

Summer Assignment for BTEC Level 3 Nationals in Information Technology

Deadline for Independent Learning Activity: Friday 15 September 2017 (scroll to bottom)

Exam Board: Pearson BTEC Level 3 Extended Certificate in Information Technology (QAN: 601/7575/8)

Website Link: <http://qualifications.pearson.com/en/qualifications/btec-nationals/information-technology-2016.html> and quals.pearson.com/BTECNats16IT

PLC:

Link to full specification: (select Extended Certificate and download)

<http://qualifications.pearson.com/en/qualifications/btec-nationals/information-technology-2016.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments&filterQuery=category:Pearson-UK:Document-Type%2FSpecification>

Unit 1 – Information Technology Systems (externally assessed)

Topic A: Digital Devices in IT Systems

The concepts and implications of the use of, and relationships among, the devices that form IT systems.

A1 Digital devices, their functions and use

The features and uses of digital devices in IT systems to meet the needs of individuals and organisations.

A2 Peripheral devices and media

The features and uses of peripheral devices and media in IT systems to meet the needs of individuals and organisations.

A3 Computer software in an IT system

The concepts and implications of the use of, and relationships between, hardware and software that form large- and small-scale IT systems and their impact on individuals and organisations.

A4 Emerging technologies

How emerging technologies can be used by individuals and organisations.

A5 Choosing IT systems

How the features of an IT system can affect its performance and/or the performance of a larger IT system.

Topic B: Transmitting Data

The concepts, process and implications of transferring data within and between IT systems.

B1 Connectivity

B2 Networks

The concepts and implications for individuals and organisations of connecting devices together to form a network.

B3 Issues relating to transmission of data

How the features and processes of data transmission affect the use and performance of IT systems.

Topic C: Operating Online

The implications for individuals and organisations of using online IT systems.

C1 Online systems

The features, impact and implications of the use of online IT systems to store data and perform tasks.

C2 Online communities

The features of online communities and the implications of their widespread use for organisations and individuals.

Topic D: Protecting Data

The issues and implications of storing and transmitting information in digital form.

D1 Threats to data, information and systems

The implications of accidental and malicious threats to the security and integrity of data, held in, and used by, IT systems.

D2 Protecting data

The features, uses and implications of systems and procedures used to protect the data of individuals and organisations.

Topic E: Impact of IT Systems

The uses, issues and implications of IT systems and their impact on individuals and organisations.

E1 Online services

How the features of online services are used to meet the needs of individuals and organisations.

E2 Impact on organisations

The features and implications of IT systems used by organisations

E3 Using and manipulating data

The uses, processes and implications for individuals and organisations of accessing and using data and information in digital form.

Topic F: Issues

The concepts, impacts and implications of issues resulting from the use of IT systems.

F1 Moral and ethical issues

The implications, for individuals, organisations and wider society, of moral and ethical factors of using information technology.

F2 Legal, moral and ethical issues

The legal issues relating to the use of IT systems and the implications for individuals, organisations and wider society.

Unit 2 – Creating Systems to Manage Information (controlled assignment)

Topic A: The purpose and structure of relational database management systems

A1 Relational database management systems

A2 Manipulating data structures and data in relational databases

A3 Normalisation

Topic B: Standard methods and techniques to design relational database solutions

B1 Relational database design

B2 Design documentation

Topic C: Creating a relation database structure

- C1 Producing a database solution
- C2 Testing and refining the database solution

Topic D: Evaluating a database development project

The characteristics, concepts, impact and implications of testing methodologies to monitor and evaluate database design, the database created, testing processes and success of the solution.

- D1 Database design evaluation
- D2 Evaluation of database testing
- D3 Evaluation of the database

Unit 3 – Using Social Media in Business (internally assessed)

Learning Aim A: Explore the impact of social media on the ways in which businesses promote their products and services

- A1 Social media websites
- A2 Business uses of social media
- A3 Risks and issues

Learning Aim B: Develop a plan to use social media in a business to meet requirements

- B1 Social media planning processes
- B2 Business requirements
- B3 Content planning and publishing
- B4 Developing an online community
- B5 Developing a social media policy
- B6 Reviewing and refining plans

Learning Aim C: Implement the use of social media in a business

- C1 Creating accounts and profiles
- C2 Content creation and publication
- C3 Implementation of online community building
- C4 Data gathering and analysis
- C5 Skills, knowledge and behaviours

Unit 4 – Website Development (internally assessed)

Learning Aim A: Understand the principles of website development

- A1 Purpose and principles of website products
- A2 Factors affecting website performance

Learning Aim B: Design a website to meet client requirements

- B1 Website design
- B2 Common tools and techniques used to produce websites

Learning Aim C: Develop a website to meet client requirements

- C1 Client-side scripting languages
- C2 Website development
- C3 Website review
- C4 Website optimisation
- C5 Skills, knowledge and behaviours

Reading List:

Course Textbook – due in July 2016

BTEC Nationals Information Technology Student Book 1 + Activebook @ £27 – ISBN: 9781292140414 (currently £24.03 in [Wordery](#))

Includes all four units covered in the extended certificate

Any textbook to teach you how to use Microsoft access 2010

As this is a new course/specification, more books will be added as they are published.

Independent Learning Activity:

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Introduction:

IT systems support and enable individuals and organisations to achieve their aims and are present in almost everything we do. Being able to effectively select and use appropriate IT systems is a valuable skill in any area, vocational or personal. You will be investigating a wide range of IT systems that are used to support the aims of individuals, groups or organisations. An IT system can be anything from a single digital device to a global collection of computers. Even large IT systems are made up of smaller devices that can perform both an isolated individual role or be part of a larger IT system.

Activity:

To research the following digital devices, their function and use:

- personal computers
- mobile devices
- servers
- entertainment systems
- digital cameras – still, video
- navigation systems
- data capture and collection systems

As a baseline, describe examples of each and the tasks that they can perform

Could you then identify where and how these devices might be used in any/all of the following:

- education and training
- personal
- social
- retail
- organisational use – business operations, internal/external dissemination of information
- creative

You may find that this information works better in a table format, however you need to be completing 500+ words

Contact Information:

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