



**DICT LEVEL II**

**INTERNET SKILLS**

**MONDAY: 23 November 2020.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question.**

**QUESTION ONE**

- (a) (i) Outline four security threats to a web server. (4 marks)
- (ii) For each of the threats in (a) (i) above, explain an effective mitigating security measure. (4 marks)
- (b) (i) Describe the term “internet of things”. (2 marks)
- (ii) Explain two factors that have influenced the growth of internet of things. (4 marks)
- (iii) State two industries or sectors that have benefited through application of internet of things. (2 marks)
- (c) List four generic buttons found on a computer browser. (4 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) Explain four considerations that you should make before choosing an internet service provider (ISP). (4 marks)
- (b) Citing the specific roles of each, define the following protocols:
- (i) IP. (2 marks)
- (ii) HTTP. (2 marks)
- (iii) TCP/IP. (2 marks)
- (iv) SMTP. (2 marks)
- (c) Describe five elements required in order to provide internet service in a learning institution. (5 marks)
- (d) Explain the following features used in search engines:
- (i) allintitle: (1 mark)
- (ii) site: (1 mark)
- (iii) allinurl: (1 mark)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Using a well labelled diagram, identify the components of a wireless internet network topology. (4 marks)
- (b) Explain the following types of servers used on the internet:
  - (i) DNS server. (2 marks)
  - (ii) Proxy server. (2 marks)
  - (iii) Content engines. (2 marks)
- (c) Outline five components necessary for the operation of Voice Over IP (VOIP) on the internet. (5 marks)
- (d) Social business is the use of social networking technology to engage employees, customers and suppliers in a business.

**Required:**

Explain five social business applications on the internet. (5 marks)  
**(Total: 20 marks)**

**QUESTION FOUR**

- (a) Discuss five internet developments that generate ethical concerns. (5 marks)
- (b) Explain the following terms used on the internet:
  - (i) Web services. (2 marks)
  - (ii) Extensible markup language (XML). (2 marks)
  - (iii) Service oriented architecture (SOA). (2 marks)
- (c) Describe the term “cloud service models” as used in cloud computing. (1 mark)
- (d) Explain two types of cloud delivery models used in cloud computing. (4 marks)
- (e) Outline four functions of Internet Assigned Numbers Authority (IANA) in internet governance. (4 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Describe the following terms as used in web technology:
  - (i) Surface layer web. (2 marks)
  - (ii) Deep layer web. (2 marks)
- (b) Explain the relationship between the world wide web (www) and the internet. (4 marks)
- (c) Distinguish between “synchronous conferencing” and “asynchronous conferencing” as used in online chats. (4 marks)
- (d) Domain name service (DNS) protocol has no confidentiality controls. User queries and name server responses are sent unencrypted.  
  
Examine two main approaches used to counter privacy issues with DNS. (4 marks)
- (e) Highlight four fundamental motivations for using three tier architecture over a two tier model. (4 marks)

**(Total: 20 marks)**

.....