

# KASNEB

## DICT LEVEL II

### INTERNET SKILLS

MONDAY: 22 May 2017.

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 three characteristics to consider when choosing a search engine. (3 marks)
- (ii) Highlight two limitations of search engines. (2 marks)
- (b) Differentiate between “internet backbone” and “web crawler” in the context of internet technology. (2 marks)
- (c) Describe each of the following TCP/IP application layer protocols:
- (i) Dynamic Host Configuration Protocol (DHCP). (2 marks)
- (ii) Telnet. (2 marks)
- (iii) Packet Internet Groper (PING). (2 marks)
- (iv) File Transfer Protocol (FTP). (2 marks)
- (d) Explain five benefits of three-tier over two-tier client-server architectures. (5 marks)

**(Total: 20 marks)**

#### QUESTION TWO

- (a) Describe the concept of “virtual reality” as used in the internet. (2 marks)
- (b) State two factors that affect the cost of hosting a website. (2 marks)
- (c) Distinguish between the following terms as used in computing and network security:
- (i) Botnets and scareware. (2 marks)
- (ii) Blogs and teleconferencing. (2 marks)
- (d) Using an example in each case, distinguish between “web based” and “mail user” agents. (4 marks)
- (e) Highlight two challenges that you might face when addressing internet security. (4 marks)
- (f) By use of an illustration, explain how a global positioning system (GPS) tracking system implements client/server tiers. (4 marks)

**(Total: 20 marks)**

#### QUESTION THREE

- (a) Differentiate between “client-side scripting” and “server-side scripting”. (4 marks)
- (b) (i) Define “elasticity” as used in cloud computing. (2 marks)
- (ii) Summarise four factors that a business should consider when choosing a cloud service provider. (4 marks)
- (c) Apache is one of the leading internet web servers.

**Required:**

- Appraise four factors that have contributed to Apache’s success. (4 marks)

- (d) Analyse four threats that a client is exposed to when using instant messaging (IM). (4 marks)
  - (e) Explain “graymail” in the context of internet services. (2 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Summarise four needs addressed by web accessibility. (4 marks)
  - (b) Explain two types of proxy servers used on the internet. (4 marks)
  - (c) Highlight the legal and ethical issues which could arise when using a web scraping software. (2 marks)
  - (d) Internet governance emphasises a multi-stakeholders approach in discussing internet related policies. (4 marks)  
With reference to the above statement, outline five areas covered by Internet Governance. (5 marks)
  - (e) Explain the role of the following internet groups and corporations:
    - (i) Internet Society (ISOC). (3 marks)
    - (ii) Internet Corporation for Assigned Names and Numbers (ICANN). (2 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Outline four benefits of server virtualisation. (4 marks)
  - (b) Define the following terms as used in the internet application:
    - (i) Servlets. (2 marks)
    - (ii) Bookmark. (2 marks)
  - (c) Explain the following top level groups:
    - (i) .Sci (1 mark)
    - (ii) .alt (1 mark)
    - (iii) .comp (1 mark)
    - (iv) .rec (1 mark)
  - (d) Distinguish between “Regional Internet Registry” (RIR) and “Internet Service Provider” (ISP). (4 marks)
  - (e) Explain the impact of Internet of Things (IOT) to an organisation in the following areas:
    - (i) Customer experience. (2 marks)
    - (ii) Innovation. (2 marks)
- (Total: 20 marks)**
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