Delegate Booklet

Course Title: **Getting Ready to Teach Pearson's new International Advanced Level IT specifications for first teaching in September 2018**

17IBAN04

Prepared by Pack Production 2016

About this event

Course Title: Getting Ready to Teach Pearson's new International Advanced Level IT specification for first teaching in September 2018

Course Code: 17IBAN04

Aims and Objectives of the event

- Get an overview of the main changes in the new specification
- Explore possible teaching and learning strategies that may be employed for the new specification
- Look at Sample Assessments and Mark Schemes
- Look at planning and organisation for the new specification
- Explore the support and resources available from Pearson to guide you through teaching the new specification
- Have the opportunity to network, discuss best practice and share ideas with other teachers.

Agenda

Time	Item
9.30 – 10.00	Welcome Tea & Coffee
10.00 – 10.10	Agenda & Introductions
10.10 – 10.30	Overview of the new specification
10.30 – 11.30	Explore teaching and learning strategies
11.30 – 12.30	Sample Assessment Material for Unit 1
12.30 - 1.1.5	Lunch
1.15 -1.45	Sample Assessment Material for Unit 2
1.45 – 2.45	Sample Assessment Material for Units 3 and 4
2.45 – 3.00	Planning, organisation and support for the new specification
3.00 – 3.45	Networking, discussing best practice and sharing ideas
3.45+	Close

Activity 1 – Teaching and learning activities for Topic 4: IT systems

Purpose:

- To explore possible teaching and learning strategies that could be employed when delivering the qualification
- To familiarise delegates with unit content for Topic 4

Task 1

Look at the *What students need to learn* section of Topic 4: IT systems. The content for this topic is comprised of what candidates need to **understand** and **be able to** do.

What specific teaching and learning activities could be used to enable candidates to develop the required understanding for Topic 4 and allow them to apply in a practical way the knowledge and understanding they gain in the classroom?

Activity 2 – Content mapping for Unit 2

Purpose:

- To explore alternatives to linear delivery of the unit content
- To consider how teaching and learning activities can be used to deliver different aspects of the unit content
- To familiarise delegates with unit content for Unit 2

Task 1

The first row of the table below, includes an activity and the unit content covered by the activity.

Complete the other rows in the table.

Activity	Unit mapping
Using HTML and CSS, add a recipe to a web page using an ordered list. Include an appropriate image. Use HTML5 elements to add a caption to the image.	7.2.4 7.3.1 8.2.4 11.1.6
Create a contact form for a web page. Add form validation.	
Add a video to a web page using the HTML5 video element. The video is provided for you in different file formats.	
Using the wireframe provided, create a page template for the home page.	

Task 2

Add other activities to deliver different aspects of the Unit 2 content.

Activity 3 – Compare the requirements of 'Describe' and 'Explain' questions

Purpose:

- To understand how each command word requires a specific type of response from learners

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Task 1

Read the two questions below. Both questions are worth 4 marks.

An online-only bank needs to store large amounts of data about its customers.
Each customer can generate many transactions every day.

2 (a) It is said that using cloud storage has financial benefits.

Explain two other reasons why the bank should use cloud storage.

(4)

2 (c) The bank wants to introduce multi-factor authentication to control access to its computer systems.

Describe one way in which multi-factor authentication could be implemented.

(4)

Compare the mark schemes:

Question number	Answer	Mark
2(a)	Award **one** mark for a reason identified and **one** mark for justification/expansion up to a maximum of **two** marks for **each** response. • The responsibility for keeping the data safe and available by the host gives an extra level of assurance to the Bank (1) because the host has to implement appropriate disaster recovery procedures and maintenance of service (1) • It provides scalability/expansion (1) because new storage can be bought online (1) • There is no need to train personnel in the specialised technology needed (1) because technical details are taken care of by the host (1)	**4**

Question number	Answer	Additional guidance	Mark
2(c)	Award **one** mark for each descriptive point, up to a maximum of **four** marks for a linked description. • The employee logs onto the system using a username and password combination (1). This is followed by a text message (1) to the employee phone, giving a unique number/PIN (1), which the employee types into the system before being granted access (1) • The employee swipes a card (1) into a reader attached to a networked machine (1). The employee is presented with a screen to type in a user name and password (1). If both steps match those on file, then access is granted (1) • The employee swipes their finger (1) over a reader attached to a networked machine (1). The employee is presented with a set of security questions (1), like 'name of first pet' that must match those on file before gaining access (1)	What the user knows (1) such as password, PIN, mother's last name, name of first pet, or other previously registered secret detail. What the user has possession of (1) such as a card, a phone, a dongle, a fob. User characteristics (1) such as a biometric signature, fingerprint, voice print, iris scan, face recognition.	4

What is the difference between the requirements of a 'Describe' question and an 'Explain' question.

Activity 4 – Discuss the allocation of marks for a 'draw' question

Purpose:

- To consider how responses are awarded marks against a mark scheme
- To familiarise delegates with unit content for Unit 1

Task 1

Read the question below. The question is worth 6 marks.

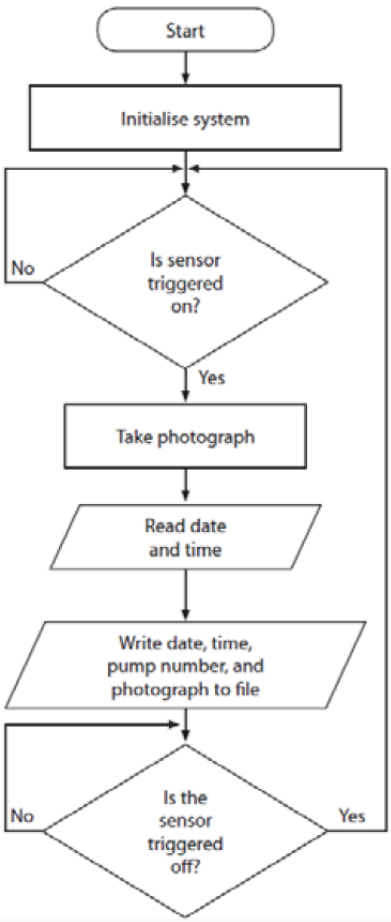
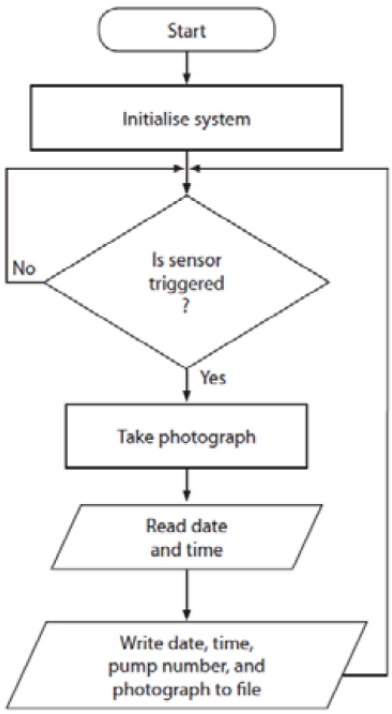
(b) Sometimes, customers leave without paying for the fuel. In order to stop this, the service station puts a camera and a motion sensor on each of the four pumps.
The service station will have a date- and time-stamped photograph of all vehicles using the service station.

Draw a flow chart to describe this process.

(6)

How do you think the marks will be allocated?

Answer on next page.

Question number	Answer	Mark
5(b)	Award **one** mark for each correctly identified part of the flowchart up to maximum of **four** marks. Flow chart includes a function to: • reset the sensor (1) • trigger an event and define the loop (1) • capture data – photo, date and time (1) • store data (1). Award **one** mark for use of correct conventions. (1) Award **one** mark for a logical and functional process. (1) Other solutions may exist.   	6

Activity 5 – Marking Activity

Purpose:

- To discuss the extent to which a learner's specific response meets the requirements of the assessment
- To familiarise delegates with unit content for Unit 2

Task 1

The folder 'Marking exercise' has a candidates' response to Q4 on the Unit 2 SAM.

The question is worth 16 marks.

Using the SAM and the mark scheme, how many marks is this response worth?

Example of marking on next page

Evidence found in:	Description	Mark Awarded Y/N
HTML – Head	<title></title> element used to provide a page title	Y
HTML – Head	<meta charset="UTF-8">	Y
HTML – Head	<meta name="keywords" content="skateboarding">	Y
HTML - Body	At least one HTML5 semantic element used to define part of the page: <header> <nav> <section> <article> <footer>	Y
CSS	The width of the page is set to 1024px.	Y
HTML - Body	The header includes both Logo.png and Title.png. Award the mark if these are not positioned as shown on wireframe. Do not award the mark if either image is distorted.	Y
HTML - Body	A functioning internal link is included to Blankpage.html.	N
HTML - Body	The image slider is included on the page and all four of the provided images slide. Award the mark if the image slider is not positioned as shown on the wireframe.	Y

HTML - Body	Text information inserted as an iFrame. Do not award the mark if the iFrame has a border.	N
CSS	All page components are floated left.	Y

	0	1	2	3	Mark
Adherence to component layout design	No awardable content	There is little adherence to the component layout design, leading to a solution that is not fit for purpose or is not suitable for the intended audience.	An attempt to adhere to the component layout design leads to a solution that is, in parts, fit for purpose and is, in parts, suitable for the intended audience.	The webpage fully adheres to the component layout design and style requirements. The resulting solution is fit for purpose and is suitable for the intended audience.	3
Application of CSS to control presentation		There is little attempt to make use of the facilities of CSS to control appearance and style. Most components rely on default configuration.	An attempt has been made to use CSS to control the appearance and style of some components. This has been successful in some cases.	Consistent and accurate application of CSS is used throughout to control the appearance and style of all components.	3

Activity 6 – Discussing how to prepare learners for assessment

Purpose:

- To explore the skills, knowledge and understanding required to complete an assessment task
- To discuss the best way to prepare learners for a specific task
- To familiarise delegates with unit content for Unit 3

Task 1

Read this question:

(b) The city has several multi-storey car parks. Each car park has many parking bays. Drivers, with smartphones, planning trips to the city are alerted to the location of car parks with free bays from an app. This information is relayed in real time and continuously updated. As the driver approaches the car park, the location of all the free bays in the area is relayed. When a driver takes a bay, it becomes occupied. When a driver leaves a bay, it becomes free. This information is monitored and processed at city central. The city tracks all the information about parking activities.

Draw an information flow diagram to show how this parking management system could be implemented using the Internet of Things.

Assume the driver is using the app in a safe, legal way.

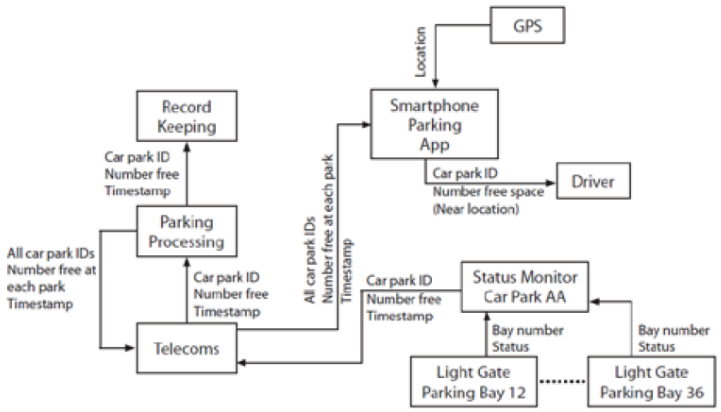
(12)

What practical skills are required to complete the task?

How would you prepare candidates to complete the task?

Marks scheme on next page.

Question number	Answer	Mark
3(b)	Award **one** mark for each correctly drawn part of the information flow diagram up to a maximum of **twelve** marks. • identification of a smartphone app • identification of GPS • input to smartphone input of GPS location • identification of driver • parking information (car park, free spaces) sent to driver • multiple bays in a car park • light/pressure sensor collecting bay status • aggregator/monitor collecting status of all bays in a single car park • car park monitor sends information to city central • car park monitor sends car park ID and number of free spaces • telecoms sends parking information to parking processing • parking processing sends parking information to record keeping • parking processing sends accumulated information back to telecoms • telecoms sends accumulated data to smartphone app • fully functional solution that could work Marks can also be awarded for any additional functionality, such as payments, indicated on the diagram.	**12**

Question number	Answer	Mark
3(b) ***Cont.***		

PERSONAL LEARNING

Things to do:

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-
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-
-

Things to avoid

-
-
-
-
-

Your ideas:

(To be completed by delegates)