GRAPHICS SPECIALIST ASSESSMENTS

1) General Graphics knowledge assessment
    Explain our mission, objectives and goals for Engineering Graphics & Information Systems
    Explain the role of the 3 sub-groups (Atlas, Systems/Design, and Geoengineering)
    Describe Public Works and its responsibilities
    Explain the relationship among graphics software applications such as
        - MicroStation
        - InRoads, Site, Storm & Sanitary, Survey
        - Geographics, Ispatial, Oracle
        - Geomedia
        - Powerpoint
        - Photo Editor
        - Descartes
        - Publisher
        - Projectwise
        - Atlas Browser

        and how each can be used for engineering
    What is the science of map making called?
    Interpret a legal description using metes and bounds
    Describe the Public Land Survey System
    Describe basic geography concepts
        Scale concepts
        Coordinates and coordinate systems
        Symbology and color
        Map projections
    Explain 10 different layers of geographic data that an engineer could use
    Explain what should be on every map and why

2) CADD skills assessment
    Demonstrate understanding of all view manipulation commands
    Explain and place all element types including precision placement
    Explain, attach, detach and manipulate reference files and images
    Demonstrate all plotting functions including customization of drivers
    Manipulate all element types including precision placement
    Manipulate groups of elements using 3 different techniques
    Manipulate levels, graphics parameters, locks, snaps, and views
    Set and save default parameters for graphics session
    Define, spec, test, and implement a custom program
    Installation and configuration CADD software
    Explain raster vs. vector graphics

3) Atlas functions assessment
    Demonstrate understanding of Atlas standards and procedures
    Describe the unique identifiers for features in each view
    Explain the atlas page numbering scheme
    What is the most important information on an atlas page?
    Describe the city's street naming system.
    Name the treatment plants.
    Name the raw water supply sources
    Demonstrate the ability to interpret information on a record drawing
    Explain all Ispatial categories and features including standard symbology
    Query data
    Plot to scale
    Create a custom map
    Fulfill a data request in 2 different formats

Explain and view a reference file
Explain and view an aerial photo
Post data to the database
Create a CGM file suitable for the Atlas Browser

4) Design functions assessment
   Demonstrate understanding of Design standards and procedures
   Demonstrate knowledge of Design Criteria
   Demonstrate knowledge of drafting guidelines including standard symbology
   Demonstrate knowledge of engineering standard drawings
   Explain the purpose of a base map for design purposes
   Create DTM
   Describe the survey data processing workflow
   Interpret survey data
   Create contours
   Create Plan & profile layout
   Generate cross sections
   Generate cut & fill calculations
   Create quantity take-offs
   Describe parametrics
   Describe 3D vs. 2D
   Describe the procedure to plot to scale

5) GIS functions assessment
   Demonstrate understanding of GIS and mapping standards and procedures
   Explain the fundamental GIS data types
   Explain topology
   Explain spatial data
   Explain thematic mapping and how to create thematic maps
   Explain various data collection techniques
   What is data-driven graphics? What is graphics-driven data?
   Write and execute a GIS query
   Demonstrate the ability to use the VSQL Query Builder in Geographics
   Import data from multiple sources
   Demonstrate knowledge and use of FME for spatial data translations
   Define a plot to scale with legend, titleblock, etc.
   Geocode items in a database using addresses and coordinates
   Create a CAD schema file in Geomedia
   Set up a presentation

6) Database/IT assessment
   Demonstrate understanding of systems policies and procedures
   Create a database
   Create a form
   Create a report
   Create a query
   Sort records in standard view and on a report
   Read data from another source
   Use a database to log, prioritize, track and report on assignments
   Explain Windows and Unix basics
   Explain the basic components of a computer
   Describe plotter and printer operation, configuration, and maintenance
   Explain client/server concepts
   Explain networking concepts
   Describe backup/recovery procedures
   What is TEAMGIS.com?