Cambridge Assessment International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/02**

Paper 4 Practical **May/June 2020**

MARK SCHEME

Maximum Mark: 110

Published

Students did not sit exam papers in the June 2020 series due to the Covid-19 global pandemic.

This mark scheme is published to support teachers and students and should be read together with the question paper. It shows the requirements of the exam. The answer column of the mark scheme shows the proposed basis on which Examiners would award marks for this exam. Where appropriate, this column also provides the most likely acceptable alternative responses expected from students. Examiners usually review the mark scheme after they have seen student responses and update the mark scheme if appropriate. In the June series, Examiners were unable to consider the acceptability of alternative responses, as there were no student responses to consider.

Mark schemes should usually be read together with the Principal Examiner Report for Teachers. However, because students did not sit exam papers, there is no Principal Examiner Report for Teachers for the June 2020 series.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the June 2020 series for most Cambridge IGCSE™ and Cambridge International A & AS Level components, and some Cambridge O Level components.

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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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Audio file Voice_

Clip in monophonic	1 mark
Bells removed from clip 206-VoiceA.mp3	1 mark
Quiet section added to end of 206-VoiceA	1 mark
So 6 seconds long	1 mark
Sound amplified to maximum…	1 mark
…without clipping	1 mark
206-VoiceB.mp3 added to end of quiet section	1 mark
Saved as single monophonic track	1 mark
Clip saved in mp3 format as Voice_ZZ999_9999.mp3	1 mark

Video file TGC2_

Image ratio of software set to 16:9	1 mark
Resolution 854 × 480	1 mark
All sound removed from the clip	1 mark
Clip saved in mp4 format as 206-TGC2 ZZ999 9999.mp4	1 mark

Image file TGC3_

Still image extracted from first frame…	1 mark
…saved as **206-TGC3** in suitable file format	1 mark

Video file TGC4_

0 seconds:	Title background set to 206-TGC3	1 mark
	Name of company placed	1 mark
	Text in sans-serif font of appropriate size	1 mark
	Top right of screen	1 mark
	Appropriate colour selection to be clearly visible	1 mark
2 seconds:		1 mark
	Title and bg retained with no adjustment/movement	1 mark
	Add the text Water cooling systems as a new line	1 mark
	Set as an appropriate subtitle	1 mark
4 seconds:		1 mark
	Title, subtitle and bg with no adjustment/movement	1 mark
	Add the text for overclocked processors	1 mark
	Appropriate style for text (to match, relative size etc)	1 mark
6 seconds:		1 mark
	Title, subtitle and bg with no adjustment/movement	1 mark
	Audio clip Voice.mp3 starts	1 mark
10 seconds:		1 mark
	Clip placed as specified (after 10 seconds)	1 mark
	Smooth transition into video file	1 mark
19.8 seconds:		1 mark
	Still image from final frame as background for credits	1 mark
	Credits scroll up the screen	1 mark
	Credits include:	
	Edited by: Candidate details in appropriate format	1 mark
	Filmed by: GBRvideo	1 mark
	Audio by: KMBaudio	1 mark
	Produced for: Tawara Gaming Computers	1 mark
	Appropriate blank line/s as spacing between credits	1 mark
	All text is a large easily read font with good contrast	1 mark
	Appropriate length for credits	1 mark
Movie exported / saved in mp4 format		1 mark

Motherboard spreadsheet

Motherboard spreadsheet	
All DDR2 rows removed (734 rows – 733 + header)	1 mark
Saved in spreadsheet format as Motherboard_ZZ999_9999	1 mark

Q6. **Data Dictionary**

Motherboard table

Field	Data type	Field size	Other metadata – input mask, validation, default value etc.		
Manufacturer	Alphanumeric/Text				
Model	Alphanumeric/Text				
Chipset	Alphanumeric/Text				
Socket	Alphanumeric/Text	4 chars			
Memory	Alphanumeric/Text	4 chars			
Memory_slots	Numeric		Integer	Validation >=0	
Price	Currency		2dp	Validation >=0	
ID	Alphanumeric/Text		Primary key		

Data dictionary	3 tables created for board, processor and location	1 mark
	4th link table added	1 mark
Motherboard table	Table name – appropriate e.g. Board, PCB	1 mark
	Appropriate fieldnames	1 mark
	ID as primary key	1 mark
	ID data type text	1 mark
	Socket data type text	1 mark
	Slots data type numeric	1 mark
	Slots data type restricted to integer	1 mark
	At least 1 appropriate validation routine	1 mark
	Any extra metadata	1 mark
	No spaces in fieldnames	1 mark
	Consistent case in fieldnames	1 mark

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Data Dictionary continued:

Processor table

Field	Data type	Field size	Other metadata – input mask, validation, default value etc.		
ID	Autonumber		Primary key		
Manufacturer	Alphanumeric/Text				
Model	Alphanumeric/Text				
Speed_in_GHz	Numeric		Decimal 1dp	Validation >=0	
Socket	Alphanumeric/Text	4 chars			
Cores	Numeric		Integer	Validation >=0	
Threads	Numeric		Integer	Validation >=0	
Price	Currency		2dp	Validation >=0	

Processor table	Table name – appropriate e.g. Processor, chip	1 mark
	Appropriate fieldnames	1 mark
	ID as primary key & autonumber (or composite key is used)	1 mark
	No spaces in 'Speed' field name	1 mark
	Speed data type numeric	1 mark
	Speed data type decimal to 1dp	1 mark
	Socket data type Text	1 mark
	Cores and Threads – Numeric Integer	1 mark
	At least 1 appropriate validation routine	1 mark
	Any extra metadata	1 mark

Link table

Field	Data type	Field size	Other metadata – input mask, validation, default value etc.		
Socket	Alphanumeric/Text	4 chars	Primary key		

Link table	Table name – appropriate e.g. Socket,Link	1 mark
	Appropriate fieldname	1 mark
	Socket as primary key	1 mark
	Socket data type Text	1 mark
	Length restricted to 4 characters	1 mark

Location/stock

Field	Data type	Field size	Other metadata – input mask, validation, default value etc.		
Location	Alphanumeric/Text	6 chars	Primary key		
Board_ID	Alphanumeric/Text	6 chars			

Location	Table name – appropriate e.g. Location, Stock etc	1 mark
	Appropriate fieldname for Location	1 mark
	Location as primary key	1 mark
	Appropriate fieldname for Motherboard	1 mark
	Fieldname has no spaces	1 mark
	Both data types Text	1 mark
	Both lengths restricted to 4,5, or 6 characters	1 mark

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Create database

Motherboard

Field Name	Data Type
Manufacturer	Short Text
Model	Short Text
Chipset	Short Text
Socket	Short Text
Memory	Short Text
Memory_slots	Number
Price	Number
ID	Short Text

Database structure	Motherboard table	1 mark
	Fields match dictionary	1 mark
	Data types match	1 mark
	Primary keys matches	1 mark
	733 records correctly imported	1 mark

Processor

Field Name	Data Type
ID	AutoNumber
Manufacturer	Short Text
Model	Short Text
Speed in GHz	Number
Socket	Short Text
Cores	Number
Threads	Number
Price	Currency

Database structure	Processor table	1 mark
	Fields match dictionary	1 mark
	Data types match	1 mark
	Primary key matches	1 mark
	76 records correctly imported	1 mark

Socket

Field Name	Data Type
Socket	Short Text

Database structure	Link/socket table	1 mark
	Single socket field as primary key	1 mark
	Duplicate data removed…	1 mark
	…to leave 22 records	1 mark

Location

Field Name	Data Type
Location	Short Text
Board_ID	Short Text

Database structure	Location/stock table	1 mark
	Location/stock field as primary key	1 mark
	ID field in motherboard table as text	1 mark
	Correct data duplicated…	1 mark
	…to leave 289 records	1 mark

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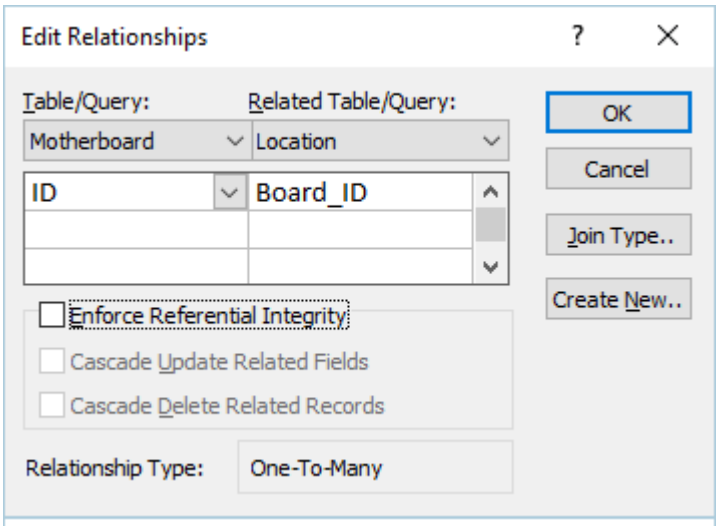
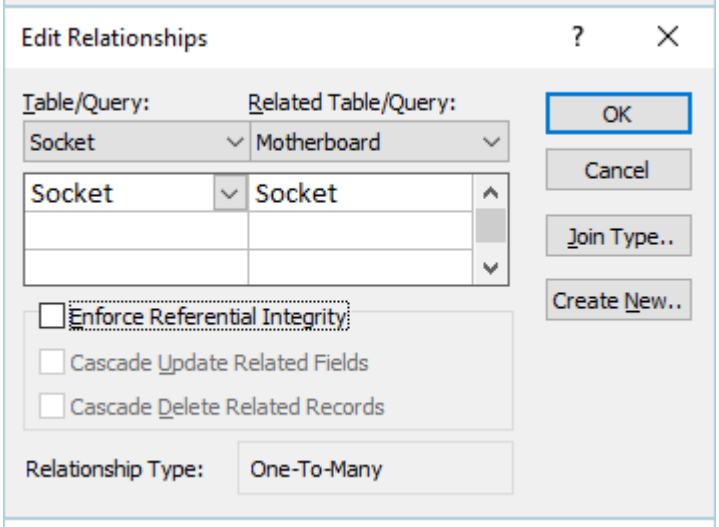
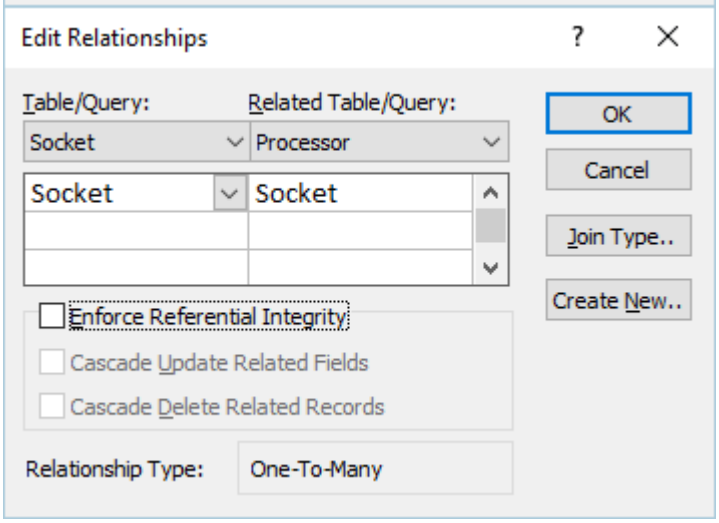
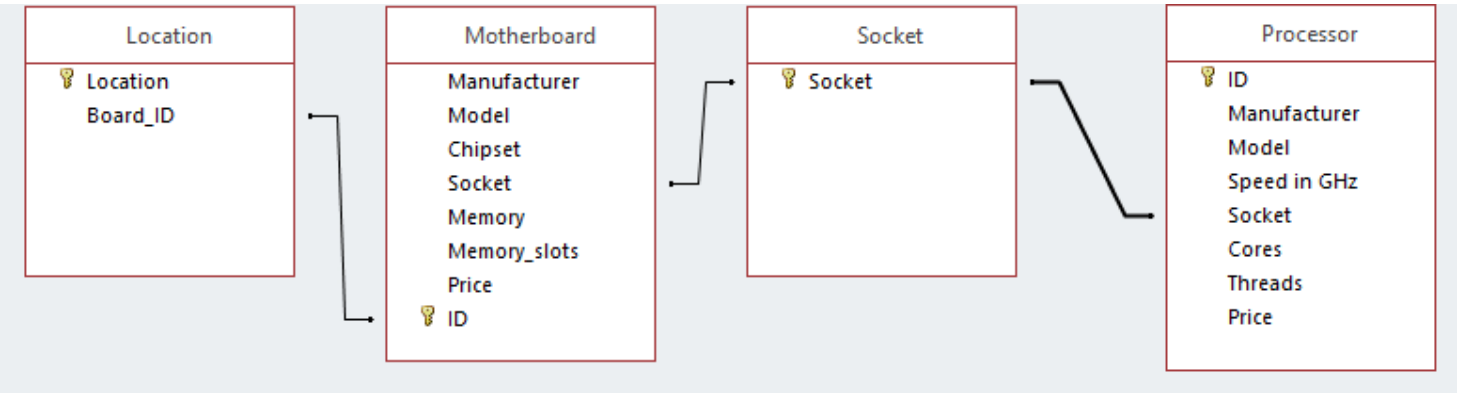

Edit Relationships
Table/Query:
Related Table/Query:
Motherboard
Location
ID
Board_ID
Enforce Referential Integrity
Cascade Update Related Fields
Cascade Delete Related Records
Relationship Type:
One-To-Many
OK
Cancel
Join Type..
Create New..


Edit Relationships
Table/Query:
Related Table/Query:
Socket
Motherboard
Socket
Socket
Enforce Referential Integrity
Cascade Update Related Fields
Cascade Delete Related Records
Relationship Type:
One-To-Many
OK
Cancel
Join Type..
Create New..


Edit Relationships
Table/Query:
Related Table/Query:
Socket
Processor
Socket
Socket
Enforce Referential Integrity
Cascade Update Related Fields
Cascade Delete Related Records
Relationship Type:
One-To-Many
OK
Cancel
Join Type..
Create New..



Database structure	Location.Board_ID to Motherboard.ID	2 marks
	1 to many	1 mark
	Socket.socket to Motherboard.socket	2 marks
	1 to many	1 mark
	Socket.socket to Processor.socket	2 marks
	1 to many	1 mark

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