MONASH University

Semester 2 2020 Sample Examination Period

EXAM CODES:	FIT1013
TITLE OF PAPER:	- Mock Exam 1
EXAM DURATION:	

Rules

During an exam, you must not have in your possession any item/material that has not been authorised for your exam. This includes books, notes, paper, electronic device/s, mobile phone, smart watch/device, calculator, pencil case, or writing on any part of your body. Any authorised items are listed below. Items/materials on your desk, chair, in your clothing or otherwise on your person will be deemed to be in your possession.

You must not retain, copy, memorise or note down any exam content for personal use or to share with any other person by any means following your exam.

You must comply with any instructions given to you by an exam supervisor.

As a student, and under Monash University's Student Academic Integrity procedure, you must undertake your in-semester tasks, and end-of-semester tasks, including exams, with honesty and integrity. In exams, you must not allow anyone else to do work for you and you must not do any work for others. You must not contact, or attempt to contact, another person in an attempt to gain unfair advantage during your exam session. Assessors may take reasonable steps to check that your work displays the expected standards of academic integrity.

Failure to comply with the above instructions, or attempting to cheat or cheating in an exam may constitute a breach of instructions under regulation 23 of the Monash University (Academic Board) Regulations or may constitute an act of academic misconduct under Part 7 of the Monash University (Council) Regulations.

Closed Book

This is a **closed book** assessment. You're not permitted to use any notes, texts, websites or other reference material to assist you in answering the questions.

If your assessment contains file download/upload questions, you are permitted to use the application required to execute the downloaded file.

Instructions

Answer all questions in this exam.

This paper contributes to 50% for the unit assessment

This paper consists of four sections:

Section A: 10 multiple choice questions worth 1 mark each. Subtotal 10 marks

Section B: Excel Functions. Subtotal 12 marks

Section C: Excel VBA. Subtotal 18 marks

Section D: Access Database. Subtotal 10 marks

Total 50 marks

Section A

Question 1

A field defined in a table that is also defined as a primary key in a different table is a(n) _____.

1 Mark

Select one:

- a. invalid function
- b. primary key
- c. relational database
- d. foreign key

Question 2

A table's primary key is _____.

1 Mark

Select one:

- a. always a composite key
- b. represented by the darkened triangle
- c. indicated by a key symbol in the row selector area
- d. also a foreign key

Question 3

Each object you place on a form is called a(n) _____ .

1 Mark

Select one:

- a. index
- b. icon
- c. label
- d. Control

Question 4

The _____ determines what type of values can be entered for a field.

1 Mark

Select one:

- a. data element
- b. data type
- c. data integrity
- d. primary key

Question 5

The object name _____ refers to the cell from which a custom function is being run.

1 Mark

Select one:

- a. ThisWorkbook
- b. CurrentCell
- c. ActiveCell
- d. FunctionCell

Question 6

The object name _____ refers to the workbook containing the macro code that is currently running.

1 Mark

Select one:

- a. ThisCell
- b. CurrentWorkbook
- c. ActiveWindow
- d. ActiveWorkbook

Question 7

The _____ symbol is used to combine two text strings into a single text string.

1 Mark

Select one:

- a. &
- b. ^
- c. %
- d. $

Question 8

To test several conditions in a macro, using the VBA statement _____ is recommended.

1 Mark

Select one:

- a. For-Next
- b. Do-While
- c. If-Then-ElseIf
- d. Select Case

Question 9

Which of the following is a use of the make-table query?

1 Mark

Select one:

- a. Creating customized tables for others to use
- b. Removing records permanently from a database
- c. Adding records from an existing table to the end of another table
- d. All of the above

Question 10

You can avoid problems with inconsistent data in related tables by using _____.

1 Mark

Select one:

- a. the Query Wizard
- b. referential integrity
- c. common fields
- d. joins

Section B

Information

Section B. Please answer ALL questions.

For this section, you may want to use one or more of the functions below:

AVERAGEIF(range, criteria, [average_range])

COUNTIF(range, criteria)

DAVERAGE(database,field,criteria)

DCOUNT(database,field,criteria)

DSUM(database,field,criteria)

INDEX(array,row_num,column_num)

ISERR(value)

ISNA(value)

MATCH(lookup_value, lookup_array, [match_type])

SUMIF(range, criteria, [sum_range])

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])

Question 11

Below is an Excel spreadsheet (*Fig 1*) containing information about degrees offered at Montague University.

2 Marks

Fig 1

	A	B	C	D	E
1	degree Code	degree Name	Duration (years)	Total Cost of degree:	average yearly cost of degree:
2	0001	Business Systems	3	$ 35,000	
3	0002	Business Systems Law	4	$ 40,000	
4	0003	Business Systems Commerce	4	$ 45,000	
5	0004	Computer Science	3	$ 30,000	
6	0005	Bachelor of Commerce	3	$ 32,000	
7			average cost of degrees:		

You are required to provide formulas for the following cells:

11a)

D7 should contain a formula which provides the average cost of a degree.

1 Marks

11b)

E2 should contain a formula which provides the average yearly cost of each specific degree offered. This formula should be written in such a way that it is easily copied to cells E3:E6.

1 Marks

Question 12

Below (*Fig 2*) is an Excel spreadsheet containing information about the students enrolled and degrees offered at Montague University.

10 Marks

The following range names have been defined:

- The range A4:D11 is named **Database**
- The range A15:D19 is named **degrees**

The cell G14 is to be used as a data input cell for the user to enter a student ID number.

Fig 2

	A	B	C	D	E	F	G	H
1				total full time students:	?			
2								
3								
4	Student ID	degree code	FT/PT	level				
5	10345677	0001	P	3	?			
6	10642431	0004	F	1				
7	10767689	0005	F	1				
8	10984563	0004	F	2				
9	12123434	0002	F	4				
10	12278670	0003	F	3				
11	12345656	0001	P	2				
12								
13								
14	degree Code	degree Name	duration	Full Cost:		student ID:	10984563	?
15	0001	Business Systems	3	$ 35,000		degree code:	?	
16	0002	Business Systems Law	4	$ 40,000		degree name:	?	
17	0003	Business Systems Commerce	4	$ 45,000				
18	0004	Computer Science	3	$ 30,000				
19	0005	Bachelor of Commerce	3	$ 32,000				
20								

You are required to provide formulas for the following cells:

12a)

E1 should contain a count of the number of full time students enrolled.

1 Marks

12b)

The cell E5 should contain a formula which gives the number of full time years which a student has left to complete the degree (excluding the current year). The formula should be expressed in such a way that it is easily copied to cells E6:E11.

2 Marks

12c)

H14 should contain a formula which enters the words "current student" if the ID number entered in G14 appears somewhere in the first column of **database** and "ID unknown" if the ID number does not appear.

3 Marks

12d)

G15 should contain a formula which provides the degree code of the student whose ID number appears in G14.

2 Marks

12e)

G16 should contain a formula which provides the name of the degree whose degree code appears in G15.

2 Marks

Section C

Question 13

Describe the outcome(s) when the following VBA code is executed.

1 Mark

```
Private Sub Workbook_Open()
    Dim strName as String, strRate as String, shtJan as Worksheet
    Set shtJan = _
    Application.Workbooks("commission.xls").Worksheets("January ")
End Sub
```

Question 14

Write a procedure called AddOne with the following steps

2 Marks

- declare an integer variable named intNum
- while the value of intNum is less than 5 repeat the following:
- provide a message to the user with the value of intNum
- add one to the value of intNum

Question 15

Question 3

4 Marks

15a)

a) Write a procedure using a Do While loop which prints out all worksheets in the active workbook.

2 Marks

15b)

b) Write a procedure as in a., but use a Do Until loop structure.

2 Marks

Question 16

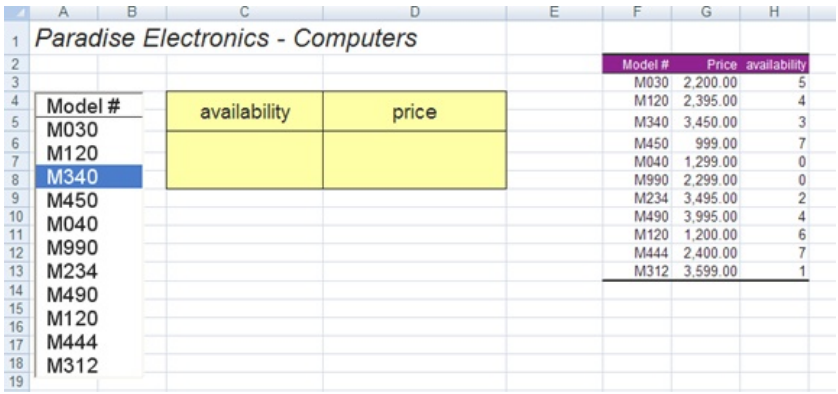
4 Marks

Write a procedure called Capital with the following steps:

1. Declare a string variable called strState
2. Use the InputBox function to ask the user to enter the name of a state and assign the user's response to strState
3. Select cell A1 of Sheet1 in the active workbook
4. If the value of strState when converted to uppercase has a value of "VIC" then the expression "Melbourne" should be inserted in cell A1
5. If the value of strState when converted to uppercase has a value of "NSW" then the expression "Sydney" should be inserted in cell A1
6. Otherwise the expression "Try again later!" should be inserted in cell A1

Question 17

7 Marks



The worksheet displayed in the screen dump above is named 'Models'. The worksheet is currently protected. The models displayed in the range F2:H13 provide the price and availability of each model. The range F2:H13 is named 'ModelInfo' Write a double-click event procedure for the listbox (named lstModels) which performs the following functions:

a) Searches the ModelInfo range for the model selected in the listbox.

b) Finds the availability of the model specified

c) If the availability is 0 (zero), then the message "not currently available" is written to the cell C6

d) If the availability is >0, then the message 'yes' is written in cell C6 and the price for the model specified is written to the cell D6.

e) The user should then be asked if they would like to continue with the purchase. If so, the availability number for that model should be decremented by 1.

Note that the worksheet should remain protected once the procedure is run.

You should make use of integer, string, currency and worksheet object variables in your code.

Section D

Question 18

Consider the tables shown below which belong to an Access database containing information related to the various projects being undertaken by a particular company.

10 Marks

Any person working on a project is an employee of the company and is included in the Employee table. The Employee table contains details of all employees in the company.

1. Employee Table

EmployeeCode	FirstName	LastName	FT/PT	AnnualSalary	StartDate
125	Peter	Anderson	Yes	$89,000.0	1/7/85
145	Anne	Wong	Yes	$55,000.0	2/5/90
324	Gavin	Matthews	No	$21,000.0	1/3/94
343	Simon	Smith	Yes	$43,000.0	4/8/91
356	Ian	Walter	No	$25,000.0	6/14/88
387	Christine	Chan	Yes	$67,000.0	11/8/93
414	David	Khoo	Yes	$60,000.0	12/8/92
415	Jane	Kurnia	Yes	$62,000.0	9/18/95
477	Indira	Samuels	No	$23,000.0	5/13/96
99	Felicity	Ng	Yes	$92,000.0	12/17/84

1.a) Field definitions for Employee table

Field name	Type	Length	Description
EmployeeCode	Text	3	Unique code for each employee
FirstName	Text	12	
LastName	Text	12	
FT/PT	Yes/No		Yes for Full Time employment and No for Part Time employment
AnnualSalary	Currency		
StartDate	date		Date of beginning employment with company

The Project table lists each project number and project name.

2. Project Table

ProjectNumber	ProjectName
126	Payroll Implementation
137	Corporate Contracts
189	New Investment Strategies
213	Y2K Compliance

2. a) Field definitions for Project table

Field name	Type	Length
ProjectNumber	text	3
ProjectName	Text	30

The Project Team table contains information about which employees belong in each team and the type of work the employee does. Each project manager has responsibility for one or more projects at a given time.

3. ProjectTeam Table

ProjectNumber	EmployeeCode	Role
126	125	Project Manager
126	324	programmer
126	477	programmer
137	343	programmer
137	387	Project Manager
189	125	Project Manager
189	356	analyst
189	414	programmer
213	415	programmer
213	99	Project Manager

3.a) Field definitions for ProjectTeam table

Field name	Type	Length	Description
ProjectNumber	Text	3	Project code of project that employee works on
EmployeeCode	Text	3	Employee code of team member
Role	Text	30	Type of work team member does e.g. programmer, analyst etc.

18a)

Name the primary keys for each table.

1 Marks

18b)

Explain the difference between an outer and an inner join. Provide an example of how you could use an outer join in a query using the database provided.

1 Marks

18c)

Query 1: Complete the query by design given so that it allows users to enter two dates and then display all employees who joined the company between those two dates, grouped into full time and part time employees. (If a particular row is not required in the design grid, leave it blank).

2 Marks

Figure 1: Query by design

Field:					
Table:					
Total:					
Sort:					
Show (Yes/No)					
Criteria:					
or:					

18d)

Query 2: Complete the Query by Design given so that it will display a list of all project names in alphabetical order, along with the name of the project manager and their employee code. (If a particular row is not required in the design grid, leave it blank).

3 Marks

What type of query would you use to find the same information as **query 2** but only list those project managers involved in more than one project?

Figure 2: Query by design

Field:					
Table:					
Total:					
Sort:					
Show (Yes/No):					
Criteria:					
or:					

18e)

Query 3: Each employee is to receive a salary increase of 10%. Complete the Query by Design given so that it will display a list of employees whose NEW salary is greater than $90,000. (If a particular row is not required in the design grid, leave it blank).

2 Marks

Figure 3: Query by design

Field:					
Table:					
Total:					
Sort:					
Show (Yes/No):					
Criteria:					
or:					

18f)

Explain how you could use one of the queries already created to construct a separate history table of all those employees who joined the organization prior 1990 without explicitly designing and creating a new table.

1 Marks