poster*

*Preparing and Presenting a Scientific Talk*

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