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28.0 COMPUTER STUDIES (451)

28.1 Computer Studies Paper 1 (451/1)

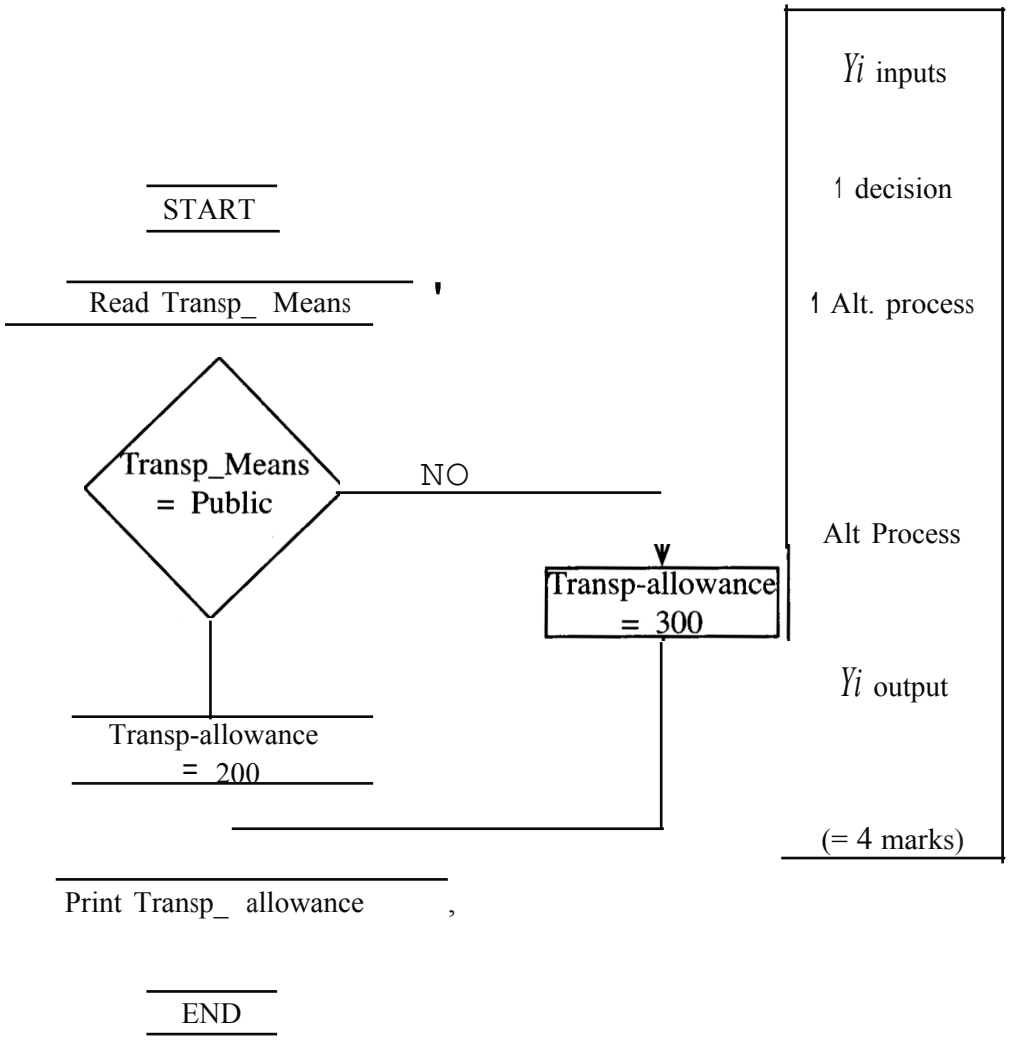
	Solution	Marks
1	(a) Tab: Moves the text ahead to the next tab stop or several stops ahead/ right/ forward. (b) Enter: Break the line after the word 'is' so that the word 'an' starts on a new line. - Words from "an" forms a new paragraph. (c) Home: Takes the cursor to the beginning of the line. - Nothing happens to the text	1 1 1 (= 3 marks)
2	- Computers can be automated or programmed. - Computers are fast. - Computers are capable of performing repetitive tasks. - Computers can store a lot of information. - Computers are accurate. - Can do dangerous tasks. - Give quality output. - Diligence /don't get tired/sick.	Any 4 x 1 (= 4 marks)
3	- They are more expensive. - They hold less volume of data. - They are volatile hence cannot store information once power is off. - Its shorter access time is dependent on the memory size hence increasing the size of primary memory will eventually lead to longer access time. - ROM cannot store data	Any 3 x 1 (= 3 marks)
4	(a) Point of sale system (POS)/Data base management system/stock control system/ sales management system. (b) Keyboard, barcode scanner, credit card reader. (c) - Transactions will be accurate. - Automatic updating of transactions. - Automatic updating of stock level. - Provide daily and periodical summaries for management use. - Improved security/limited access. - Easy of storage of files.	1 Any 2 x X = 1 Any 2 x 1 = 2 (= 4 marks)
5	(a) Impact printer/Dot matrix/Daisy wheel. (b) It prints by using spokes which hit the paper hard. The energy is transferred to attached carbon papers.	1 1 (= 2 marks)

6	File properties: - File types. - File extension. - File size. - Creating time/date of storage/saves time. - Owner/Account used. - Time of modification/date. - Usage conditions/File attributes (Read Only/Archives/Hidden). - Protection information. - Contents of the file -Access time.	Any 4 x !Ii (= 2 marks)
7	- System infected with viruses which occupy memory space. - Many utilities are running in the background (e.g antivirus). - Many applications are opened. - RAM may be smaller than the required/part of RAM corrupted. - Corrupted Registry.	Any 2 x 1 (= 2 marks)
8	- Enactment of relevant laws to compact the vice. - Stiff penalties for those found in possession of pirated software. - Sensitize the public on the harm of using pirated copies. - Making software affordable/cheaper. - Certificates to identify the original software. - Use of keys,passwords to secure software products. - Restrict the number of installations.	Any 2 x 1 (= 2 marks)
	Solution	**Marks**
9	Hardware consideration: - Main memory size/volume/capability. - Hard disk size. - Available input devices. - Available output devices. - Processor specification ie. speed/type/hardware. - Monitor resolution. - Bandwidth for busses (e.g 64-bit) - Compatibility - Configuration - Warranty terms for hardware.	Any 3 x 1 (= 3 marks)
10	(a) Advantages: - Shifts time of processing to when computers are less busy. - No user input required hence no idle computer time as it awaits input. - Input is done once (batch). - Can enable use of hired equipment hence cost effective. (b) Bate)'! processing. - Electronic.	Any 2 x 1 (= 2 marks) 1 (= 3 marks)

11	Advantages: - Can be used in the absence of human teachers. - Combines the expertise of many teachers hence more knowledgeable. - Reduces cost of hiring many teachers/serves many students. - Preservation of scarce expertise. - Students can learn on time.	Any 3 x 1 (= 3 marks)
12	- Encryption. - Firewalls. - User profiles/passwords/user. - Limit the number oflog-in attempts. - Audit trail/tracking. - Physical protection of computers.	Any 3 x 1 (= 3 marks)
13	(a) Input mask: Is a layout/format that filters the data that can be entered in a field. (b) Default value: Used to specify the value that is automatically entered in a field when a new record is created.	1 1 (= 2 marks)
14	(a) Warranty: If a software has a problem then it can be replaced. If not working can be returned for repair. (b) Portability: To ascertain the compatibility with other systems. marking schemewith marking scheme	1 with 1 (= 2 marks)
15	- Booking and reservations. eg. hotel, car, bus, air ticket. - Space explorations. - Intensive care units (hospital). (ICU) - Chemical plants/nuclear - Military security - Banking eg. ATM.	Any 2 x 1 (= 2 marks)
16	(a) Characteristic of scripting language: - Use of tags. - It is interpreted and not compiled. - Do not have declaration part. - User friendly -Are portable. -Must be embedded in the browser.	Any 2 x 1 (= 2 marks)

(b) Syntax Errors: Errors arising due to violation of language rules. Logical Errors: Errors arising from poor logic such as incorrect use of formulas/ semantic. Runtime Errors: Occur when there is abrupt interruption of running program. When the running program stops abruptly.	Any2 (Error name 1 Description 1) (= 4 marks)

(c) (i) 1. Input transp_means 2. If Transp_means = Public Then Transp_ allowance= 200 Else Transp_ allowance = 300 3. Print Transp_allowance 4. Exit	1 1 1



	(iii) - Flowcharts require templates/complex symbols/special software while pseudo code requires only a text editor. - Drawing flowcharts takes a lot of time. - Flowcharts occupy more space. - Flowcharts permit development of logic sequences which cannot be coded using valid structured code. - Translation of flow charts into individual code is harder/difficulty.	Any 2 x 1 (= 2 marks)
	Total for Question 16	**15 marks**

17	(a) - Binary coded Decimal (BCD))(4 bits). - American Standard Code for information interchange (ASCII). - Extended BCD interchange code.(EBCDIC) - Unicode. .....- Standard BCD (6 bits)	Any 3 x 1 (= 3 marks)
	(b) (i) 1 1 02 = 4 + 2 = 610 0. 1012 = T + T Sum= 6 + T+T = 6 sor6.625	1 1 1
	(ii) 12 2 6RO 2 3RO 2 1 R 1 2 0 R 1 0.6875 x 2 = 1.375 0.375 x 2 =0.75 0.75 x 2 = 1.5 0.5 x 2 = 1.00 1100+ 0.1011 = 1100.1011?	1 1 1 1
	(c) 11001.0101 1 1 Q, Q 1 lQOll,QQOl	1 order 1
	(d) COMP (100101)= 0 1 1 0 1 0 + 1 001101 QllQll 101000 Carry= 0 recomplement the answer 010111 ±1 011000	1 1 1
	Total for Question 17	15 marks
18	(a) (i) Cell margin: Its the space between the boundary of the cell and the text/ content inside the cell. (ii) Nested table: is a table created inside another table.	1 1

	(b) - In line with text. - Square - Behind text. - Infront of text. - Tight. - Through. - Top and bottom. - None.	Any 4 x X (= 2 marks)
	Solution	**Marks**
	(c) (i) Axis label: Data corresponding to the vertical or horizontal lines of a given chart whereas ie x-axis and y-axis. Data label: are data that provide additional information about a data marker which represents a single data point on a value that originates from a worksheet cell.	(= 2 marks)
	(ii) Cropping is the process of trimming/cutting/hiding vertical or horizontal edges of an object/picture while sizing is the process of enlarging/expanding or reducing/contracting an object/ picture to appropriate dimension.	(= 2 marks)
	(d) (i) = Product (B3:C3)=Product (C3,B3) (ii) = & B &8 * C5 + C5 = Product (&B &* *C5)+C5 (iii) = Count If (C2:C5 = 110) (iv)= Min (d2:d5)	1 2 2 2
	Total for Question 18	**15 marks**
19	(a) Surfing: Its the process of accessing /browsing/visiting internet resources like webpages. Uploading: Transferring files from a computer to a remote computer. Inbox: Folder/place in email system where incoming messages are stored/saved.	1 1 1
	(b) - Slower than a wired network. - The network can be less stable, wireless reception may be impaired by other wireless and wired devices within the network. - Risk of outsider accessing the network. - Very difficult to configure. - Very hard to secure. - Very hard to trouble shoot.	Any 3 x 1 (= 3 marks)
	(c) - Block in appropriate content/Firewall/Filter. - Set limits on downloads. - Monitor where children go online. - Counsel children eg. not talking to strangers online. - Supervise them. - Giving user accounts/passwords/log ins.	Any 3 x 1 (= 3 marks)

	(d) - Threat to privacy. Organisation "system admn" Can snoop into peoples mails. - Email can be unsolicited/spam mail. Messages can be sent to masses of people without their consents. - Vulnerability to machine failures. - Emails can be overwhelming when many messages are received leading to email overload and going through each of them can be taxing. - Email can be faked. - Email attached can be a source of viruses. - Email technology not available to all/Technology illiteracy. - Encourage illicit communication such as immoral behaviour.	Any 3 x 2 (= 6 marks)
	Total for Question 19	**15 marks**
	Solution	**Marks**
20	(a) Current system may be experiencing problems thereby being unable to meet organisation requirements. - New directives may be received from authorities and the organisation must comply. - Changes in the operating environment forces the organisation to change in order to fit and continue in business. eg. competition. - Changes in technology requiring the upgrading or total change in the existing system. - Peer pressure need to remain fashion	Any 3 x 2 (= 6 marks)
	(b) (i) Sample data should be provided so that all modules can be tested. (ii) Output reports show that the system actually works/testing process/expected output..	1 1
	(c) (i) Manual: Manual files stored in cabinets/books/paper/in-tray/out-tray . (ii) Electronic: Secondary storage devices/individual storage devices eg. Flash .	1 1
	(d) (i) Student: Master file/Parent/Reference File/Primary. Register: Transaction file/Child table/Secondary. (ii) Master file: Data is static/Permanent/Semi-permanent. Transaction file: Data is dynamic/Temporary/Changes frequently (iii) Key field: Student number/Admission No./Reg. No./File No.	1 1 1 1 1
	Total for Question 20	**15 marks**

(a) (i) Database created and named. (2 marks)

- Creating of 3 tables x 1 mark. (3 marks)
- 9 correct fields x 1 mark. (9 marks)

(ii) Relationships:

- correct fields between 2 tables @ 1 mark x 2 (2 marks)
- type between 2 tables @ 1 mark x 2 (2 marks)
- enforcing referential integrity in any relationship. (½ mark)

(iii)
- Form created @ 1 mark x 3 (3 marks)
- Data entry per column x ½ mark (4½ marks)
- selection of the correct object per table @ 1 mark x 3 (3 marks)

(b) (i)
- Query created:

  - correct tables (1 mark)
  - naming of the query (1 mark)
  - correct fields (1 mark)

- Age computation:

  - use of formulae (1 mark)
  - use of correct formulae (1 mark)
  - expression (label) (1 mark)
  - use of criteria (1 mark)
  - correct criteria (1 mark)

- Report:

  - Existence (1 mark)
  - Correct fields (1 mark)

(ii)
- labels: (1 mark)
- correct expression "average" (1 mark)

(c) (i) Correct tables (1 mark)

Correct fields (1 mark)
Name/saving (1 mark)

(ii) Selection of correct graph (1 mark)

Selection of correct fields (1 mark)
Saving (1 mark)

(d) Printing:

- the three tables ½ x 3 (1 ½ marks)
- query output (EMPTYPE) 1 x ½ (½ mark)
- two reports 2 x ½ (1 mark)

2 (a) Folder created:

- existence (1 mark)
- renaming (1 mark)

Five paragraphs @ 1 mark x 5 (5 marks)

Graphics:

- cylinder (1 mark)
- shaded cylinder (1 mark)
- arrowed lines (1 mark)
- thickness of arrowed line (1 mark)'
- correct label (1 mark)
- copies of cylinders (1 mark)
- copies of arrows (1 mark)
- Saving (1 mark)

(b) Saving: (1 mark)

(c) (i) centre alignment (1 mark)

font style = bold (1 mark)
font style = underline (1 mark)
font size = 16 (1 mark)
font type = Arial (1 mark)

(ii) Drop cap:

correct paragraph (1 mark)

drop capping (1 mark)
prop cap size = 4 lines (1 mark)

(iii) Bullet applied (1 mark)
Application in correct lines (1 mark)

(iv) Column applied (1 mark)
Application on correct paragraph (1 mark)

(v) Top margin set to 0.r (1 mark)
Left margin set to 0.9N (1 mark)

(vi) Alignment set to justification (1 mark)

	(vii)	Spelling correction		(1 mark)
	(viii)	Line spacing set to 1.5		(1 mark)
		Application on the correct paragraph		(1 mark)
	(ix)	Movement of paragraph		(1 mark)
		Application on the correct paragraph	1 mark	(1 mark)
	(x)	Footer:	1 mark	
		0 a line existence	1 mark	(1 mark)
		0 line dimension = 6'''		(1 mark)
		0 name and index	3 marks	(1 mark)
		0 objects placed in the footer area		(1 mark)
(d)	(i)	Table creation		(1 mark)
		Data entry	(X mark per column= 2 marks)	
	(ii)	Insert blank row		(1 mark)
		Entering the title		(1 mark)
		Merging cells		(1 mark)
	(iii)	Label and positioning		(1 mark)
		Formula[= average(ABOVE)]	1 mark	(1 mark)
	(iv)	Saving [already awarded at (b)]	1 mark	
		{Note: no mark/or saving in 2 (d)(iv)}	1 mark	
			1 mark	
(e)	Printing	language	1 mark	(1 mark)
		final language		(1 mark)
			1 mark	
			1 mark	
			9 marks	