

Paper 2C

	Marks
1. (a) (i) No installation is needed. / Movies can be watched using a browser. / cross platform (with explanation)	1
download, streaming, watch online ✕	
(ii) It is easier to deliver the updated version. / cross platform (with explanation)	1
Better management of customer or movie records, kept from being downloaded ✕	
(b) Advantage: It is compatible with many common video players. / No extra Codec is needed / It has a better quality (least compression needed).	1
No codec is needed. ✕	
Disadvantage: The file size is large. / It does not support streaming.	1
(c) (i) It has a shorter waiting time.	1
Save time ✕	
(ii) It has a graphics display card with poor computation power. / There is not enough memory. (hardware)	1
not up-to-date, not good enough ✕	
The network bandwidth of the customer's computer is not sufficient. / The server is busy. / The network traffic is busy. (network)	1
(d) $60 \times 1024 \times 1024 \times 8 / 200$ or $60 \times 8 / 200$	1
= 2516582.4 bit/s or 2.4 Mbps (2.5Mbps)	1
(e) (i) MP4, MKV, AVI (H264, AVCHD), WMV, FLV, MOV	1×2
codec, FFmpeg, DivX, Xvid, x264, mpeg ✕	
(ii) Number of <u>lines</u> scanned per second (height ①)	2
Resolution, number of pixels scanned per second/ each frame/ in the width ✕	
(iii) In progressive video, all lines in each frame are refreshed one by one. update line by line ✕	1
In interlace video, every other lines in each frame are refreshed. change one after another / after layer ✕	1

		Marks
2. (a)	PNG: Yes, No	1
	JPG: Yes, Yes	1
	BMP: No, No	1
(b) (i)	The browsers interpret some HTML codes differently. / The browsers have different padding or margin setting.	1
(ii)	table / frame / CSS / image / layer	1x2
(c) (i)	Search engines use this data when adding pages to their search index. / Peter wants to increase the chance of being searched by search engines. / Define character encoding scheme.	1
(ii)	description of the web page / keywords / title / author / copyright / creation date / character encoding / refresh web page / re-direction (any other valid usage)	1x2
(d)	$5184 \times 3456 \times 24$ bits = 51 / 51.3 / 51.26 MB	1 1
(e)	Frame rate / resolution / File format / transition effect / audio / sub-titles	1x3

		Marks
3.	(a) (i) It prevents software robots from reading the text. / It ensures that the response is made by human being. / It prevents registration or posting automatically generated by software. (prevent hacker's attack / prevent copy & paste ✖)	1
	(ii) It can be read by Braille reader / screen reading software. (blind people can use alternative text ✖)	1
	(iii) Output the information in audio format. (sound validation ✖)	1
(b)	Use client-side scripting (JavaScript) on Username (or other input fields) to check blank input.	1 + 1
	Use server-side scripting (Database) on Username and password to validate the customer.	1 + 1
(c)	Drawback 1: User may not input codes of song correctly. Solution 1: Insert the code automatically when clicking a song in the list. / Add an 'add to cart' button in every row of song. / Add a check box next to the song. (Use pull down menu ✖)	1 + 1
	Drawback 2: User cannot delete or amend any selection, as the selected songs are not displayed. / User cannot review what they have bought. Solution 2: Add a table to display the selected songs and allow amendments to be made. (Add a reset / undo button ✖)	1 + 1
	Other possible answers: songs are not in (alphabetical) order → add sorting function / searching function	
	(Drawback: Each time users can only input one code. / The text field is too short. / 'Keep shopping' button is useless. / Each time users can only buy one song. / The total amount is not calculated automatically. Solution: Add a quantity field. / Add a singer field. ✖)	
(d) (i)	In one second, 44,100 samples are taken. (44.1×1024 ✖)	1
	(ii) 16 bits of data is used to represent each sample. / The sample size is 16 bits.	1
	(iii) It is a kind of humanisation that it produces sound heard from various directions as in natural hearing. / Use two channels (left and right) to record sound.	1
	The song is livelier when it is played. / The recorded song close to real one. (waveform)	1
	(better quality / good sound / record sound clearly / two sound tracks ✖)	
(e)	Phase	1
	Amplitude / loudness	1
	(file type / file format / compression method / duration / length ✖)	

4. (a) (i) Some activities have lengthy names. The entire names can clearly be viewed. / The width / display size is smaller. It suits mobile phone/devices. 1+1
- (ii) If there are many different activities, the design can fix the length of the list of the activities shown for selection. / The selected activities are shown clearly. 2
- (iii) Show a dialog box to confirm the selection. 1
- (b) (i) Add a 'Deselect' / 'Reset' button to de-select all chosen items and users can simply re-select the items from the beginning. / Reduce the time for reloading. 1+1
- (ii) Running the script by the Submit button: 3
- ```

n ← 0
i ← 0
For each i,
 if act[i] is selected (or equals 1),
 n ← n + 1

```
- Condition (if statement) ①  
 Increment n value by 1 in if statement ①  
 Looping concept ①
- Running the script by event-driven:  
 When the i-th check box is clicked,  
 if act[i] is not selected/ =0,  
 n ← n + 1  
 else  
 n ← n - 1
- Description of the event ①  
 Condition of the increment of n ①  
 Condition of the decrement of n ①

- (c) (i) if i > 1  
 swap P[i-1] and P[i]

```

temp ← P[i-1]
P[i-1] ← P[i]
P[i] ← temp

```

1  
 1

- (ii) if P[i+1] is not null / P[i] is not the last  
 swap P[i] and P[i+1]

```

temp ← P[i+1]
P[i+1] ← P[i]
P[i] ← temp

```

1  
 1