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| --- | --- | --- |
| **Q** | **Answer** | **Marks** |
| **1a** | Last stage of testing prior to release. | 1 |
| **1b** | Any two of the following • software can be tested on their own systems • software can be tested on eventual users • provide feedback to software development company • client needs to agree that software meets their needs before accepting/paying for it | 2 |
| **2** | H3 {font-family : Tahoma;font-size : 16px;color : red;font-weight : bold}Acceptable alternatives to H3:.subheading { rules }OR#subheading1 {rules} | 3 |
| **3a** | Any two of the following:• walker and walk• dog and walk• owner and dog | 2 |
| **3b** |  | 4 |
| **3c** | • make the gender/walks well with others options Boolean with a male/female and yes/no buttons • create drop down lists for Dog type and Owner ID | 2 |
| **3d** | Create a query with the following fields: • Walker.walker name and criteria = “Susan” • Dog.dogname • Dog.dogtype • Dog.walks well with others • Owner.owner address And then create a report using the data from the query. | 5 |
| **4** | There is no one field that can be used as a unique identifier so multiple fields need to be selected. | 1 |
| **5a** | Any two of the following • updating centrally held data/data sources is not possible with client side scripting • validation cannot be disabled if it is handled at the server • can query SQL using PHP • less security issues as data is managed at server Or any other valid response. | 2 |
| **5b** | Any two of the following • allows multiple uses to share, edit and save files/folders • accessible via the internet from any device • accessible via internet from any location | 2 |
| **5c i** | ISPs must implement technical systems for the storing and interception of information that may be requested by government. | 1 |
| **5c ii** | Encryption is becoming more sophisticated/difficult to decrypt, etc (1 mark), requiring the cooperation of the individual to provide keys/information in order to decrypt (1 mark). | 2 |
| **6a** | Perceptual Coding (1 mark) removes sounds or frequencies that cannot be heard by humans (1 mark). | 2 |
| **6b** | Free Audio Lossless Coding (FLAC) (1 mark) attempts to predict frequency of future samples and using rice encoding (1 mark) | 2 |
| **7** | text files that contain information about browsing habits (1 mark) but can be designed to send as much data as possible to external servers/third parties (1 mark) | 2 |
| **8** | * Can make use of public cloud services to expand storage capabilities
* Can make use of private cloud to store essential / classified data
* Can make use of private cloud to retain control over security and maintenance
 | 2 |
| **9a** | Any two from* Touch screen
* Microphone
* Camera
 | 2 |
| **9b** | Any two from* Headphones
* Speakers
* Screen
 | 2 |
| **9c** | No moving parts (1 mark) which makes them more robust (1 mark) | 2 |
| **10a** | Novice (1 mark) because it is a simple user interface which requires no previous experience to use. (1 mark) | 2 |
| **10b** | • Remote access to control heating when not at home • Use of geolocation can automatically turn heating off when no one is home • Takes account of external weather forecast and adjusts temperature accordingly • Real time temperature monitoring through mobile devices can reduce unnecessary gas/fuel use • Data can be analysed to determine how quickly a home heats and how slowly it loses heat meaning that the boiler can be used more efficiently • Multi room control systems prevent rooms being overheated when not in use | 2 |
| **11** | Manufacture – resources used to produce the device eg finite materialsUse – electricity and energy that the device requires to functionDisposal – harmful gases that could be released into the atmosphere eg toxic chemicals | 2 |
| **12** | • Pupils have read only access to this folder (1) • Teachers have read/write access to this folder (1) | 2 |