Cambridge Assessment International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/02**

Paper 2 Practical **October/November 2022**

MARK SCHEME

Maximum Mark: 90

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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

Cambridge International is publishing the mark schemes for the October/November 2022 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **13** printed pages.

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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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Question	Answer	Marks
1	Video file teo2_	
	Image ratio of software set to 16:9	**1**
	Resolution 1280 × 720	**1**
	End of clip after 22 seconds removed	**1**
	All sound removed from the clip	**1**
	Clip saved in mp4 format as teo2_ZZ999_9999.mp4	**1**
	Pan and zoom used to remove left crowd …	**1**
	… with elephant visible at all times	**1**

Question	Answer	Marks
2	image file teo1_	
	Still image extracted from first frame…	**1**
	…saved as **teo1** in suitable file format	**1**

Question	Answer	Marks
3	image file teo3_	
	Still image extracted from last frame saved as **teo3** in suitable file format	**1**

Question	Answer	Marks
4	video file teo4_	
	0 seconds: Background Image *teo1* correctly displayed	**1**
	Title **Charity event**	**1**
	Top left of screen with no transition	**1**
	Appropriate colour selection and clearly visible	**1**
	3 seconds:	**1**
	Title and bg retained with no adjustment/movement	**1**
	Subtitle **Tawara Elephant Orphanage** added below title	**1**
	Set as an appropriate subtitle	**1**
	6 seconds:	**1**

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Question	Answer	Marks
4	Title, subtitle and bg with no adjustment/movement	**1**
	Add the text **Help us to support them**	**1**
	New line and appropriate style for text	**1**
	9 seconds:	**1**
	Clip placed as specified (after all text)	**1**
	No transition into video file …	**1**
	Audio clip n22voiceover.mp3 starts	**1**
	31 seconds:	**1**
	No transition into background teo3	**1**
	Credits scroll up the screen	**1**
	Credits include: **Edited by:** Candidate details in appropriate format	**1**
	Credits include: Filmed by: **GBRvideo**	**1**
	Credits include: Audio by: **KMBaudio**	**1**
	Appropriate blank line/s as spacing between credits	**1**
	Appropriate length for credits	**1**
	Whole video: All text is an easily read font with good contrast	**1**
	All text in a consistent sans-serif font with credits of appropriate size	**1**

Question	Answer	Marks
5	Movie exported/saved as teo4_ZZ999_9999.mp4 format	**1**

Question	Answer	Marks
See Task 6 below for example of file manipulation		
6	File contents are correct – data transposed	**1**
	Transpose paste used	**1**

Question	Answer	Marks
See Task 7 below for example of merged data file		
7	n22timetable.csv with all data	**1**

Question	Answer	Marks
See Task 8 below for example of physical ERD		
8	Physical ERD… …3 entities	**1**
	…Drawn with rounded rectangles	**1**
	Entity names at top …	**1**
	… Student	**1**
	… Link	**1**
	… Timetable/Lessons	**1**
	Student table PupilNo …	**1**
	… set as primary key	**1**
	Forename	**1**
	… 26 characters	**1**
	Surname	**1**
	… 12 characters	**1**
	4 subject fields	**1**
	All alphanumeric data types	**1**
	All other fields 3 characters in length	**1**
	Link table ID field (or compound key on Class & PupilID)	**1**
	… Alphanumeric or Numeric	**1**
	Class	**1**
	PupilNo	**1**
	Class and PupilNo Alphanumeric data type	**1**
	… set to 3 chars in length	**1**
	… set as foreign keys	**1**

Question	Answer	Marks
8	**Timetable table** Class	**1**
	… 3 characters	**1**
	… set as primary key	**1**
	All fields alphanumeric	**1**
	4 room fields	**1**
	… set to 2 characters long	**1**
	4 Teacher fields	**1**
	… set to 3 characters long	**1**
	Links Shown between tables	**1**
	Link-Timetable 1 to many	**1**
	Link-Students 1 to many	**1**

Question	Answer	Marks
See Task 9 below for example of merged data file		
9	**Database structure** 3 tables created	**1**
	Students, Timetable and Link table	**1**
	Database saved as THS_ZZ999_9999	**1**
	All primary key fields match ERD	**1**
	Student table Forename, Surname & 4 subjects only	**1**
	All data types alphanumeric	**1**
	All field lengths match ERD	**1**
	199 records correctly imported	**1**
	Link table Only PupilNo, Class	**1**
	PupilNo & Class - 3 characters	**1**
	796 records correctly imported	**1**

Question	Answer	Marks
9	**Timetable table** All 9 fields alphanumeric	**1**
	… with all Teacher fields set to 3 characters	**1**
	… with all Room fields set to 2 characters	**1**
	38 records correctly imported	**1**
	Relationships match ERD …	**1**
	… with referential integrity enforced	**1**

Video file teo2_

Image ratio of software set to 16:9	1 mark
Resolution 1280 × 720	1 mark
End of clip after 22 seconds removed	1 mark
Clip saved in mp4 format as teo2_ZZ999_9999.mp4	1 mark
All sound removed from the clip	1 mark
Pan and zoom used to remove left crowd …	1 mark
… with elephant fully visible at all times	1 mark

Image file teo1

Image teo1	
Still image extracted from first frame…	1 mark
…saved as **teo1** in suitable file format	1 mark

Image file teo3

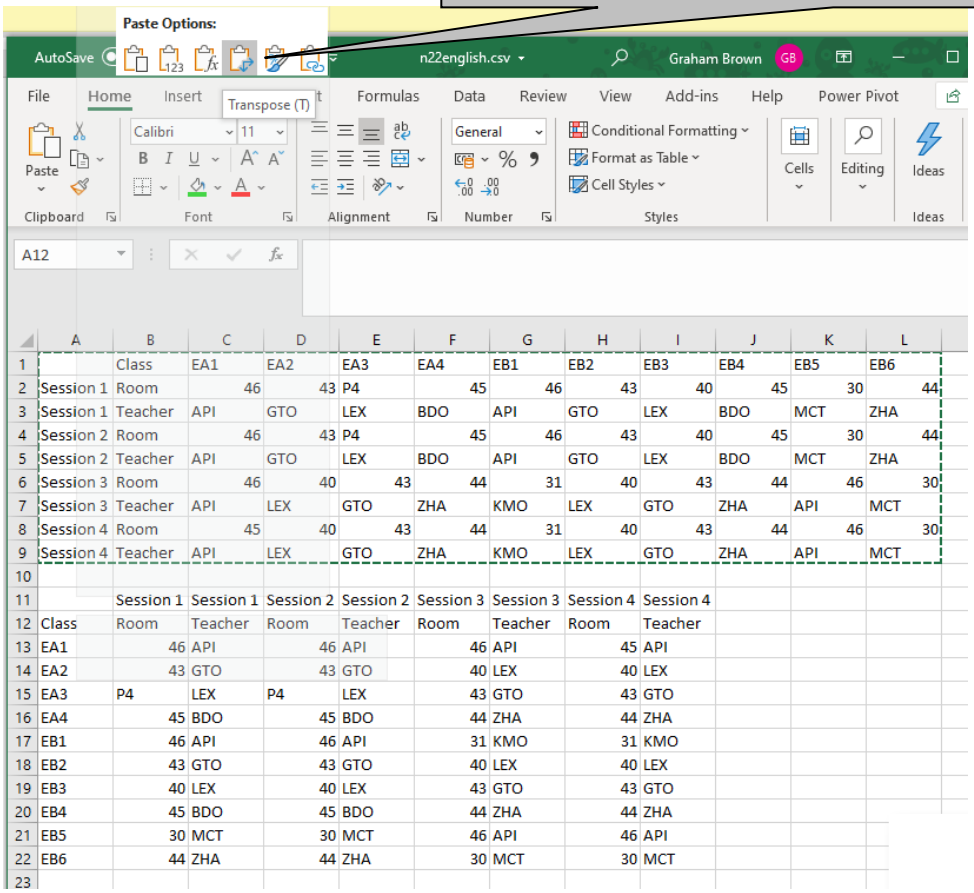
Image teo3	
Still image extracted from last frame saved as **teo3** in suitable file format	1 mark

Video file teo4_

0 seconds:	Background Image *teo1* correctly displayed	1 mark
	Title **Charity event**	1 mark
	Top left of screen with no transition	1 mark
3 seconds:		1 mark
	Title and bg retained with no adjustment/movement	1 mark
	Tawara Elephant Orphanage below title	1 mark
	Set as an appropriate subtitle	1 mark
6 seconds:		1 mark
	Title, subtitle and bg with no adjustment/movement	1 mark
	Add the text **Help us to support them**	1 mark
	New line and appropriate style for text1	1 mark
All text is	appropriate colour selection and clearly visible	1 mark
9 seconds:		1 mark
	teo2 clip placed as specified (after all text)	1 mark
	No transition into video file	1 mark
	Audio clip N22voiceover.mp3 starts	1 mark
31 seconds:		1 mark
	No transition into background teo3	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
	Appropriate blank line/s as spacing between credits	1 mark
	Appropriate length for credits	1 mark
	All text is an easily read font style with good contrast	1 mark
All text in a consistent sans-serif font with credits of appropriate size		1 mark
Movie exported / saved as **teo4_ZZ999_9999.mp4** format		1 mark

Task 6
File manipulation

File contents are correct – data transposed	1 mark
Transpose paste used	1 mark



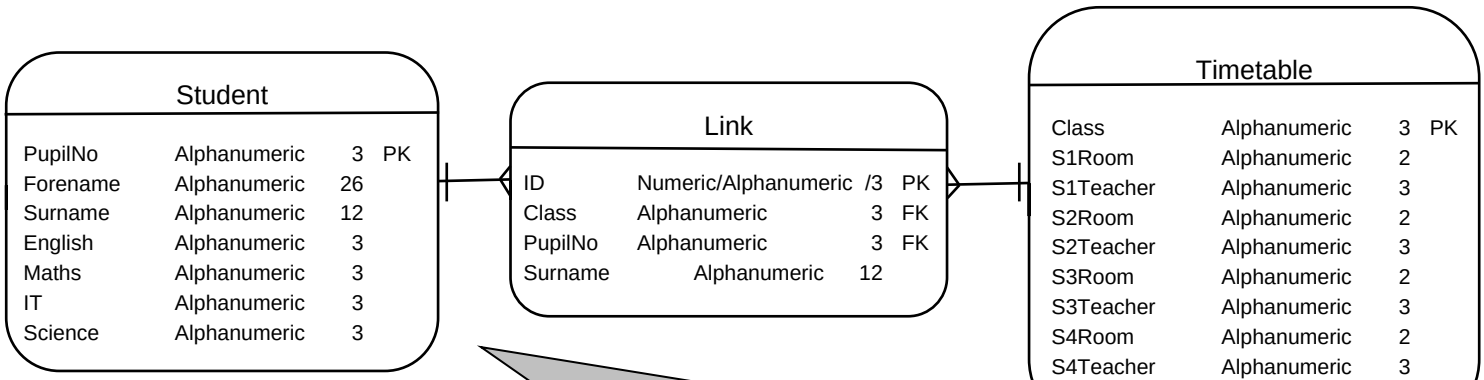
	A	B	C	D	E	F	G	H	I	J	K	L
1		Class	EA1	EA2	EA3	EA4	EB1	EB2	EB3	EB4	EB5	EB6
2	Session 1	Room	46	43	P4	45	46	43	40	45	30	44
3	Session 1	Teacher	API	GTO	LEX	BDO	API	GTO	LEX	BDO	MCT	ZHA
4	Session 2	Room	46	43	P4	45	46	43	40	45	30	44
5	Session 2	Teacher	API	GTO	LEX	BDO	API	GTO	LEX	BDO	MCT	ZHA
6	Session 3	Room	46	40	43	44	31	40	43	44	46	30
7	Session 3	Teacher	API	LEX	GTO	ZHA	KMO	LEX	GTO	ZHA	API	MCT
8	Session 4	Room	45	40	43	44	31	40	43	44	46	30
9	Session 4	Teacher	API	LEX	GTO	ZHA	KMO	LEX	GTO	ZHA	API	MCT
10												
11		Session 1	Session 1	Session 2	Session 2	Session 3	Session 3	Session 4	Session 4			
12	Class	Room	Teacher	Room	Teacher	Room	Teacher	Room	Teacher			
13	EA1	46	API	46	API	46	API	45	API			
14	EA2	43	GTO	43	GTO	40	LEX	40	LEX			
15	EA3	P4	LEX	P4	LEX	43	GTO	43	GTO			
16	EA4	45	BDO	45	BDO	44	ZHA	44	ZHA			
17	EB1	46	API	46	API	31	KMO	31	KMO			
18	EB2	43	GTO	43	GTO	40	LEX	40	LEX			
19	EB3	40	LEX	40	LEX	43	GTO	43	GTO			
20	EB4	45	BDO	45	BDO	44	ZHA	44	ZHA			
21	EB5	30	MCT	30	MCT	46	API	46	API			
22	EB6	44	ZHA	44	ZHA	30	MCT	30	MCT			
23												

Task 7
Merged data file

	A	B	C	D	E	F	G	H	I
1	Class	S1Room	S1Teacher	S2Room	S2Teacher	S3Room	S3Teacher	S4Room	S4Teacher
2	EA1	46	API	46	API	46	API	45	API
3	EA2	43	GTO	43	GTO	40	LEX	40	LEX
4	EA3	P4	LEX	P4	LEX	43	GTO	43	GTO
5	EA4	45	BDO	45	BDO	44	ZHA	44	ZHA
6	EB1	46	API	46	API	31	KMO	31	KMO
7	EB2	43	GTO	43	GTO	40	LEX	40	LEX
8	EB3	40	LEX	40	LEX	43	GTO	43	GTO
9	EB4	45	BDO	45	BDO	44	ZHA	44	ZHA
10	EB5	30	MCT	30	MCT	46	API	46	API
11	EB6	44	ZHA	44	ZHA	30	MCT	30	MCT
12	MA1	60	CMG	60	CMG	60	CMG	59	CMG
13	MA2	57	DGE	57	DGE	54	JMA	54	JMA
14	MA3	54	JMA	54	JMA	57	DGE	57	DGE
15	MA4	59	MGU	59	MGU	58	GTN	58	GTN
16	MA5	58	GTN	58	GTN	59	MGU	60	MGU
17	MB1	60	CMG	60	CMG	45	FLE	45	FLE
18	MB2	57	DGE	57	DGE	54	JMA	54	JMA
19	MB3	54	JMA	54	JMA	57	DGE	57	DGE
20	MC1	59	MGU	59	MGU	58	GTN	58	GTN
21	IA1	44	MTE	44	MTE	60	CMG	60	CMG
22	IA2	60	MOL	F2	JRE	14	PRO	15	PFR
23	IA3	17	RRO	60	MOL	F2	JRE	14	PRO
24	IA4	F6	DJE	17	RRO	71	MOL	F2	JRE
25	IA5	F2	JRE	14	PRO	17	RRO	71	MOL
26	IB1	14	PRO	15	PFR	19	JCL	17	RRO
27	IB2	58	GTN	58	GTN	44	MTE	44	MTE
28	IB3	15	PFR	F6	DJE	25	FBR	19	JCL
29	IB4	25	FBR	6	PKA	15	PFR	F6	DJE
30	IB5	6	PKA	19	JCL	F6	DJE	25	FBR
31	SA1	80	GBA	81	GBR	86	TZO	85	BDE
32	SA2	81	GBR	82	PTY	88	BGA	86	TZO
33	SA3	84	SPC	88	BGA	81	GBR	83	JFL
34	SA4	82	PTY	84	SPC	83	JFL	88	BGA
35	SA5	85	BDE	80	GBA	89	DWA	89	PRE
36	SA6	86	TZO	85	BDE	82	PTY	81	GBR
37	SB1	88	BGA	86	TZO	80	GBA	84	SPC
38	SB2	89	DWA	83	JFL	84	SPC	82	PTY
39	SC1	83	JFL	89	DWA	85	BDE	80	GBA

n22timetable.csv with all data 1 mark

Task 8
Physical ERD



Physical ERD…	3 entities	1 mark
	Drawn with rounded rectangles	1 mark
	Entity names at top …	1 mark
	… Student	1 mark
	… Link	1 mark
	… Timetable/Lessons	1 mark
Student entity	PupilNo	1 mark
	… set as primary key	1 mark
	Forename	1 mark
	… 26 characters	1 mark
	Surname	1 mark
	… 12 characters	1 mark
	4 subject fields	1 mark
	All alphanumeric data types	1 mark
	All subject fields 3 characters in length	1 mark
Link entity	ID field (or compound key on Class & PupilID)	1 mark
	… Alphanumeric or Numeric	1 mark
	Class	1 mark
	PupilNo	1 mark
	Class and PupilNo Alphanumeric data type	1 mark
	… set to 3 chars in length	1 mark
	… set as foreign keys	1 mark

Timetable entity	Class	1 mark
	… 3 characters	1 mark
	… set as primary key	1 mark
	All fields alphanumeric	1 mark
	4 room fields	1 mark
	… set to 2 characters long	1 mark
	4 Teacher fields	1 mark
	… set to 3 characters long	1 mark
Links	Shown between entities	1 mark
	Timetable - Link 1 to many	1 mark
	Students - Link 1 to many	1 mark

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Task 9
Database structure

Student

Field Name	Data Type
PupilNo	Short Text
Forename	Short Text
Surname	Short Text
English	Short Text
Maths	Short Text
IT	Short Text
Science	Short Text

Timetable

Field Name	Data Type
Class	Short Text
S1Room	Short Text
S1Teacher	Short Text
S2Room	Short Text
S2Teacher	Short Text
S3Room	Short Text
S3Teacher	Short Text
S4Room	Short Text
S4Teacher	Short Text

Link

Field Name	Data Type
ID	Number
PupilNo	Short Text
Class	Short Text

Database structure	3 tables created	1 mark
	Students, Timetable and Link table	1 mark
	Database saved as **THS_ZZ999_9999**	1 mark
	All primary key fields match ERD	1 mark
Student table	Number, Forename, Surname & 4 subjects only	1 mark
	All data types alphanumeric	1 mark
	All field lengths match ERD	1 mark
	199 records correctly imported	1 mark
Link table	Only PupilNo, Class	1 mark
	PupilNo 3 characters & Class 3 characters	1 mark
	796 records correctly imported	1 mark
Timetable table	All 9 fields alphanumeric	1 mark
	… with all Teacher fields set to 3 characters	1 mark
	… with all Room fields set to 2 characters	1 mark
	… 38 records correctly imported	1 mark
	Both relationships match ERD …	1 mark
	… with referential integrity enforced	1 mark

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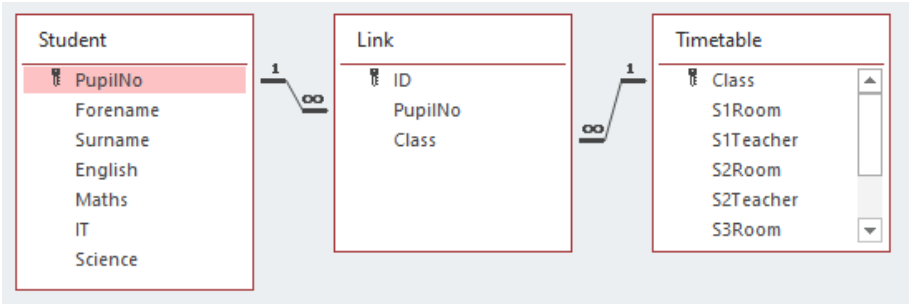
Student
PupilNo
Forename
Surname
English
Maths
IT
Science
1
∞
Link
ID
PupilNo
Class
∞
1
Timetable
Class
S1Room
S1Teacher
S2Room
S2Teacher
S3Room