



COMPUTER ENGINEERING

Level 6 Diploma

UNIT 5 – CLOUD COMPUTING AND OPERATING SYSTEMS

Question 1

Critically discuss the benefits and limitations of TWO different monitoring softwares for a cloud computing platform, referring to potential cost and utility discrepancies. (20 marks)

Question 2

Lecturers for an advanced programming unit have requested that the integrated development environments and version control systems they use in class be transferred to a cloud computing environment. The requested change aims to optimise the availability of computing resources for compiling and testing code.

- (a) Produce a plan of the resources that will be needed by the applications when they deployed into the cloud. (10 marks)
- (b) Discuss the expected resilience of the cloud computing environment using what-if modelling and propose any necessary fail-safes. (10 marks)

Question 3

Develop a prioritised list of FIVE cloud migration opportunities for an online games business. In your answer, fully justify your chosen list referring to the required investment and the expected returns. (20 marks)

Question 4

A software development company is reviewing whether to change its local server's with a cloud-computing solution.

- (a) Discuss the advantages and disadvantages of using server images for cloud deployment, as opposed to manually configured local servers. (10 marks)
- (b) Select TWO cloud-based storage technologies and evaluate their potential performance difference to a local NAT solution. (10 marks)

Question 5

Critically review how an organisation's requirements are used to determine storage requirements and the choice of data storage solution, referring to Massively Open Online Courses (MOOCs). (20 marks)

Question 6

Analyse in detail the lifecycle of an operating system, discussing the implications that the cycle has for commissioning and decommissioning server images for cloud systems. (20 marks)

Question 7

Contrast the common architectures that can be used to improve the resilience of an e-commerce website that is responsible for selling tickets for a very popular concert. In your answer, discuss in detail the performance and security implications for each. (20 marks)