

G12 ECZ COMPUTER STUDIES P2 2017 GCE SOLUTIONS

Grade 12 ECZ Computer Studies Paper 2 (Practical), 2017 GCE (7010/2)

1 hour 30 minutes | 2 questions, answer both, 30 marks (practical)

ACTICAL paper (spreadsheet + database, done live in software). The full question paper appears first — the exact formulas/steps/answers ea

EXAMINATIONS COUNCIL OF ZAMBIA

Examination for General Certificate of Education Ordinary Level

Computer Studies

7010/2

Paper 2 Practical

Thursday

13 JULY 2017

Time: 1 hour 30 minutes

Instructions to Candidates

- 1 There are **two** questions in this paper, answer both.
- 2 You are required to use a word document where you will be pasting your screenshots.
- 3 Save the word document with the name **EVIDENCE**. Type your **full name**, **Examination number** and **centre name** in the header as shown below.

SURNAME_FIRSTNAME_EXAM NUMBER_CENTRE NAME.

- 4 At the end of the examination print out all your screenshots from the document you saved as EVIDENCE.

NOTE: DO NOT WRITE ANYTHING ON YOUR EVIDENCE DOCUMENT

Information for candidates

The number of marks is shown in brackets [] at the end of each question or part question.

The total number of marks for this paper is 30.

Cell phones are not allowed in the examination room.

1 Use a Microsoft Excel spreadsheet program to answer this question.

(a) Open a new worksheet and type the data below.

	A	B	C	D
1	Salary scale			
2	I	7.5		
3	H	9.2		
4	G	10.5		
5	E	12.6		
6				
7	NAME	SALARY SCALE	CONTRACT HOURS	SALARY
8	Chilando	I	34	
9	Betty	E	66	
10	Raphael	G	72	
11	Goodman	H	53	
12	Edina	E	66	
13	Mundeva	I	34	
14	Eshly	G	72	
15			TOTAL	

[2]

Take a screenshot and paste it in the EVIDENCE document. Number it as **1(a)**.

(b) Merge and centre cells A1 and B1.

[1]

(c) Apply a grey shading to the lookup table A1:B5 and format the cells to border attribute.

[2]

Take a screenshot and paste it in the EVIDENCE document. Number it as **1(c)**.

(d) In cell D8, enter the VLOOKUP function to calculate the salary for Chilando. = VLOOKUP (B8, \$A\$2: \$B\$5, 2,0)*C8.

[3]

(e) Replicate the function in Cell D8 through to D14.

[1]

(f) In cell D15, enter the formula to calculate the TOTAL for the salary.

[2]

(g) Sort the cell range A8:D14 in descending order of NAME.

[1]

Take a screenshot and paste it in the EVIDENCE document. Number it as **1(g)**.

(h) Use the data in the cell ranges A8:A14 and D8:D14 only to create a clustered column chart with 3D effect.

[2]

Take a screenshot and paste it in the EVIDENCE document. Number it as **1(h)**.

(i) Show formulas.

[1]

Take a screenshot and paste it in the EVIDENCE document. Number it as **1(i)**.

2 Use a Microsoft Access database program to answer this question.

- (a) (i)** Create a database with the following file structure and save it as EMPLOYEE_TABLE.

Field Name	Data type	Field size	
Staff_Number	Text/short text	4	
First name	Text/short text	15	
Surname	Text/short text	15	
Sex	Lookup wizard		
Address	Memo/long text		
Salary	Number/numeric		
Department	Text/short text	25	[2]

- (ii)** Select an appropriate primary key. [1]

Take a screenshot of the file structure and paste it in the EVIDENCE document. Number it as **2(a)(i)**.

- (b)** Enter the following records in the EMPLOYEE_Table:

Staff Number	Surname	Firstname	Sex	Address	Salary	Department
EM 01	Likezo	Nyambe	M	Mongu	4500	Accounts
EM 02	Mwansa	Sandra	F	Kasama	2500	Logistics
EM 03	Foloko	Agness	F	Ndola	3500	Marketing
EM 04	Nyirongo	Akapelwa	M	Lundazi	4500	Accounts

[2]

Take a screenshot and paste it in the EVIDENCE document. Number it as **2(b)**.

- (c) (i)** From the table created in part **2(b)**, use a wizard to create a form in tabular layout. [2]

Take a screenshot and place it in the EVIDENCE document.
Number it as **2(c) (i)**.

- (ii)** Enter the following data in the form which you have created:

EM05, Ndungu, Derick, M, Kabwe, 2500, Accounts

EM06, Kamavu, Sophie, F, Solwezi, 2500, Logistics

[1]

Take a screenshot and paste it in the EVIDENCE document. Number it as **2(c) (ii)**.

(d) Make a query which:

(i) Shows male employees only and salary above 3500. [2]

Take a screenshot and paste it in the EVIDENCE document.
Number it as **2(d) (i)**.

(ii) Sorts the records in descending order of salary. [1]

Take a screenshot and paste it in the EVIDENCE document. Number
it as **2(d) (ii)**.

(iii) Contains a new calculated field called new salary. Take bonus to be 500.
Use the following criteria to make the calculations: [3]

$$\text{New_Salary} = \text{SALARY} + \text{BONUS}$$

Take a screenshot and paste it in the EVIDENCE document. Number
it as **2(d) (iii)**.

(iv) Filters the records for female employees only. [1]

Take a screenshot and place it in the EVIDENCE document. Number
it as **2(d) (iv)**.

Print the EVIDENCE document.



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Question Q1. Use Microsoft Excel. (a) Type the given salary-scale lookup table (I=7.5, H=9.2, G=10.5, E=12.6) and the employee table (Name/Salary scale/Contract hours/Salary for Chilando/I/34, Betty/E/66, Raphael/G/72, Goodman/H/53, Edina/E/66, Mundeve/I/34, Eshly/G/72, plus a TOTAL row 15). [2] (b) Merge and centre cells A1 and B1. [1] (c) Apply grey shading to the lookup table A1:B5 and format the cells to border attribute. [2] (d) In cell D8, enter the VLOOKUP function to calculate the salary for Chilando: =VLOOKUP(B8,\$A\$2:\$B\$5,2,0)*C8. [3] (e) Replicate the function in D8 through to D14. [1] (f) In cell D15, enter the formula to calculate the TOTAL for the salary. [2] (g) Sort the cell range A8:D14 in descending order of NAME. [1] (h) Use A8:A14 and D8:D14 only to create a clustered column chart with 3D effect. [2] (i) Show formulas. [1]

(a)-(c) Type both tables exactly as given. Select A1:B1 and use Merge & Center. Select A1:B5, apply a grey fill (Fill Color) and add borders to every cell (Format Cells -> Border, or the Borders button -> All Borders).

Answer: (d) Formula for D8: =VLOOKUP(B8,\$A\$2:\$B\$5,2,0)*C8 — this looks up Chilando's salary-scale code (I) in the lookup table, returns its rate (7.5), and multiplies it by the contract hours (34). Result: $7.5 \times 34 = 255$.

Answer: (e) Replicating D8 through D14 gives: Betty (E=12.6, 66hrs) = $12.6 \times 66 = 831.6$; Raphael (G=10.5, 72hrs) = $10.5 \times 72 = 756$; Goodman (H=9.2, 53hrs) = $9.2 \times 53 = 487.6$; Edina (E=12.6, 66hrs) = 831.6 ; Mundeve (I=7.5, 34hrs) = 255 ; Eshly (G=10.5, 72hrs) = 756 .

Answer: (f) Formula for D15: =SUM(D8:D14) -> result $255+831.6+756+487.6+831.6+255+756 = 4172.8$.

Answer: (g) Sorting A8:D14 by NAME in descending (Z-to-A) order gives this row order: Raphael, Mundeve, Goodman, Eshly, Edina, Chilando, Betty (note 'Eshly' sorts before 'Edina' since the third letter 's' comes after 'd' alphabetically, and descending order reverses that to put Eshly first between the two).

(h) Select A8:A14 (Names) together with D8:D14 (Salary) using Ctrl to select the second range, then Insert -> Chart -> Column -> 3-D Clustered Column.

(i) Formulas -> Show Formulas (or Ctrl+`) to display every cell's formula instead of its calculated value, then take the screenshot.

Question Q2. Use Microsoft Access. (a)(i) Create a database with the given EMPLOYEE_TABLE file structure (Staff_Number Text/4, First name Text/15, Surname Text/15, Sex Lookup wizard, Address Memo/long text, Salary Number/numeric, Department Text/25) and save it as EMPLOYEE_TABLE. [2] (ii) Select an appropriate primary key. [1] (b) Enter the 4 given records (EM01 Likezo Nyambe M Mongu 4500 Accounts ... EM04 Nyirongo Akapelwa M Lundazi 4500 Accounts). [2] (c)(i) Use a wizard to create a form in tabular layout. [2] (ii) Enter 2 more records (EM05 Ndungu Derick M Kabwe 2500 Accounts; EM06 Kamavu Sophie F Solwezi 2500 Logistics) using the form. [1] (d) Make a query which: (i) shows male employees only with salary above 3500 [2] (ii) sorts the records in descending order of salary [1] (iii) contains a new calculated field New_Salary = SALARY + BONUS (bonus = 500) [3] (iv) filters the records for female employees only. [1]

(a) Create the table with each field set to the exact data type/size shown (Staff_Number Text size 4, First name/Surname Text size 15, Sex as a Lookup Wizard field, Address as Memo/Long Text, Salary as Number, Department Text size 25), and save it as EMPLOYEE_TABLE.

Answer: (ii) The PRIMARY KEY should be set on Staff_Number, since it is the only field guaranteed to hold a unique value identifying each employee record (e.g. EM01, EM02, ...).

(b) Enter the 4 given records exactly as shown into EMPLOYEE_TABLE.

(c)(i) Use Create -> Form Wizard on EMPLOYEE_TABLE, selecting all fields and choosing the Tabular layout option.

(ii) Open the tabular form and enter the 2 new records (EM05 and EM06) exactly as shown.

Answer: (d)(i) Query criteria: Sex = "M" AND Salary > 3500. Checking all 6 records, only two satisfy BOTH conditions: EM01 Likezo Nyambe (M, 4500) and EM04 Nyirongo Akapelwa (M, 4500). The others are either female (EM02, EM03, EM06) or male with salary not above 3500 (EM05, 2500).

Answer: (ii) Sorting all 6 records by Salary in DESCENDING order gives: EM01 (4500), EM04 (4500), EM03 (3500), then EM02, EM05 and EM06 (all tied at 2500, order among ties can follow their original entry order).

Answer: (iii) Add a new calculated field: New_Salary: [Salary]+500. Results: EM01 4500+500=5000; EM02 2500+500=3000; EM03 3500+500=4000; EM04 4500+500=5000; EM05 2500+500=3000; EM06 2500+500=3000.

Answer: (iv) Query criteria: Sex = "F". This gives 3 records: EM02 Mwansa Sandra (Logistics, 2500), EM03 Foloko Agness (Marketing, 3500), EM06 Kamavu Sophie (Logistics, 2500).

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