

## Pearson BTEC Level 3 Nationals Diploma, Extended Diploma

**Window for supervised period:**

**Tuesday 7 May 2019 – Monday 13 May 2019**

Supervised hours: 3 hours

Paper Reference **31770H**

### **Computing**

#### **Unit 3: Planning and Management of Computing Projects**

**Part A**

**You must have:**

Project\_Initiation\_Document.rtf

### **Instructions**

- **Part A** should be completed before attempting **Part B**.
- **Part A** and **Part B** tasks will be submitted together for each learner on completion of **Part B**.
- **Part A** contains material for the completion of the set task under supervised conditions.
- **Part A** should be undertaken in 3 hours during the assessment period of one week timetabled by Pearson.
- **Part A** is specific to each series and this material must only be issued to learners who have been entered to undertake the task on a date set by Pearson in the relevant series.
- **Part A** must be kept securely until the start of the 3-hour supervised assessment period.
- **Part B** materials for the set task will be issued prior to the start of the supervised assessment period according to the guidance in the specification.
- This booklet should not be returned to Pearson.
- Answer **all** activities.

### **Information**

- The total mark for this paper is 36.

Turn over ►

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## Instructions to Teachers/Tutors and/or Invigilators

This paper must be read in conjunction with the unit information in the specification, the *BTEC Nationals Instructions for Conducting External Assessments (ICEA)* document and the *unit 3 Administrative Support Guide 2019*. See Pearson website for details.

Refer carefully to the instructions in this task booklet and the *Instructions for Conducting External Assessments (ICEA)* document to ensure that the assessment is supervised correctly.

The set task should be carried out under supervised conditions.

An electronic template for use in activity 1 will be provided for centres to download for learner use.

Work should be completed on a computer using the supplied documents or using project software as directed in each activity.

Internet access is not permitted.

All learner work must be completed independently and authenticated by the teacher/tutor and/or invigilator before being submitted to Pearson.

Centres are free to arrange the single session 3-hour supervised assessment period how they wish provided it is completed within the 1-week period scheduled by Pearson and according to the level of supervision specified.

Centres are responsible for putting in place appropriate checks to ensure that only permitted material is introduced into the supervised environment.

### Maintaining Security

- During any break, materials must be kept securely.
- User areas must only be accessible to the individual learners and to named members of staff.
- Access to the internet is not permitted.
- Learners can only access their work under supervision.
- Learner work must be regularly backed up.
- Learners should save their work to their folder using the naming instructions indicated in each activity.
- Any work learners produce under supervision must be kept securely.
- Any materials being used by learners must be collected in at the end of the 3 hours, stored securely and handed back at the beginning of the **Part B** session.

## Outcomes for Submission

Each learner must create a folder to submit their work. Each folder should be named according to this naming convention:

**[Centre #]\_[Registration number #]\_[surname]\_[first letter of first name]\_U3A**

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345\_F180542\_Smith\_J\_U3A

Each learner will need to submit 4 PDF documents, within their folder, using the file names listed.

**Activity 1:** activity1PID\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2a:** activity2gantt\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2b:** activity2resource\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2c:** activity2cost\_[Registration number #]\_[surname]\_[first letter of first name]

An authentication sheet must be completed by each learner and submitted with the final outcomes.

The work should be submitted no later than 20 May 2019.

## Instructions for Learners

Read the set task information carefully.

You must plan your time accordingly and be prepared to submit all the required evidence by the date specified.

You will complete this set task under supervision and your work will be kept securely at all times.

You may use a calculator and will have access to a computer. All activities must be completed using a computer.

There will be no access to the internet.

You must work independently throughout the supervised assessment period and should not share your work with other learners.

### Outcomes for Submission

You must create a folder to submit your work. Your folder should be named according to this naming convention:

**[Centre #]\_[Registration number #]\_[surname]\_[first letter of first name]\_U3A**

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345\_F180542\_Smith\_J\_U3A

You will need to submit 4 PDF documents, within your folder, using the file names listed.

**Activity 1:** activity1PID\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2a:** activity2gantt\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2b:** activity2resource\_[Registration number #]\_[surname]\_[first letter of first name]

**Activity 2c:** activity2cost\_[Registration number #]\_[surname]\_[first letter of first name]

You must complete an authentication sheet before you hand your work into your teacher/tutor.

### Set Task Brief

You are asked to use your project planning and management understanding and skills within a given computing project scenario.

Mr Jones is the owner of a computer sales company called Digital Graffiti. The current store has been open for two years. Mr Jones plans to open two additional stores.

You work as a Project Manager for Hype Computing, that will install the infrastructure in all three stores.

Your team consists of software and network engineers. They will report directly to you.

In **Part A** you are required to complete project documentation to initiate and launch the project.

In **Part B** you will monitor and control the project's progress to its completion and closure.

**You are advised to spend 30 minutes reading the information, task instructions and the tasks you are to complete.**

**You may make notes and/or highlight information to use in the completion of your project documents.**

#### Information

Mr Jones has requested a system that will:

- manage customer details
- manage and process orders
- maintain stock levels
- allow customers to place orders online.

Mr Jones feels that the new system will:

- improve customer service
- increase the number of customers
- ensure orders are recorded accurately
- allow out of stock items to be replaced within 24 hours
- increase the total orders by at least 10%
- lead to an increase in profit of £50,000 per year.

The system to be developed will require:

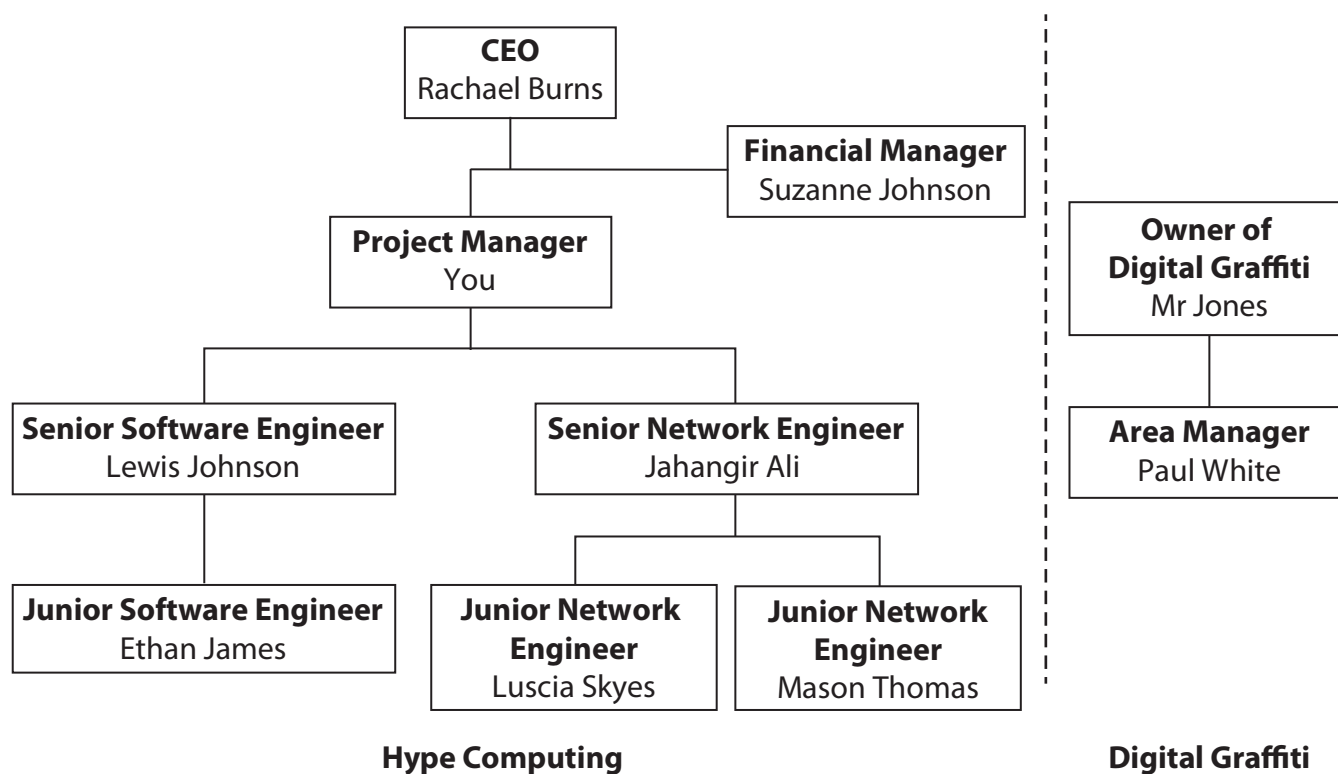
- a relational database with a customised interface
- installation of sales terminals in each store
- installation of network infrastructure.

The network will consist of sales terminals in each store connected to a central server. The server will be kept in the current store. It will host the relational database and online ordering system. The network equipment will cost £15,000.

As a Project Manager you must recommend a backup system. The two options are:

	Description	Price
Option one Online backup	<b>Storage space</b> – 1TB disk space <b>Frequency</b> – one scheduled backup per day <b>Technical support</b> – limited to three issues per year <b>Contract duration</b> – 3 years	£3600
Option two In-house backup	<b>Storage space</b> – 3TB disk space <b>Frequency</b> – real time backup <b>Technical support</b> – unlimited support from Hype Computing <b>Contract duration</b> – 3 years	£12,180

### Hype Computing and Digital Graffiti organisational structures



The Financial Manager has provided these costings to help you plan the project.

<b>Job title</b>	<b>Cost per hour</b>
Project Manager	£30
Senior Software Engineer	£25
Junior Software Engineer	£18
Senior Network Engineer	£25
Junior Network Engineer	£18

The Junior Network Engineers will work on:

- installing sales terminals
- installing network infrastructure
- hardware testing.

The Junior Network Engineers need seven hours per general function point. Their rate of pay is shown in the table.

The Junior Software Engineer will work on:

- setting up online customer order system
- creating customised interface
- software testing.

The Junior Software Engineer needs six hours per general function point. Their rate of pay is shown in the table.

The Senior Network Engineer will work on:

- installing network infrastructure
- installing and configuring the server
- hardware testing.

The Senior Network Engineer needs five hours per general function point and eight hours per complex function point. Their rate of pay is shown in the table.

The Senior Software Engineer will work on:

- installing and setup of relational database
- installing and configuring the server
- software testing.

The Senior Software Engineer needs five hours per general function point and eight hours per complex function point. Their rate of pay is shown in the table.

The CEO of Hype Computing has provided these details from her function point analysis of the project:

- Setup online customer order system (6 general function points)
- Create customised interface (6 general function points)
- Install and setup relational database (8 complex function points)
- Install sales terminals (6 general function points)
- Install network infrastructure (12 general function points)
- Install and configure server (8 complex function points)
- Software testing (9 general function points)
- Hardware testing (9 general function points)

The Senior Software and Senior Network Engineers will work together to devise a test plan. It will take five days to create the test plan. If major faults are found then, these can be fixed within three days and minor faults within one day. Regression testing for any fault takes two days.

All Senior and Junior Engineers will require a laptop at a cost of £369.00 each.

It has been estimated that the staff would work 5 days a week, 7 hours a day. The project start date would be 1st July 2019 and needs to be completed by the 19th August 2019.

The project has an allocated budget of £40,000.



## Part A Set Task

**You must complete ALL activities within the set task.**

**You are reminded that you need to produce your documents using a computer and software of your choice.**

**Your documents must be saved in your folder ready for submission using the formats and naming conventions indicated.**

You need to complete your company's Project Initiation Document (PID) for the computing project.

### Activity 1

Produce a Project Initiation Document for your project using the template **Project\_Initiation\_Document.rtf**

The 'Background to the Proposed Work' section has already been populated.

*Add further lines to the Project Initiation Document sections if required.*

Save your PID as a PDF in your folder for submission as **activity1PID\_[Registration number #]\_[surname]\_[first letter of first name]**

You are advised to spend 1 hour and 30 minutes on this activity.

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**(Total for Activity 1 = 22 marks)**

Project planning documentation is needed to go with your PID. You need to produce a Gantt chart, resource list and cost plan for the computing project.

### Activity 2

Produce the following project planning documentation based on the information provided in the set task brief:

- (a) a Gantt chart
- (b) a resource list
- (c) a cost plan.

Save your planning documentation as 3 PDFs in your folder for submission as

*Gantt chart as*  
**activity2ganttt\_[Registration number #]\_[surname]\_[first letter of first name]**

*Resource list as*  
**activity2resource\_[Registration number #]\_[surname]\_[first letter of first name]**

*Cost plan as*  
**activity2cost\_[Registration number #]\_[surname]\_[first letter of first name]**

You are advised to spend 1 hour on this activity.

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**(Total for Activity 2 = 14 marks)**

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**TOTAL FOR PART A = 36 MARKS**