

Name:.....

Course:.....

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# CITY UNIVERSITY LONDON

## Excel VBA Progress Test

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### Group A

This is an open book exam. You may use your lecture notes as well as task- and solution-sheets from previous lab-sessions.

Write your answers in the spaces provided after each question, continuing on the blank back of the sheets if necessary.

Full marks may be obtained for correct answers to all three questions, that is 100 points.

To avoid possible accusations of cheating close all other applications before starting this exam.

Time:        You have 75 mins to complete this test.

1) (25 points)

- a) Compute the future value of an investment using the Excel built-in function FV. For an initial deposit of 5750 Euro in a savings account the bank pays an interest rate of 0.25%. For the next years the owner of the account plans to deposit 350 Euros at the beginning of every month into your account. How much money is in the account after 7 years. Provide the exact command line for Excel built-in function with all its arguments.
- b) Use an Excel built-in function which produces the function

$$f(x) = \begin{cases} (x - 12)/3 & \text{for } x \leq 5 \\ 3x^2 - 5x & \text{for } x > 5 \end{cases} .$$

Complete the table:

$x$	-1.25	3.7	5.9	111.8
$f(x)$				

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- 2) (30 points) Use the Excel spreadsheet to record a Macro. When your Macro is activated it should fill the cells B8 to D10 of your worksheet with the colour yellow and the cells F4 to I6 of your worksheet with black. Call your Macro “YellowBlack” and design it such that it can be activated with Ctrl + y.
- View the VBA code of the recording you have produced and write down the VBA code in the space provided below. Write down also the comments the Macro recorder produces.
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3) (36 points) Write a VBA code for a function (routine) which simulates the login dialog into a computer.

- When executed the function should start with an Input Box which states "Enter your password!". The title of this box should be "Welcome to City Computing".
  - The entry into the input box should be assigned to a variable named "PASS". Declare the type of this variable appropriately.
  - The PASS word is supposed to be city2004. Design two message boxes with just an OK button both entitled "City Computing". If the PASS word is typed correctly into the input box, the message box should say "You have new e-mail!", otherwise it should say "Sorry, wrong password".
  - Write down the VBA code in the space provided below.
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Internal examiner: Dr. Andreas Fring