

PUSASQF406
Application of IT – Basic of Excel

Time: 2 hours
Total Marks: 60 marks

Note:

1. The candidate has option to either attempt question 3A or question 3B. Rest all questions are mandatory.
2. Numbers to the right indicate full marks.
3. The candidates will be provided with the formula sheet and graph papers [if required] for the examination.
4. Use of approved scientific calculator is allowed.

Q1 Answer the following

15 Marks

A

5 Marks

Write the numbers 1-10 in cells A1:A10. Create a macro named "copy_data" that copies the contents of cells A1:A10 from one Sheet to cells B1:B10 in next sheet.

B

5 Marks

Calculate the cubes of the above numbers in cells A1:A10 inside cells B1:B10 of the same Sheet.

Write a macro that will calculate the sum of the numbers above from cells B1:B10 in cell D3 with a constraint that it will only sum numbers whose absolute value is greater than 100.

C

5 Marks

Write a macro named "format_range" that changes the font color of the used range to red and sets the font size to 12.

Q2 Answer the following

15 Marks

A

5 Marks

Write a Macro to record the first 10 even numbers in column A starting from row 1.

B

5 Marks

Create a function that can be used to calculate the volume of cylinder from its diameter and height.

Take $\pi=3.14$ and use it to calculate the same for the data given in Sheet2.

(Note – volume of a cylinder is calculated as $\pi r^2 h$, where r = radius and h = height)

C

5 Marks

Write a code that will give the cylinder's size in the next column. If volume is less than 25,000 then Small, if greater than 25,000 then Medium, and if greater than 50,000 then Big.

Q3 Answer the following

30 Marks

A

30 Marks

Develop a UserForm in Excel to create a simple student registration system. The UserForm should include the following functionalities:

1. Input Fields:

- Full Name (Text Box)
- Date of Birth (Date Picker)
- Gender (Option Buttons: Male, Female)
- Course Selection (Combo Box: Choose from "Mathematics", "Science", "English")

2. Buttons:

- "Register": Clicking this button should capture the data entered in the UserForm and append it to a new row in the worksheet named "StudentData", starting from cell A2. Ensure that all fields are validated (i.e., not empty) before proceeding with the registration. Display an appropriate error message if any field is left blank.
- "Clear": Clicking this button should clear all input fields in the UserForm.
- "Close": Clicking this button should close the UserForm.

3. Additional Requirements:

- Ensure that the Date of Birth field restricts the user from selecting dates in the future.
- Provide appropriate labels for all input fields and buttons on the UserForm.
- Format the UserForm to make it user-friendly.
- Include appropriate title and headings to guide the user through the registration process.

4. Scoring Criteria:

- Correct functionality of all input fields, buttons, and error handling:
- User-friendly design and layout of the UserForm:
- Efficient coding practices and clear commenting:

OR

B

Develop an Excel VBA macro to automatically generate a chart based on the data in a specified range. The macro should include the following functionalities:

1. Data Input:

- Define a named range "ChartData" that includes the data to be plotted on the chart. Use the Chart data from datasheet as your data for the chart. The range should cover both the X-axis (categories) and Y-axis (values).

2. Chart Creation:

- Create a new worksheet named "Chart" to display the chart.
- Develop a macro to generate a column chart based on the data in the "ChartData" range. The chart should have appropriate titles, axis labels, and legend.
- Ensure that the chart is visually appealing and easy to understand.

3. Additional Requirements:

- Ensure that the macro is well-documented with clear comments to explain the purpose of each section of code.
- Test the macro with a new dataset, that you create on your own to ensure its robustness and reliability.

4. Scoring Criteria:

- Correct functionality of chart creation, customization, and error handling:
- Visual appeal and clarity of the generated chart:
- Quality of code documentation, efficiency, and readability: