
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

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Paper 1 Written A

May/June 2017

MARK SCHEME

Maximum Mark: 80

Published

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This document consists of **9** printed pages.

Question	Answer		Marks
1	Customers have to have a computer and be connected to the Internet to view posters on billboards.		4
	A website can be expensive to maintain compared to other methods.	✓	
	Posters/presentations can only be seen in a limited number of places.	✓	
	Posters cannot be defaced as easily as presentations in shopping malls.		
	Hard copy flyers are interactive.		
	Printed posters have multimedia features.		
	Websites and presentations are easier to update as you do not have to reprint many copies.	✓	
	A much wider area/potential customer base is covered cheaply by using flyers.		
	Emailed advertisements may be mistaken for spam.	✓	
	It is difficult to send the same message to many people at the same time if using email.		

Question	Answer		Marks
2	It is cheaper than employing a programmer to create and maintain it.	✓	4
	Pop-ups may create unhappy customers who may avoid that company in future.	✓	
	Customers will use pop-up blocking software which does not allow pop-up-unders to appear.		
	A pop-up does not appear to users until they close the page they are working on.		
	The company's own website has a longer delay in updating or improving the advertising material.		
	The customer regards pop-up-unders as less of an inconvenience than pop-ups.	✓	
	There is no way of linking pop-ups and pop-up-unders to the company's own website.		
	The company has more control over the host's website than it would over its own.		
	There may be so many other companies advertising on the host's website that the company's advertising has less space available.	✓	
	Fewer people may see it if it is on someone else's website.		

Question	Answer	Marks
3(a)	<p>Two from:</p> <p>Involves working the same number of hours as normal/in a week Work more hours per day... ...over a shorter number of days Usually involves working 4½ days in a week/9 days out of 10 in a period of two weeks.</p>	2
3(b)	<p>Eight from:</p> <p><i>Employees</i> Earn the same amount of money but work fewer days They can have long weekends (by finishing early on Fridays or not working Fridays) Travel to work fewer days so less time spent travelling Travel to work fewer days so less money spent travelling By working longer days they can get very tired and not be able to enjoy their extra days off It can put extra pressure on some workers if they are required to work when other workers are not prepared to work Allows workers to organise their working lives to suit their personal needs</p> <p><i>Company</i> Allowing for programmers' individual needs leads to lower absenteeism/better punctuality among programmers Programmers prefer flexibility so are more productive/more motivated It may take managers longer to organise the system It may not be possible with some areas of work There is a danger of lower productivity, as some workers may work unsupervised during early or late times, and when left alone they might not work as hard.</p> <p>One mark is available for a reasoned conclusion.</p>	8

Question	Answer	Marks
4(a)	<p>Six from:</p> <p>Can compare products and prices at their leisure Can shop at a convenient time for them/24/7 Customers can shop at their favourite store even when they live far away Customers do not have to spend time travelling to shop Customers do not have to spend money travelling to shop Disabled customers will find it easier than travelling to shop There will be a greater choice of goods Do not have to spend time queuing</p> <p>Disabled people may have problems navigating through screens Customers who do not have a credit/debit card will not be able to use online shopping Can order goods and they do not get delivered Goods are not to the same standard as those ordered/wrong goods delivered/substitute goods delivered Cannot check the standard of goods before buying/cannot be sure the goods are in stock May be hidden costs such as delivery charges Expense of buying a computer with a broadband internet connection/must have a reliable electricity supply/basic computer skills.</p> <p>One mark is available for a reasoned conclusion. Must have at least one advantage and disadvantage to gain full marks.</p>	6
4(b)	<p>Six from:</p> <p>They can employ fewer staff and pay less in staff wages Because of their lower costs, they can offer cheaper goods thus attracting more customers Shoppers can shop 24/7 so company could gain increased profits Internet more likely to attract customers worldwide, increasing profits</p> <p>Less personal touch so it is harder to sell other products Initial/running costs such as having to pay website developers Initial costs such as buying the hardware when starting up Will have had to retrain staff which is costly.</p> <p>One mark is available for a reasoned conclusion. Must have at least one advantage and disadvantage to gain full marks.</p>	6

Question	Answer	Marks
5(a)	<p>Three from:</p> <p>Database of customers' information/previous orders for operator to search caller's details Word processor to type up data about the call Email software to send to customer confirmation of call and action taken Web browser to search intranet/internet for extra help</p> <p>Allow answers relating to customer service.</p>	3
5(b)	<p>Six from:</p> <p><i>First-party call control</i> Allows operator to have a direct connection between their computer and the phone set Allows the operator's computer to control the functions of the operator's phone Suitable only for the smallest of call centres</p> <p><i>Third-party call control</i> Requires a dedicated telephony server to connect the telephone network and the computer network Operator's phone communicates directly with the server Operator's phone is not directly connected to their computer The server controls all the phones The server can direct a call to the appropriate operator Any computer in the system can control any phone Suitable for large call centres.</p>	6

Question	Answer	Marks
6(a)	<p>= IF(B6 < 75,"Small",IF(B6 < = 95,"Medium","Large"))</p> <p>Nested IF (2 tiers with correct number of closing brackets) – 1 mark <i>IF B6 < 75</i> Returns Small – 1 mark <i>IF B6 < = 95</i> – 1 mark Returns Medium – 1 mark <i>IF B6 > 95</i> returns Large – 1 mark No absolute cell referencing – 1 mark</p>	6
6(b)	<p>Four from:</p> <p>Waist sizes would be typed into column B These would then be rounded in column C... ...using a formula in C6... ...such as ROUND(B6, 0) or INT(B6) B6 in the formula would need to be changed to C6 to give = IF(C6 < 75,"Small",IF(C6 < = 95,"Medium","Large")) – 2 marks for fully correct formula.</p>	4

Question	Answer	Marks
7	Three matched pairs:	
	Examining documents <u>used in the system</u>	1
	Benefit – Helps to identify the inputs and outputs of the system/volume of data can be determined/processing can be deduced	1
	Interview <u>system users</u>	1
	Benefit – Interviewer can move away from their 'script' and ask a more in-depth question if a particular response is given/can interpret body language	1
	Can distribute questionnaires to <u>system users</u>	1
	Benefit – Answers tend to be, on the whole, more accurate/everyone can complete the questionnaire at the same time instead of one after the other (as with interviews)/can complete it at their leisure	1

Question	Answer	Marks
8	Six from: When data flows from or to somebody or somewhere outside the system, that somebody or somewhere is called a terminator/external entity Here the terminator/external entity could be the GP/family doctor The processing of patient data is put in a process box The actual data output from the system, is recorded for future use Such data is therefore called a store... ...such as the treatment received by a patient Each flow arrow is labelled to show what data is flowing at that point in the diagram The label might be the patient's treatment.	6

Question	Answer	Marks
9	<p>Six from:</p> <p>Hospital workers have a personal duty of confidence to individuals whose data is stored</p> <p>Hospital workers should have a personal duty of confidence to their employer</p> <p>Workers must not tell any unauthorised person about personal data which is held</p> <p>Hospital must not use information for any reason except with the permission of the individual</p> <p>Workers must be asked to treat the information as confidential/it must be obvious to them that the information is given in confidence</p> <p>Hospital should ask employee to sign a confidentiality agreement</p> <p>Hospital should take responsibility for any information which is passed on</p> <p>Only the least amount of information that could identify the individual should be used</p> <p>Information should not be passed on from organisation to organisation without authorisation from the individual</p> <p>Anonymised information should always omit personal details wherever possible</p> <p>Aggregated information should never identify individuals</p> <p>Hospital/workers must ensure the security of customer data</p> <p>Workers must ensure only relevant data is used</p> <p>Workers should ensure they only use up to date/accurate information.</p>	6

Question	Answer	Marks
10	<p>Five from:</p> <p>Select suitable data</p> <p>...including normal, abnormal and extreme data</p> <p>Expected results and actual results are recorded</p> <p>Actual and expected results are compared</p> <p>Comments on comparison are recorded/comments are made as to whether system needs to be changed or otherwise</p> <p>Live data could be used</p> <p>Comparison between actual results and previous system results.</p>	5

Question	Answer	Marks
11(a)	<p>Three from:</p> <p>There are personal/private (users' own) calendars and public calendars Open her private calendar to see when he is free Open the public calendar showing when other workers are free Identify a suitable time when he is free and when others are free/where there are no clashes Notify the programmers of the time and date of the meeting Calendar software would advise him of any clashes Pietr would type in the details of the meeting Pietr sets an alarm to alert him when the meeting starts Calendar function keeps a record of appointments and meeting times.</p>	3
11(b)	<p>Five from:</p> <p>Identifying short- and long-term targets Set deadlines for the completion of each task Can set the relative importance of each target Helps to devote appropriate resources/workers (to achieving that target) Helps in planning the steps needed to produce a solution Using Gantt charts... ...to represent parallel and sequential tasks... ...to help ensure sequential tasks are completed in time for the next one ...to help ensure parallel tasks finish at the same time Helps in making correct decisions which will affect the time taken at each stage Helps to arrange workload Can monitor progress by seeing how long a task has taken so far/see how long tasks should take.</p>	5