City& Guilds

5220-536 MARCH 2018
Level 3 Advanced Technical Extended Diploma in Digital Technologies (720)
Level 3 Digital Technologies (System Infrastructure) – Theory exam (2)

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

- If any additional answer sheets are used, enter the additional number of pages in this box. ➡ 0 0
- Please ensure that you **staple** additional answer sheets to the **back** of this answer booklet, clearly labelling them with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue pen. Do not** use a pencil or gel pen.
- If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. **Do not** write on the source documents.
- ***I declare that I had no prior knowledge of the questions in this assessment and that I will not divulge to any person any information about the questions.**

General instructions
- The marks for questions are shown in brackets.
- Answer **all** questions.
- Answer the questions in the spaces provided. Answers written in margins or on blank pages will **not** be marked.
- Cross through any work you do not want to be marked.
- Write all your working out and answers in this booklet.

1   State in the correct order the first **four** stages of the system development lifecycle.   (4 marks)

_____

_____

_____

_____

_____

_____

_____

2   Explain **three** factors that need to be taken into account when scoping a
     system development.   (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

3   Explain the purpose of 'prototyping' a system.   (2 marks)

_____

_____

_____

4   State **two** benefits of using cloud technologies.   (2 marks)

5   Explain how **two** cloud services can support the activities of a business.   (4 marks)

6   Explain **three** standard metrics that may be used to justify a transition to cloud-based
     services for a business or an organisation.   (6 marks)

7   State the correct connectors used to terminate the following network cable types.
    •   Twisted pair
    •   Coaxial   (2 marks)

_____

_____

_____

_____

8   Explain the purpose of **three** types of installation documentation that need to be
    completed when installing a network.   (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

9   State **two** factors of Network Performance that can be monitored, tracked and
    reported on.   (2 marks)

_____

_____

_____

_____

10   For **each** of the following network threats, explain what the threat is and how it could impact a user.
  •   Malware
  •   Spyware
  •   Trap door   (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

11   State **two** reasons for providing technical support within a business.   (2 marks)

_____

_____

_____

12   Explain **two** methods of validating technical support information that may be gathered
      during system troubleshooting.   (4 marks)

      _____

      _____

      _____

      _____

      _____

      _____

      _____

      _____

13   Explain **two** factors that must be taken into account when communicating the result
      of technical support to a user.   (4 marks)

      _____

      _____

      _____

      _____

      _____

      _____

      _____

      _____

14   State **two** Infrastructure Management roles that would be involved in regular ongoing
      support for an organisation's e-commerce website.   (2 marks)

      _____

      _____

      _____

      _____

15   Explain **two** features of a centralised computing facility used by a large organisation.   (4 marks)

_____

_____

_____

_____

_____

_____

_____

16   a)   State **two** ways that data/information accessed by external users of an
         organisation might be hosted.   (2 marks)

_____

_____

_____

     b)   Explain **two** authentication methods that may be used when accessing the
         data/information identified in Question 16a).   (4 marks)

_____

_____

_____

_____

_____

_____

_____

17   Discuss how a large organisation that uses cloud technologies in multiple locations, can manage their systems and data to ensure availability in the event of a threat taking place.   (9 marks)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

18 A newly-formed, medium-sized organisation where 43% of the staff are home-workers, is considering using Cloud Computing platforms.
Discuss the processes that the in-house Technical Support Team would undertake in advising the management on the proposed implementation.

(9 marks)

End of assessment