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# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**COMPUTER APPLICATIONS TECHNOLOGY P2**

**NOVEMBER 2019**

**MARKING GUIDELINES**

**MARKS: 150**

**These marking guidelines consist of 20 pages.**

**SUGGESTIONS AND RECOMMENDATIONS TO MARKERS**

- Revisit the questions and the marking guideline frequently during the marking session.
- It is advisable to read the question frequently (and re-read) together with the candidate's response to check that it correlates, so that you are not misled by the candidate's statements/answers.
- Be careful not to focus on keywords or general statements, but rather read the entire answer. If in doubt, read the entire answer and then the question paper and the marking guideline.
  - Ask yourself or your senior marker if the response could 'fit' into the marking guideline before allocating the correct marks to the candidate.
  - Accept correct answers that are expressed differently, e.g. the marking guideline states 'slow' and the candidate responds with 'not fast'.
- Beware of overlapping answers to a specific question. In general, ONE mark is awarded per fact.
- Do not choose answers on the candidate's behalf. Where a question requires a candidate to LIST or NAME/STATE: mark the first number of instances required, e.g. the first TWO facts if the candidate presents a list of FIVE facts and only TWO facts were required, even if presented in paragraph format.
- Questions requiring longer answers must be regarded as a single unit. Marks can be awarded if correct statements are found anywhere in the paragraph.

**SECTION A****QUESTION 1: MULTIPLE-CHOICE**

1.1	D	✓	1
1.2	C	✓	1
1.3	B	✓	1
1.4	B	✓	1
1.5	A	✓	1
1.6	D	✓	1
1.7	C	✓	1
1.8	D	✓	1
1.9	D	✓	1
1.10	A	✓	1
<b>Total: [10]</b>			

**QUESTION 2: MATCHING ITEMS**

2.1	E	✓	1
2.2	O	✓	1
2.3	L	✓	1
2.4	S	✓	1
2.5	K	✓	1
2.6	P	✓	1
2.7	T	✓	1
2.8	F	✓	1
2.9	C	✓	1
2.10	R	✓	1
<b>Total: [10]</b>			

**QUESTION 3: TRUE/FALSE ITEMS**

*(Note to marker: In Question 3.1, 3.3, and 3.4 candidates need to provide both the word 'False' and the correct term, e.g. motherboard, in order to get the mark.)*

3.1	False, WAN ✓ /MAN	1
3.2	True ✓	1
3.3	False, driver ✓	1
3.4	False, (Disk) Cleanup ✓	1
3.5	True ✓	1
		<b>[5]</b>

**TOTAL SECTION A: 25**

**SECTION B****QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1	<p><b><i>TWO input devices found on a laptop computer</i></b></p> <p>(1) Keyboard/Keypad (2) Touch pad/Track pad (3) Microphone (4) Camera/Webcam (5) Fingerprint scanner (6) Track point/Pointing stick</p> <p>✓✓ (Any two)</p>		2
4.2	<p><b><i>TWO reasons why all text on a touch screen device does not display</i></b></p> <p>(1) On-screen keyboard is blocking the text (2) Font size is too large (zoomed)/Screen size is too small (3) More than one app is opened which takes up screen space (4) Text is scrolled out of view/Auto-rotation is not turned on</p> <p>✓✓ (Any two)</p>		2
4.3	<p><b><i>TWO functions of a UPS</i></b></p> <p>(1) Provides temporary backup power during power failures/dips✓ to save work (2) Protects the computer from power surges/fluctuations/dips✓</p>		2
4.4	<p><b><i>TWO reasons for using a data projector instead of a monitor</i></b></p> <p>(1) The display can be used for large groups of people (2) Image size can be varied (3) Can display on a variety of surfaces (4) Data projector is easier to move/carry around (Comparable sizes)</p> <p>✓✓ (Any two)</p>		2
4.5	<p><b><i>TWO advantages of HDMI cables over VGA cables</i></b></p> <p>(1) Digital signal results in better audio/video quality (higher resolution)/HDMI enables better quality images/display (2) Transmits both audio and video data (3) Faster data transfer</p> <p>✓✓ (Any two)</p>		2
4.6	<p><b><i>TWO reasons why 3D-printers are not commonly used in home offices</i></b></p> <p>(1) Not multifunction: cannot scan/copy/cannot print on paper (2) Home office users generally do not need to print 3D models (3) Emissions may possibly be toxic (smelly/odour)</p> <p>✓✓ (Any two)</p>		2

4.7.1	<p><b>ONE reason why 1024x768 does not refer to size of the monitor</b></p> <p>1024x768 refers to the resolution and NOT the physical screen size/display ratio/Screen size is given in inches✓</p>	1	
4.7.2	<p><b>Term used to describe why software will not work on an earlier version of the OS</b></p> <p>Compatibility✓</p>	1	2
4.8	<p><b>TWO reasons for purchasing an office suite rather than applications by various software developers</b></p> <p>(1) Office suite/Applications will have a similar GUI/environment  (2) Easy to share data between applications/Integration of data  (3) All applications are available from a single installation  (4) Only single update required for all applications  ✓✓ (Any two)</p>		2
4.9	<p><b>TWO causes for an application to stop responding</b></p> <p>(1) Lack of <b>system resources</b>, e.g. Not enough RAM to run application/Lack of disk access/Too many applications running in the background/Application is in the process of updating  (2) Lack of <b>network</b> access/connectivity  (3) Hardware <b>malfunction</b>, e.g. faulty RAM, CPU overheating, etc.  (4) Corruption of the <b>software</b>/Faulty software/Software bug  (5) Malware, e.g. Virus infection, Hacking software  ✓✓ (Any two)</p> <p>(Note to marker: Allocate two marks if the candidate gives two valid points in the same bullet, e.g. Faulty RAM and faulty CPU.)</p>		2
4.10	<p><b>TWO reasons why a picture becomes blurred or is unclear</b></p> <p>(1) The picture size was increased/Pixilation  (2) It was saved at a lower resolution  (3) It was saved in a different file format  (4) Aspect ratio was changed  (5) Sharpness/Softness/Contrast of the picture was adjusted  (6) Graphic effects were applied  ✓✓ (Any two)</p>		2
4.11	<p><b>How convergence contributes to green computing</b></p> <p>Fewer devices means:  (1) fewer resources/materials being used (in the manufacturing process)  (2) less going to landfills/less e-waste  (3) fewer emissions (e.g. in manufacturing/transport)  (4) less power/electricity being consumed  ✓✓ (Any two)</p>		2

4.12.1	<b>Term for analogue broadcast changed to digital broadcast</b> (Digital) migration✓	1	3
4.12.2	<b>TWO advantages of digital broadcasting technology for the viewer</b> (1) Sharper picture/video/higher resolution/Support HD devices (2) Streaming/video on demand (3) Better quality sound (4) More television channels available (5) Music/Radio channels also available (6) The availability of other services, e.g. optional languages/subtitles/parental lock, etc. (7) Electronic programming guide ✓✓ (Any two)	2	
			<b>[25]</b>

**QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES**

5.1	<p><b><i>TWO advantages of networked computers over stand-alone computers</i></b></p> <p>(1) Sharing of hardware  (2) Installing/Sharing of applications  (3) Sharing of documents/files  (4) Enables communication between computers  (5) Centralised/Improved security is possible  (6) Updates can be shared/centralised  (7) Device management  (8) Sharing of internet connectivity  (9) Backups can be centralised  (10) Centralised data</p> <p>✓✓ (Any two)</p>		2
5.2.1	<p><b><i>Port to connect computer to a wired network</i></b></p> <p>Port A/Ethernet port✓</p> <p>(Note to marker: Accept Port B together with a motivation, e.g. adaptor.)</p>	1	2
5.2.2	<p><b><i>Way to connect to a wireless network</i></b></p> <p>(Wireless) dongle✓ in Port B</p> <p>OR</p> <p>Router/modem in Port A/B</p> <p>(Note to marker: Do not accept Port A or B only.)</p>	1	
5.3	<p><b><i>Type of connection that uses light for data transmission</i></b></p> <p>Fibre✓ /Li-Fi</p>		1
5.4	<p><b><i>ONE solution for users to log on to a LAN</i></b></p> <p>(1) Switch the server/switch on  (2) Refresh the user accounts/Restart the server/computer/switch/Create new user accounts/Roll back the server to previous settings  (3) Plug the network cable in  (4) Faulty <b>hardware</b>: Replace the damaged network cable/Switch/Port  (5) Review user permissions (NOT passwords)/firewall/timed access  (6) Clean virus infection on the server</p> <p>✓ (Any one)</p>		1
5.5	<p><b><i>ONE reason why buffering occurs while streaming a video</i></b></p> <p>(1) There is not enough bandwidth/High internet traffic  (2) ISP throttled your connection  (3) Problems with the streaming server  (4) Poor signal strength/Connection was interrupted</p> <p>✓ (Any one)</p>		1

5.6	<b>Purpose of a home page setting in a browser</b> Automatically loads a (favourite) web page every time the browser is started✓/Acts as an indirect bookmark		1
5.7	<b>TWO outcomes from clicking on a website hyperlink</b> (1) (Automatically) directs a user to other pages/sections of the website/other websites (2) Opens the e-mail interface (3) Can initiate/trigger file downloads/link to multimedia files (4) Could result in a dialog box, e.g. Error message ✓✓ (Any two)		2
5.8	<b>TWO ways to ensure privacy on social media: Facebook/WhatsApp</b> (1) Ensure that only authorised people can see the posts/content/Use privacy settings (2) Disable cookies (3) Disable/Restrict access to 3rd party apps/Disable sharing of data with social network service provider, if possible (4) Block users that you do not want to communicate with (5) Hide/Do not share personal details (6) Disable the 'share location' feature ✓✓ (Any two)		2
5.9	<b>TWO limitations of e-commerce</b> (1) Items cannot be tried out before purchase (2) Requires some form of banking account/Usually cannot transact in cash (3) Not all services can be purchased through online stores, e.g. haircut, medical visits, etc. (4) Relies on internet connectivity (5) Digital skills (6) Warranty claims can be difficult (7) Can be impersonal (8) May be exposed to fraud/scams (9) Possible delay in delivery ✓✓ (Any two)		2
5.10	<b>Technology used to secure data</b> Encryption✓ /SSL/TLS		1
			<b>[15]</b>

**QUESTION 6: INFORMATION MANAGEMENT**

6.1.1	<b>Purpose of an abstract</b> A brief <b>summary</b> /overview/outline of the report✓	1	
6.1.2	<b>Purpose of an introduction</b> (1) To give a (description of the) purpose of the report (2) To give background information about the topic (3) To give a brief idea of what the researcher did/research process was to solve the problem  ✓ (Any one) <i>(Note to marker: Do not accept 'target audience'.)</i>	1	2
6.2	<b>TWO reasons for information not being suitable</b> (1) The author is not an authority on the topic/Cannot obtain bibliographical information (2) The information is too old (3) Information in the document was found to be plagiarised (4) The information is biased (5) The information is contradictory (6) Information cannot be cross-referenced (7) The information is very limited and does not adequately cover the topic  ✓✓ (Any two)		2
6.3.1	<b>ONE limitation of closed questions in a questionnaire</b> (1) Limited options may lead to skewed data (2) Options may be biased towards a point of view (3) Respondent may want to give an answer not in the list/Limits possible responses that could be given by the respondent (4) No indications of whether the respondent understood the questions  ✓ (Any one)	1	
6.3.2	<b>TWO benefits for a researcher when closed questions are answered electronically</b> (1) Easier to process/analyse responses in a graph/spreadsheet/database (2) The creation of graphs can be automated (3) Can read all responses/Bad handwriting is not an issue/Do not have to retype the responses/Fewer errors in data (4) Data capturing can be automated (5) Easy to share data with others/publish dataset (6) Data validation of responses can be done (7) Possible response times are quicker (8) Higher return rate is possible  ✓✓ (Any two)	2	3

0

6.4	<p><b><i>THREE reasons why the graph is difficult to interpret</i></b></p> <p>(1) The title obscures the content of the graph/The title may make it difficult to see detail/interpret the graph</p> <p>(2) The graph shows a big difference in the bars but values are very close</p> <p>(3) The combined percentages go well beyond 100%/It is not obvious that the graph displays parts of a whole/A pie chart would be more suitable</p> <p>(4) The Y-axis starts at 80% rather than 0%/Incorrect upper and lower limits of the Y-axis</p> <p>(5) The legend has a meaningless label</p> <p>(6) Axes are not labelled</p> <p>✓✓✓ (Any three)</p>		3
			<b>[10]</b>

**QUESTION 7: SOCIAL IMPLICATIONS**

7.1.1	<p><b>TWO activities on the internet that could lead to addiction</b></p> <ul style="list-style-type: none"> <li>(1) Social networking/Constantly checking messages</li> <li>(2) Checking profiles of others</li> <li>(3) (Online) gaming</li> <li>(4) Watching inappropriate content/pornography</li> <li>(5) (Online) shopping/(online) auctions</li> <li>(6) Watching (online) videos</li> <li>(7) (Online) dating</li> <li>(8) (Online) gambling</li> </ul> <p style="text-align: right;">✓✓ (Any two)</p>	2	
7.1.2	<p><b>TWO warning signs of internet addiction</b></p> <ul style="list-style-type: none"> <li>(1) Withdrawal from/Dislike of social activities/Isolation</li> <li>(2) <b>Obsessed</b> with their internet activities/Spend all their time at the computer/Constant need for data</li> <li>(3) <b>Mental health</b> issues/Depression/Anxiety/Aggression/Withdrawal</li> <li>(4) <b>Physical symptoms:</b> Repetitive stress injuries/Carpal Tunnel Syndrome/Headaches/Fatigue</li> <li>(5) Secretive behaviour with computing devices</li> <li>(6) Truancy/Absence from school/work</li> </ul> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Allocate two marks even if candidate lists two points from the same bullet.)</i></p>	2	4
7.2	<p><b>TWO potential ethical problems of companies accessing big data</b></p> <ul style="list-style-type: none"> <li>(1) <b>Breach of privacy:</b> Use of data for certain purposes/tasks without permission, e.g. selling people's data profiles to third parties for marketing</li> <li>(2) Use of personal data to target/tempt specific people into making unnecessary purchases</li> <li>(3) Companies may exploit data/Unfair bias becomes the accepted norm</li> <li>(4) Lack of security controls/Open to cyber-attacks</li> </ul> <p style="text-align: right;">✓✓ (Any two)</p>		2
7.3	<p><b>ONE way law enforcement authorities could trace cyber criminals</b></p> <ul style="list-style-type: none"> <li>(1) Track/Trace/Check on the internet activities of users, e.g. visiting questionable sites, posting offensive comments, etc.</li> <li>(2) Internet activities leave behind data (breadcrumbs/History/cookies) that can be traced</li> <li>(3) Profile users based on their internet activities</li> <li>(4) Information provided by victims</li> </ul> <p style="text-align: right;">✓ (Any one)</p>		1

7.4	<p><b>ONE way in which social media is able to influence public opinion</b></p> <p>Posts (opinions) made by influencers/celebrities/authorities/companies on social media manipulate/could influence public opinion/behaviour both positively or negatively ✓</p> <p><i>(Note to marker: Accept any realistic response related to the influence of social media, e.g. Fake news, trending posts/comments, etc.)</i></p>		1
7.5	<p><b>TWO negative effects of software piracy for creators</b></p> <p>(1) Software manufacturers lose revenue/Loss of sales  (2) Discourages the creation of new software/Can affect the quality of new software developed  (3) Possible job losses  (4) Reputational damage because users are unaware of malware in the pirated software</p> <p>✓✓ (Any two)</p>		2
			<b>[10]</b>

**QUESTION 8: SOLUTION DEVELOPMENT**

8.1	<p><b>ONE benefit of using styles for headings in a long WP document</b></p> <p>(1) Easy to create a table of contents/Enables the use of automatic table of contents  (2) Consistent format of headings/Professional layout of document  (3) Easy to modify/update multiple headings at the same time</p> <p>✓ (Any one)</p> <p><i>(Note to marker: Only accept time saving when motivated.)</i></p>		1
8.2	<p><b>TWO reasons for using sections breaks</b></p> <p>(1) Different headers and footers can be applied to a document  (2) Different page numbering can be applied in one document  (3) Watermarks can be inserted on only some pages in one document  (4) Various page settings, e.g. page orientations/paper sizes/margins/borders can be applied to one document  (5) Various column layouts can be applied to one document  (6) Different vertical alignment options can be applied in one document</p> <p>✓✓ (Any two)</p>		2
8.3	<p><b>TWO word processing features used by a reviewer</b></p> <p>(1) Tracking/Track changes/Markup  (2) Comments  (3) Use highlighting/use different colour fonts/strikethrough to indicate suggested changes</p>		2
8.4.1	<p><b>ONE reason for the display of non-printing symbols</b></p> <p>Show/Hide feature is activated/Show formatting, e.g. spaces, tabs, etc.✓</p>	1	2
8.4.2	<p><b>Reason why there is no bullet next to 'Shelter'</b></p> <p>Soft return/enter was used/Pressed Shift+Enter/Did not press the Enter key on its own/It is part of the bulleted text ✓</p>	1	
8.5	<p><b>How to use Page Break Preview in a spreadsheet</b></p> <p>Drag the (blue) page break ✓ with the mouse to customise the printable area</p>		1

8.6	<b>Purpose of the exclamation mark in a spreadsheet</b>  Exclamation mark indicates a reference to another sheet/workbook/The cell A1 is in the 'data' worksheet✓		1
8.7	<b>Cell format of a time answer in a spreadsheet</b>  General/Number✓		1
8.8	<b>TWO mistakes in a formula preventing correct autofill</b>  (1) The reference to cell A2 should not be an absolute reference/The row reference cell A2 should not be an absolute cell reference/It should be A2 or \$A2✓ (2) There should be absolute cell referencing (\$) in cell E1/Cell E1 should be a complete absolute cell reference/It should be \$E\$1✓  (Note to marker: Allocate one mark for reference to absolute cell referencing without specifying the cells.)		2
8.9	<b>Purpose of square brackets in a database calculation</b>  Square brackets reference a field (name) ✓ or a table  (Note to marker: Accept reference to extract a value from a column. Do not accept 'Column heading' per se.)		1
8.10	<b>Effect of moving =Count(*) from DB group footer to report footer</b>  The function will count all the values ✓ of all the records in the table/report instead of just the values of a group/It results in only one answer at the end of the report		1
8.11	<b>Tag for text to appear on the web browser tab</b>  Move the text 'December Holidays' to between the title tags✓  (Note to marker: Accept <title> December holidays </title>.)		1
			<b>[15]</b>

**TOTAL SECTION B: 75**

**SECTION C****QUESTION 9: INTEGRATED SCENARIO**

9.1.1	<b><i>Speed of the faster CPU</i></b> 2.4 GHz✓	1	
9.1.2	<b><i>ONE reason for the tablet being more suitable for outdoor use</i></b>  (1) A tablet is portable/Not dependent on external power source (2) The tablet is LTE/4G/Wi-Fi enabled (3) Can be easily tilted/moved around to avoid glare  ✓ (Any one)	1	
9.1.3	<b><i>TWO ways to extend the storage space of the tablet</i></b>  (1) Use an SD Card/memory card (2) Use an (OTG) flash drive/external hard drive (3) Use an online/cloud storage service  ✓✓ (Any two)	2	
9.1.4	<b><i>ONE reason for the desktop computer being better for graphics processing</i></b>  (1) Has a (dedicated) video/graphics card (2) Has more RAM  ✓ (Any one)	1	
9.1.5	<b><i>Explanation of an on-site warranty</i></b> The manufacturer will arrange for pickup or repair the device at the client's premises✓  <b>Reason why tablets do not have on-site warranties</b> Tablets are small/portable enough for the owner to easily take it back to the store✓	2	
			7

9.2.1	<b>ONE advantage of real-time communication</b>  Interaction/Help is immediate/No delays in messages✓	1	5
9.2.2	<b>TWO types of internet connection needed during the competition</b>  (1) Satellite (2) Cellular (3G, 4G, 5G, LTE) (3) Wi-Fi/Wireless  ✓✓ (Any two)	2	
9.2.3	<b>TWO hardware devices used for video conferencing</b>  (1) Webcam/Camera (2) Speakers/Earphones/Headphones (3) Microphone (4) (Bluetooth) Headset (5) Monitor/Screen/Projector (6) Smartphone/Computer/Tablet  ✓✓ (Any two)	2	
9.3.1	<b>TWO online platforms to publish videos</b>  (1) YouTube (2) School's website/other websites (3) Blogs/Vlogs (4) WhatsApp/WeChat/Telegram (group) (5) Facebook (6) Instagram (7) Snapchat (8) TikTok (9) Twitter (10) Vimeo, etc.  ✓✓ (Any two)	2	
9.3.2	<b>How to locate a video on the internet</b>  (1) Use the word ' <b>video</b> ' in the search string✓/Set search type to <b>video/video tab</b> (advanced search) (2) <b>Search string</b> must include the school <b>name</b> /cooking competition <b>name</b> /dish <b>name</b> /video <b>name</b> ✓	2	

9.3.3	<p><b><i>TWO specifications of a camera that influence video quality other than the sensor</i></b></p> <p>(1) Resolution/Megapixels  (2) Colour depth  (3) (Quality of the) lens  (4) Optical (vs digital) zoom  (5) Frame rate  (6) ISO rating  (7) File formats available for saving  (8) Video stabilisation/Shudder is reduced  (9) Speed of the memory card, etc.</p> <p>✓✓ (Any two)</p>	2	8
9.3.4	<p><b><i>TWO reasons for compressing video files</i></b></p> <p>(1) To decrease the amount of data used when sharing files/Limited bandwidth for sharing files  (2) Possible limited storage space on the device/cloud service  (3) Faster uploading</p> <p>✓✓ (Any two)</p>	2	
9.4.1	<p><b><i>TWO spreadsheet features for accurate data capturing</i></b></p> <p>(1) Data validation/Drop down list  (2) Lock cells/Protect cells  (3) Conditional formatting  (4) Freeze panes</p> <p>✓✓ (Any two)</p>	2	5
9.4.2	<p><b><i>An alternative way to add values in a range</i></b></p> <p>Use the SUM ✓ function</p>	1	
9.4.3	<p><b><i>Function to lookup data</i></b></p> <p>VLOOKUP/HLOOKUP/XLOOKUP✓</p> <p>(Note to marker: Accept an answer that uses MATCH and INDEX together.)</p>	1	
9.4.4	<p><b><i>ONE way to make a spreadsheet document available on any OS</i></b></p> <p>(1) Save as PDF  (2) Print to PDF  (3) Save/Convert a screenshot to any picture format</p> <p>✓ (Any one)</p>	1	
			<b>[25]</b>

**QUESTION 10: INTEGRATED SCENARIO**

10.1	<b><i>TWO specifications to consider when buying a printer</i></b>  (1) Resolution/DPI/Quality of the printouts (2) Printer speed/PPM (3) Connectivity options, e.g. Wireless, USB, etc. (4) Printer capacity (industrial level)/Duty cycle (5) Multifunction ability, e.g. copying, scanning, etc. (6) Paper size/Borderless printing (7) User interface options (8) Duplex/Two-sided printing option (9) Colour/Monochrome printing (10) Printing technology, i.e. size and number of ink tanks, toner, etc. (11) Paper tray capacity  ✓✓ (Any two)	2	2
10.2.1	<b><i>ONE kind of damage to a computer from a power surge</i></b>  (1) Hardware damage, e.g. to power supply, motherboard, etc. (2) Corruption/Loss of data  ✓ (Any one)	1	3
10.2.2	<b><i>TWO ways to dispose of a computer in an environmentally friendly way</i></b>  (1) Recycle the components (2) Use a service provider/retailer that disposes of e-waste (3) Re-use/sell/donate working components  ✓✓ (Any two)	2	
10.3.1	<b><i>Type of user that uses high-end hardware and software</i></b> Super/Power user✓	1	
10.3.2	<b><i>TWO reasons to restrict access to the server room</i></b>  (1) Additional layer of access control for employees (2) To prevent burglaries/theft of data/hardware (3) To prevent physical damage/vandalism/tampering with the network  ✓✓ (Any two)	2	
10.3.3	<b><i>TWO reasons for blocking USB ports</i></b>  (1) Theft of data/Unauthorised copying of data (2) Flash drives often carry viruses (3) Prevents employees from attaching other devices (4) Prevents employees from bringing in games/personal documents/software, etc.  ✓✓ (Any two)	2	

10.4	<p><b>TWO benefits of grid computing</b></p> <ul style="list-style-type: none"> <li>(1) Large processing tasks are shared over many computers/Enormous processing power</li> <li>(2) Can use existing resources/No need to buy an expensive supercomputer</li> <li>(3) The failure of one computer will not affect processing of tasks</li> <li>(4) Scaling of processing power is easy</li> <li>(5) Uses idle resources</li> </ul> <p style="text-align: right;">✓✓ (Any two)</p>		2
10.5.1	<p><b>Cause of the software problem</b></p> <p>Bug ✓</p> <p><b>Solution</b></p> <ul style="list-style-type: none"> <li>(1) System restore/Roll back to previous date/time where the software worked properly</li> <li>(2) Install a patch/service pack (from the vendor website)</li> <li>(3) Re-install the software</li> </ul> <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Accept 'Glitch' as the cause with 'Restart' as the solution.)</i></p>	2	
10.5.2	<p><b>TWO reasons why OS updates should <u>NOT</u> automatically download on networked computers</b></p> <ul style="list-style-type: none"> <li>(1) Automatic updates may use a lot of bandwidth</li> <li>(2) Automatic updates may use a lot of storage space</li> <li>(3) Updates may slow down the network/Computers may restart automatically to install updates during times when they are in use</li> <li>(4) Updates may cause the computers/network to become unstable/May cause compatibility issues with existing software/Possible introduction of bugs</li> <li>(5) OS updates may not be needed by the users</li> </ul> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept any answer related to data usage and cost.)</i></p>	2	4

10.6.1	<p><b><i>TWO reasons for <u>automatic</u> backups</i></b></p> <p>(1) Saves time due to scheduled backups/No user intervention required for backups  (2) Ensures backup is always/regularly/timeously done/Employees may forget if done manually  (3) Time/schedule backups when computers are not in use</p> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do NOT accept reasons for a backup that is NOT automatic.)</i></p>	2	
10.6.2	<p><b><i>TWO guidelines in the policy for making backups, other than making regular backups or setting automatic backups</i></b></p> <p>(1) Only backup when computers are not being used  (2) Do not store backups in the same location as the original data/Specify location of backups  (3) Specify a storage medium  (4) Backup to multiple types of media  (5) Do incremental backups to save space/data/Only backup recent data and not everything  (6) Do not backup software/programs that can be reinstalled  (7) Encrypt sensitive data on backup/Ensure changes cannot be made to the backup  (8) Testing of backups  (9) Responsible person for backups</p> <p style="text-align: right;">✓✓ (Any two)</p>	2	4
10.7.1	<p><b><i>Technology that is used to obtain location data</i></b></p> <p>GPS✓</p>	1	
10.7.2	<p><b><i>Term for the data that is embedded in a picture file</i></b></p> <p>Metadata✓ /Geotagging</p>	1	2
10.8.1	<p><b><i>Why the data type of StationID is Short Text</i></b></p> <p>(1) No calculations will be done  (2) The zero at the start of the number will display/In a Number data type the zero at the start of the number will not display  (3) It may be a code in which the numbers carry a specific meaning</p> <p style="text-align: right;">✓ (Any one)</p>	1	
10.8.2	<p><b><i>How to sort rainfall values in ascending order per station</i></b></p> <p>(1) Group by StationName✓  (2) Sort by Rainfall✓</p>	2	3
			<b>[25]</b>

TOTAL SECTION C: 50

GRAND TOTAL: 150