G12 ECZ COMPUTER STUDIES P2 2016 SPECIMEN SOLUTIONS

Grade 12 ECZ Computer Studies Paper 2 (Practical), 2016 Specimen (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 School Certificate Ordinary Level

Computer Studies 7010/2

Paper 2

2016

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 screen shots.

3 Save the word document with the name EVIDENCE. Type your full name, Examination number, 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 screen shots 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.

This question paper consists of 5 printed pages.

1 Use a spreadsheet program to answer the questions that follow.

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

	A	B	C	D	E
1					
2	Student name	Test average results	Computer project results	Total marks	Final Grade (Pass or fail)
3	Nyambe	64.2	7		
4	Mumba	80.2	4		
5	Gondwe	50.1	4		
6	Hantuli	40.1	6		
7	John	20.3	7		
8	Agness	85.1	6		
9	Tangu	75.2	7		
10					
11	Highest Total marks				
12	Number of Students				

[2]

(b) Merge and centre cell range A1 : E1. [1]

(c) Type the title 'End of Term 1 Results' in the merged cells. [1]

(d) Format the title with font face Times New Romans and 18pt as font size. (Take a screen short of the worksheet and place it in the EVIDENCE document) [2]

(e) In Cell D3, use a function to calculate the total marks and replicate it through D9. [2]

(f) In Cell E3, type the appropriate function to calculate the final grade of students. Use the condition, if total is greater than 60 then final grade is 'pass' otherwise ' fail'. [2]

(g) Replicate the function in E3 through E9. [1]

(h) In Cell B11, use a function to calculate the highest total marks. [2]

(i) In Cell B12, use an appropriate function to find the number of students who wrote the End of term 1 examination. [2]

Click on show formula, take a screen shot of a worksheet and place it in the EVIDENCE document.

Save and close the spreadsheet program.

2 Use a database program to answer the questions that follow.

The database has two labels namely STUDENT TABLE and BOOK TABLE.

(a) Create a database and name it as SCHOOL RECORDS.

(i) Create a student file structure as shown below.

Field	Data type	Field Size
SN	text	3
Surname	text	15
First name	text	15
D.O.B	date/time	
Duration	numeric/number	
Class	Lookup wizard	
Town	text	10
Gender	text	1

Take a screen shot of a student file structure and place it in the EVIDENCE document. [2]

(ii) Enter student records as shown below.

SN	Sur name	First name	DOB	Duration	Class	Town	Gender
T01	Lombe	Grace	11/07/88	4	10A	Kabwe	F
T02	Phiri	James	12/01/92	1	12C	Ndola	M
T03	Likezo	Peter	13/04/87	2	10A	Lusaka	M
T04	Hatembo	Betty	14/12/00	3	11B	Choma	F
T05	Loloji	Mary	07/09/88	4	12C	Kitwe	F
T06	Inonge	Inonge	12/11/84	5	10A	Mongu	F
T07	Phiri	Ian	23/08/95	4	12A	Chipata	M

Take a screen shot of student rewards and place it in the EVIDENCE document. [2]

(b) Create a book file structure as shown below.

Field	Data type	Field Size
SN	text	3
Book title	text	20
Cost	Numeric	
Author	Text	15
Category	Text	15

Publisher	Text	15

Take a screen shot of a book file structure and place it in the EVIDENCE document. [2]

(i) Enter Book records as shown below.

SN	Book Title	Cost	Author	Category	Publisher
T01	Grade 10	40	P. Bwalya	Text Book	G.G. Tales
T02	Women Health	75	G. Gondwe	Novel	Light Bearers
T03	Awake	35	C. Lutelo	Magazine	KVP
T04	Algorithm	80	P. Jones	Text Book	G.G. Tales
T05	The Hatcher	55	L. Phiri	Magazine	KVP
T06	Grade 11 Physics	60	A. Sibeso	Text Book	G.G. Tales
T07	The Youth	45	K. Peters	Novel	Light Bearers

Take a screen shot of the book record and place it in the EVIDENCE document. [2]

(ii) Create a query called BORROW that shows books borrowed by students from Class 10A. [2]

(Take a screen shot and place it in the evidence document.)

(iii) Use a wizard to create the forms called BOOK FORM and STUDENTS FORM based on BOOK and STUDENT table respectively. [2]

(Take screen shots and place them in the Evidence document.)

(iv) Use the BOOK FORM to enter the records as shown below.

Book Title	Author	SN	Category	Publisher	Cost
Bible	Gideons	T09	Text Book	Gideons	250

(Take a screen shot and place it in the EVIDENCE document.) [1]

(v) Using the field names of the student table;

SN, Surname, First name, Class, Town, generate a report and save it as BOOK REPORT.

(Take screen shot and place it in the EVIDENCE document. [2]

Question Q1. Use a spreadsheet program. (a) Open a new worksheet and type the given data (Student name/Test average results/Computer project results/Total marks/Final Grade for 7 students, plus 'Highest Total marks' and 'Number of Students' rows). [2] (b) Merge and centre cell range A1:E1. [1] (c) Type the title 'End of Term 1 Results' in the merged cells. [1] (d) Format the title with font face Times New Roman and 18pt font size. [2] (e) In Cell D3, use a function to calculate the total marks and replicate it through D9. [2] (f) In Cell E3, type the appropriate function to calculate the final grade: if total is greater than 60 then 'pass' otherwise 'fail'. [2] (g) Replicate the function in E3 through E9. [1] (h) In Cell B11, use a function to calculate the highest total marks. [2] (i) In Cell B12, use an appropriate function to find the number of students who wrote the End of Term 1 examination. [2]

(a)-(d) Type the data exactly as given, select A1:E1 and use Merge & Center, type 'End of Term 1 Results' into the merged cell, then select that text and set the font to Times New Roman, size 18pt.

Answer: (e) Total marks combines the test average and computer project result: formula for D3 is =B3+C3 (or =SUM(B3:C3)), then replicate (fill down) through D9. Results: Nyambe 64.2+7=71.2; Mumba 80.2+4=84.2; Gondwe 50.1+4=54.1; Hantuli 40.1+6=46.1; John 20.3+7=27.3; Agness 85.1+6=91.1; Tangu 75.2+7=82.2.

Answer: (f)-(g) Formula for E3: =IF(D3>60,"pass","fail"), replicated through E9. Results: Nyambe (71.2) pass; Mumba (84.2) pass; Gondwe (54.1) fail; Hantuli (46.1) fail; John (27.3) fail; Agness (91.1) pass; Tangu (82.2) pass.

Answer: (h) Highest total marks: formula for B11 is =MAX(D3:D9) -> result 91.1 (Agness's total).

Answer: (i) Number of students who wrote the exam: formula for B12 is =COUNT(D3:D9) (or =COUNTA(A3:A9)) -> result 7.

Question Q2. Use a database program. The database has two tables: STUDENT TABLE and BOOK TABLE. (a) Create a database named SCHOOL RECORDS. (i) Create the student file structure (SN text/3, Surname text/15, First name text/15, D.O.B date/time, Duration numeric, Class Lookup wizard, Town text/10, Gender text/1). [2] (ii) Enter the 7 given student records (T01 Lombe Grace ... T07 Phiri Ian). [2] (b) Create a book file structure (SN text/3, Book title text/20, Cost numeric, Author text/15, Category text/15, Publisher text/15). [2] (i) Enter the 7 given book records (T01 Grade 10 ... T07 The Youth). [2] (ii) Create a query called BORROW that shows books borrowed by students from Class 10A. [2] (iii) Use a wizard to create the forms BOOK FORM and STUDENTS FORM based on the BOOK and STUDENT tables respectively. [2] (iv) Use the BOOK FORM to enter a new record: Bible/Gideons/T09/Text Book/Gideons/250. [1] (v) Using the student-table field names SN, Surname, First name, Class, Town, generate a report and save it as BOOK REPORT. [2]

(a) Create a new database and name it SCHOOL RECORDS. Create the STUDENT table with each field set to the exact data type/size shown (SN as Text size 3, Surname/First name as Text size 15, D.O.B as a Date/Time field, Duration as Numeric, Class as a Lookup Wizard field, Town as Text size 10, Gender as Text size 1), then enter the 7 given student records exactly as shown (Lombe Grace T01/10A/Kabwe/F through Phiri Ian T07/12A/Chipata/M).

(b) Create the BOOK table with fields SN (Text/3), Book title (Text/20), Cost (Numeric), Author (Text/15), Category (Text/15), Publisher (Text/15), then enter the 7 given book records exactly as shown (Grade 10 by P. Bwalya through The Youth by K. Peters).

Answer: (ii) * NOTE ON THIS SUB-PART: the STUDENT and BOOK tables as defined on this specimen paper have NO shared/linking field (no 'Book SN' field in the student table, and no 'Borrower' field in the book table) recording which student borrowed which book — a genuine borrow-query normally needs a third 'Loans' table linking Student SN to Book SN, which this specimen paper does not define. This appears to be a gap in the specimen's data design. The closest achievable query with the given fields is to filter the STUDENT table where Class = "10A", producing: T01 Lombe Grace, T03 Likezo Peter, and T06 Inonge Inonge — save this query as BORROW, since it is the only 'Class 10A' condition the given data supports.**

(iii) In the database, use Create -> Form Wizard, choose the BOOK table as its record source and save the resulting form as BOOK FORM; repeat with the STUDENT table as the record source, saving that form as STUDENTS FORM.

(iv) Open BOOK FORM and enter a new record with Book Title = Bible, Author = Gideons, SN = T09, Category = Text Book, Publisher = Gideons, Cost = 250.

(v) Use Create -> Report Wizard on the STUDENT table, selecting only the fields SN, Surname, First name, Class and Town (in that order) as the report's fields, and save the finished report as BOOK REPORT.

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