JMP Scripting Using JMP 14 Exam

During the testing of these objectives; you will be expected to perform common tasks, such as:

JSL Building Blocks:

- Use basic elements in JSL including: numbers, dates, character strings, names, functions and their operators, expressions, punctuation, fences, comments, variables
- Employ built-in analyses and graphics to perform tasks using:
  - Distribution
  - Graph Builder
  - Fit Y by X
- Differentiate between the various types of objects including:
  - Tables
  - Platforms
  - Display boxes

Working with Scripting Tools:

- Use the Script Editor
  - Change the Script Editor preferences (line numbers, code folding, embedded log)
  - Run a script or portions of a script
  - Format the code
  - Use tool tips
  - Encrypt, decrypt and password protect scripts
- Use the Log Window
  - Interpret content in logs.
- Use the Debugger
  - Use the Debugger to set break points and step through a script,
  - Observe variables
- Use the Scripting Index
  - Use the scripting index as a reference.
- Use the Add-In Builder
  - Use Add-In Builder to make scripts available on-demand and facilitate script deployment

Working with Data Tables (15%)

Use scripts to create new data tables and modify existing data tables

- Work with multiple data tables and the current data table
- Save data tables
- Close data tables (save, no save)
- Use New Table() function
- Use New Column() as an argument and a message (Set Values)
- Define column attributes and properties
- Format columns (dates and more)
- Populate a new column using a formula
- Use scripts to create table variables and table scripts
- Use of the Invisible keyword when creating intermediate tables

Open JMP data tables and import data from Excel and relational databases

- Use the Pick functions to retrieve a path
- Use the Excel wizard or text import to derive and interpret the Source script
- Perform basic database operations (connect, query, and disconnect)
- Define/change modeling types and data types

Work with Rows and row states

- Select Where function
- Hide, label and exclude rows
- Color or mark by column
- Get Rows Where

Use commands from the Tables menu such as:

- Summary
- Sort
- Concatenate
- Join
- Stack/Split
- Subset

Programming (35%)

Handle or Address run-time errors

- Use the Pick functions to retrieve a path
- Use the Excel wizard or text import to derive and interpret the Source script
- Perform basic database operations (connect, query, and disconnect)
- Define/change modeling types and data types

Manage namespaces and name resolution

- Use the global namespace
- Use the here namespace
- Use Scoping operators (: and ::) in front of names of columns and global variables respectively

Work with data structures

- Create lists, matrices and associative arrays
- Modify lists, matrices and associative arrays
- Use a data table as a data structure
- Test or extract elements from a data structure (min/max, locate)Control scripts through iteration

Control scripts through iteration

- For each row
- For
- While

Control scripts through conditional action like:

- If
- Match
- Choose
- Boolean functions

Modify and query character strings using functions, such as:

- Word() / Words()
- Item() / Items()
- SubStr()
- Left()
- Right()
- Contains()

Create Modify and Evaluate Expressions:

- Substitute () Substitute Into ()
- Expr ()
- Name Expr ()
- Eval (Eval Expr)
- Eval()
- Insert ()
- Insert Into()

Create User-defined functions

- Keep variables local to the function
- Interpret return values in the user-defined function

Work with date values to:

- Calculate a duration
- Retrieve day of the week, week of the year from a date value
- Convert dates to character strings with Format
- Convert character strings to dates with Informat

Working with Platforms (25%)

Launch and interact with the analysis layer

- Specify columns using appropriate column references
- Include option in the launch
- Send messages to the platform after launch
- Target the appropriate data table for the launch
- Recognize why/when the Send to report option appears
- Use a variable in a By role

Access and modify the report layer

- Access a reference to the report layer
- Navigate the display tree and identify display boxes
- Use the display box references

Save report window

- Save report as a .jrn
- Save report as pdf
- Save report as .ppt
- Save report as an interactive html file

Creating Custom Windows (25%)

Use New Window () to create a user dialog

- Suspend the script until user dismisses the dialog
- Unload user input from a dialog and determine if the OK button or the Cancel button was clicked
- Select data columns and assign them to analysis roles
- Associate a function or expression with a display box
- Use container boxes to organize dialog elements
- Use Scripting input boxes such as:
    - Number edit box
    - Text edit box
    - Button box
    - Column list box
    - Radio box
    - Check box
    - Combo box
    - List box

Use New Window () to create a custom report

- Include live platforms
- Incorporate a local data filter with a live platform
- Incorporate a column switcher with a live platform
- Copy the display boxes to use in reports
- Create a table with number and string column boxes
- Create custom reports by using display boxes such as:
    - outline box
    - tab box
    - panel box
    - lineup box
    - number col box
    - string col box