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INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/1)

OVERALL PERFORMANCE

In Semester 1, 619 candidates sat for the examination for this subject and 49.75% of them obtained a full pass.

The percentage of each grade is as follows:

Grade	A	A–	B+	B	B–	C+	C	C–	D+	D	F
Percentage	7.75	2.26	2.26	2.75	6.46	18.58	9.69	16.80	11.79	10.66	10.99

CANDIDATES' RESPONSES

General comments

Overall, all of the questions reflected the contents with the ICT STPM syllabus and Bloom Taxonomy which includes some low order thinking skills (LOTS) and high order thinking skills (HOTS) questions. The questions were based on the current issues. It covered all the topics from the basic of computer system to producing a multimedia project. Some of the questions were very basic and common to the candidates. Many of them managed to get the highest score.

Comments on the individual questions

Question 1

For part (*a*), the question asked about type of software Z, an Operating System (OS). The candidates mostly answered Application Software, Utility Software, Anti-Virus and Microsoft Word which were wrong. Part (*b*) asked the candidates to state two purposes of installing software B (Spreadsheet) and software C (Presentation) which many candidates scored full marks from it.

Question 2

Most of the candidates only obtained half marks for this question. The question was about the process of audio recording of a guitarist. Most of the candidates were unable to explain the analog signal to digital signal and vice versa. The candidates mistook refer the process to MIDI, Sampling, Soundwave and etc., which lead them to lose marks. As for part (*b*), the candidates obtained marks on describing how the audio recording was produced.

Question 3

For part (*a*), the question asked about describing ways user can safeguard privacy of their personal information from being trespassed and almost every candidate could score marks for this question. Part (*b*) required the candidates to explain the effect to the user if data intrusion occur. Most candidates managed to describe and explain the questions probably because of their knowledge and experience regarding this matter.

Question 4

Candidates were required to explain space utilisation in the context of image usage, emphasis and text size of the screenshot. Most of the candidates obtained marks for this question. Some mistakes made by the candidates as the candidates only described the screenshot in terms of the applications sold and the discount given which were not reflected to the question.

Question 5

Candidates were required to complete the given table on the common problems associated with utility programs face by the user. Only a few candidates obtained full marks by completing the tables.

Question 6

Only few candidates chose this question rather than Question 7. The candidates who attempted this question could not identify the multimedia development stage used to develop the storyboard based on Zigby's storyboard in part (*a*). As for part (*b*), candidates were required to state four deliverables, which were related to the storyboard at the same stage for the flowchart, final story script, produced graphic art, audio and video. Part (*c*) required candidates to name the types of shots for images P (Medium Close-Up), Q (Medium Shot) and R (Medium Shot) and they were required to describe each type of shot. Part (*d*) required candidates to sketch a new close-up angle shot of P zooming towards the eyes of Zigby, which almost all the candidates who answered this question managed to score marks.

Question 7

Most of the candidates could not differentiate between raster or bitmap and vector as in part (*a*) which asked the candidates to identify the similarities of the types of images given. Part (*b*) required candidates to choose between the two images that were suitable for button in a webpage and state the reason. Almost half of the candidates choose image K and image M because both images looked clearer but the answer were images L and N as they fulfilled the requirement due to low in resolution. For part (*c*), candidates required to suggest the possible file format in part (*b*) which the answers were jpeg, png, bmp and etc. Part (*d*) required the candidates to determine whether image in N could be enhanced into M and state the reasons. Only a few candidates could answer this part thus giving them full marks. Part (*e*) required candidates to name two computer artworks that were suitable for image M and most of the candidates' answers were given as the file types according to certain software such as Photoshop, Illustrator, Paint, Microsoft Office and etc. which were incorrect as the answers were most likely the products from computer generated artworks such as banner, logo and poster.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/2)

OVERALL PERFORMANCE

In Semester 2, 612 candidates sat for the examination of this subject and 57.67% of them obtained a full pass.

The percentage of each grade is as follows:

Grade	A	A–	B+	B	B–	C+	C	C–	D+	D	F
Percentage	9.31	3.59	6.70	8.50	8.17	10.13	11.27	4.25	4.08	3.43	30.56

CANDIDATES' RESPONSES

General comments

Most candidates were not able to score the average marks for this question paper. Generally, many candidates were able to answer easy questions in C language but not for questions that required analysis and evaluation based on the given problems. However, many candidates had incorrect understanding on what was expected from the given questions.

Comments on individual questions

Question 1

The question was about the reserved words in C. For part (*a*), not many candidates were able to give reasonable answers. Some candidates tried to give their own view which was not very logical. In part (*b*), candidates were required to give three examples of reserved words in C and the explanation as well. Many candidates were able to give correct examples but some of the explanations were not very well presented.

Question 2

In part (*a*), the question asked the candidates to show the precedence of the operators for this arithmetic statement, `M=a*b+c*d%a;`. Only a few candidates could give the exact answer for this question. It seemed that the candidates were not familiar with this type of question. They were familiar with the questions that asked them to calculate a variable by giving the value of another variable. For part (*b*), most of the candidates were able to answer the question. They tried showed the process of attaining the answer, which was not necessary for this question. Part (*c*) required candidates to explain about invalid data type. The majority of the candidates were not able to answer this question.

Question 3

This question required candidates to write a code segment in C for the given pseudocode. Nearly all candidates were able to get marks for this question. Only a few candidates used `for` statement instead of `while` statement, hence this caused the deduction of marks.

Question 4

For part (*a*), the question expected the candidates to draw a flowchart from the given formula. Most candidates were able to draw the diagram using appropriate symbols. However, some candidates had difficulties showing the logical flow for the solution. Part (*b*) required candidates to write a program based on the flowchart in part (*a*) which candidates need to use a `while` loop to display the conversion of the temperature. Most candidates were able to write the program. However, common mistakes occured when they were unable to use variable C as a counter.

Question 5

In part (*a*), candidates were required to draw a schematic diagram to list the values of an array. Most candidates seemed to understand what was expected from the question but they answered incorrectly. For part (*b*), candidates were required to identify the purpose of the program. Most of the candidates tended to answer by mentioning the possible functionalities of the given function. However, only a few candidates provided the correct answers.

Question 6

For this question, the candidates were reqiured to write a function definition. A variety of answers were given by the candidates for this question. They were able to write the function definition and return the value for the `main` function. Somehow there were still candidates who were mistook between `main` function and user defined function.

Question 7

This question was not a popular question among the candidates. Most of the candidates were not able to understand the usage of `struct` statement in C. Many candidates could not answer `struct` type question as they could not declare `struct` statement in programming code.

INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/3)

OVERALL PERFORMANCE

In Semester 3, 603 candidates sat the examination of this subject and 52.08% of them obtained a full pass.

The percentage of each grade is as follows:

Grade	A	A–	B+	B	B–	C+	C	C–	D+	D	F
Percentage	9.78	2.49	2.82	2.82	9.29	14.10	10.78	9.12	6.63	9.45	22.72

CANDIDATES' RESPONSES

General comments

Overall, the candidates answered the questions accordingly. The questions were suitable with the level of knowledge acquired by the candidates as intended by the objectives stated in the syllabus. As a whole, candidates answered the questions in sequence. Most scripts were presentable, readable and understandable. Some of the theory-based questions were very straightforward and yet it was obvious that many candidates were not able to provide specific answers. Instead, they gave general answers that only touched the surface of the topic, which indicate that they did not truly understand the topics. However, it seemed that many candidates performed better in answering application questions (Questions 6 and 7) rather than theory-based questions.

Comments on the individual questions

Question 1

The question was about similarity and difference of alpha and beta testing. Majority of the candidates answered correctly for part (*a*), but did not manage to score marks for part (*b*) and (*c*). Part (*b*) asked the purpose of each test and part (*c*) asked the consequence if beta testing was not carried out.

For example, if the candidates did not know what beta testing was, they would not be able to answer the third part of the question. Most answers given were general answers for testing activity rather than specific answers regarding alpha and beta testing. Hence, most candidates only obtained partial marks from their answers using their general knowledge about testing.

Question 2

The question was related to the Information Systems. Part (*a*) required candidates to name three types of Information Systems, and part (*b*) required candidates to describe those systems. Many candidates were not able to answer this question correctly. This could probably be that those candidates did not memorize the names of the systems correctly. In part (*b*), some candidates were able to describe the information system even if they did not get the name of the system right in part (*a*).

Question 3

This question tested the understanding of the candidates regarding the primary and foreign keys. This was not a memorising type of question. The question required candidates to describe the deliverables of a planning phase. Most of the candidates answered with their own understanding of what they thought the output should be after planning. Some answers were long but without any relevant points. For instance, some candidates explained what happened in the planning phase, or the activities carried out and other general answers regarding system development life cycle (SDLC).

Question 4

The question required candidates to state three structured analysis tools in design phase of SDLC. Many candidates did not get any marks for this question because they only provided general answers. Most candidates answered by giving Gantt chart, waterfall model and etc. which were incorrect.

Question 5

The question asked candidates to explain what are database, database system and database management system. Many candidates were confused between these three terms. Some of the answers given were correct but for the wrong term. Some candidates gave similar answers for all three terms, indicating that they did not understand the difference between the three terms. Very few candidates were able to score high marks for this question.

Question 6

The question required candidates to draw an ER diagram to represent the short case given in the question. Most of the information was given in the case and was quite straightforward. No additional assumption was required. However there was one attribute named "allowance", which should be located at the M:N relationship between EMPLOYEE and PROJECT entity. Almost none of the candidates were able to get this right.

Question 7

This question required candidates to write SQL commands based on three given tables. The required commands were medium in terms of difficulty level. Most of the candidates chose to answer this question instead of Question 6 and most of them were able to score high marks. Most candidate were able to answer parts (*a*), (*b*) and (*c*). Only a few candidates were able to score marks for part (*d*), which required the joining of three tables. Another common mistake made by candidates which resulted in some loss of marks was incomplete or incorrect data type definition in part (*a*).