



MAJLIS PEPERIKSAAN MALAYSIA



# *Laporan Peperiksaan STPM 2018*

## *Information and Communications Technology (958)*





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## *Information and Communications Technology <sup>(958)</sup>*



**SASBADI SDN. BHD.** (139288-X)  
(Anak syarikat milik penuh Sasbadi Holdings Berhad (1022660-T))  
PETALING JAYA



**MAJLIS PEPERIKSAAN MALAYSIA**

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Hak cipta terpelihara. Tidak dibenarkan memetik atau mencetak kembali mana-mana bahagian isi buku ini dalam bentuk apa jua dan dengan cara apa pun, baik secara elektronik, fotokopi, mekanik, rakaman, atau yang lain-lain sebagainya sebelum mendapat izin bertulis daripada Penerbit.

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# INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/1)

## OVERALL PERFORMANCE

In Semester 1, 522 candidates sat for the examination for this subject and 44.83% 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	6.70	2.30	3.07	0.00	10.92	9.58	12.26	10.92	12.45	9.58	22.22

## CANDIDATES' RESPONSES

### *General comments*

An overall performance of the candidates for section A for both ICT and multimedia topics were quite balanced. In section B, candidates performed better in ICT questions (Question 7) as compared to the multimedia question (Question 6). The difficulty level covers from LOT to HOT questions.

### *Comments on the individual questions*

#### **Question 1**

Given a picture, most candidates could identify the type of computer storage. There were candidates who wrongly identified Y as ROM. Furthermore, many candidates also lost their marks when comparing the characteristics between the storage (Q1b).

#### **Question 2**

Most candidates failed to answer the value of two case studies of the Bridging Digital Divide. Instead they gave the target answers for the value answer. There were candidates who misunderstood the value analysis as they answered in the form of monetary value or in numbers.

#### **Question 3**

Many candidates were confused the meaning of “playback” in part (a) by describing on how to replay an online video instead of explaining the word “streaming”. In part (b), most students could answer the question correctly. However it was quite surprising that some candidates described on how to share an online video instead of describing the benefit of online video sharing.

#### **Question 4**

In part (a), most candidates missed the keyword given in (ie. Via telecommunication technology) as most answers given were not based on the keyword given such as thumb drive, CD, etc. In part (b), most candidates could calculate and knew the formula but failed to recognise the difference of unit size (GB, MB, Mbps).

**Question 5**

In part (a) was a recall question, but many candidates forgot the name of the phases and its sequence. The questions in part (b) and (c) could be considered as HOT questions and very few candidates answered it correctly.

**Question 6**

In part (a), the candidates failed to name the principle of animation and in part (b) is the animation techniques. In part (c) the candidates explained the content of the multimedia, instead of the element of the multimedia.

**Question 7**

In part (a), 0 most candidates were able to answer the e-commerce process as they had experienced it themselves. However, in part (b) very few candidates could describe IT related job and in part (c) is its responsibility.

# INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/2)

## OVERALL PERFORMANCE

In Semester 2, 512 candidates sat for the examination for this subject and 58.01% 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	8.40	4.88	7.03	6.25	8.40	6.45	16.60	3.32	5.47	5.27	27.93

## CANDIDATES' RESPONSES

### *General comments*

Most candidates were not able to score the average marks on this question paper except for certain candidates who have skills and understanding in programming. The candidates' answers did not reflect the marking scheme as they did not quite understand about the topic that had been asked. The topics such as function, array and structure really affect the overall marks obtained by the candidates. Generally, many candidates were able to answer on easy questions in C language but not for questions that required analysis and evaluation based on the given problems.

### *Comments on the individual questions*

#### **Question 1**

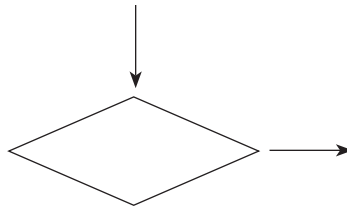
Many candidates gave the answers as required, but a few did not give the correct answer because they were not familiar with the solution hierarchy for mathematical statements with different operators. Candidates needed to replace the values from declaration statement to variable that were given in the mathematical operations. Then, solved the mathematical operations by showing the step-by-step solution until they got the final answers.

#### **Question 2**

For part (a), the candidates did not answer it correctly as this question required the candidates to explain the importance of algorithm in solving computing problems but the given answer was according to appropriate logic, therefore many candidates still at least got a few marks. In part (b), the candidates needed to draw a flow chart according to the statements provided. Candidates needed to use their skills to arrange the symbols correctly and completed the flow chart with the correct arrows from the start to the end. Many candidates at least obtained one mark for successfully drawing the symbols for both start and end. Half of the candidates drew the flow chart accurately and obtained full marks. However, almost 50% of the candidates lost about three marks because they did not draw neatly, either in the form of line that were not connected, left the "Yes" or "No" statements at the choice symbol or only drew a part of the arrow's line which made them lost about half of the marks. The usage of the incorrect symbols also caused the candidates to gain few marks even though they wrote the correct statements on the symbols.

Example:

Not connected and there were no "Yes" or "No" statements



Example:

Incorrect symbols used for "Read.."



### Question 3

This question wanted the candidates to identify the statements that were given in a program. After that, the candidates needed to arrange the given program into program in a form of function main and call function, definition function and then, include function prototype into modified function. The function prototype needed had also been given. Overall, even though this question was quite easy, many candidates could not answer it. Almost 90% of the candidates failed to give the exact answer as they were capable to write "prototype" (given in the question) but did not put it in the right section in the program. The candidates also could not write definition function and call function. Majority of the candidates only rewrote the program given in the question.

### Question 4

In part (a), the candidates needed to write a statement in C to define `struct Chapter` to store the required information. Almost 95% of the candidates failed to give exact answer and obtained zero mark. Part (b) required the candidates to write a statement in C to declare an array `numChapter[10]` for the type `struct Chapter`. Almost 95% of the candidates failed to obtain mark because they lacked of understanding regarding this topic. Part (c) needed the candidates to write a statement in C to count and print the total number of pages in a book. Almost all candidates failed to give the answer according to the marking scheme. They failed to use the correct statement to refer to the data with the type `struct` which made them failed to show the correct operation in the program.

### Question 5

The candidates needed to write a program in C, which required them to find and print odd numbers in an array, and then count the total of the odd numbers. Almost all of the candidates got 1 mark because they could declare array `digit (int digit[10])` and write the statement `main()` but not many could successfully write C programming to determine the odd number such as `(if digit[i]/2==1)`. The candidates' understanding for array topic was really weak. The candidates also failed to refer to the data in an array (`digit[i]`) but used only the word for `digit` in the operation that made the statement inaccurate. An example for the correct answer for totaling the odd numbers was `(totalodd = totalodd + digit[i])`.

### Question 6

In part (a), the question required the candidates to write a statement (`struct birthday`) to store the trainers birthday. Not many candidates could answer struct type question because the candidates were not skilful enough and maybe did not really understand this topic. This question was a bit tricky making the students to write like the following:



```
Example: struct birthDate {
    char names[20];
    int numbers1;
    char gender[2];
    int dateofbirth[9];
    char phone[11]; }
```

while the correct answer was supposed to be like the following:

```
struct birthDate {
    int day;
    int month;
    int year; }
```

As the candidates were confused with the answer in part (a) will led them to fail in answering part (c).

In part (b), the question required the candidates to write a declaration statement for an array 100 dimension for `struct listBirthDate` for type `birthDate` but not many of the candidates could answer it successfully

In part (c), the question required the candidates to write a code segment in C to read the information given for  $n$  trainer using the structure in part (a). The candidates could not obtain any mark as they failed to refer to the data type `struct` especially those who were already confused from the start.

### Question 7

In part (a), the question required the candidates to develop an algorithm to determine `gradePoint` according to grade that were given in the question. Many candidates successfully wrote the algorithm using flow chart or pseudocode and obtained at least  $\frac{1}{2}$  mark for start to end or 3 marks for the correct answers. The flow chart was a bit moderate in terms of the presentation such as in question (2), the drawing was not really neatly drawn as the line of the arrows was not really accurate.

In part (b), the question needed the candidate to write function `getGradePoint` in C to accept grade as parameters, determine grade point using `switch...case` statement and return the values `gradePoint`. Every candidate could write `switch...case` statement but the candidates could not write the function correctly with `return... statement`.

In part (c), the question required the candidates to write a function `main` in C which (i) read  $n$  grade, (ii) obtained the value of grade point for each of the grade and call function `getGradePoint`, (iii) calculate the average grade point and (iv) print grade point. Only a few candidates who could answered this question successfully and got full marks. Almost every candidates got marks from the part of variables declaration. Only the candidates who really understood the function topic could answer this question correctly.

# INFORMATION AND COMMUNICATIONS TECHNOLOGY (958/3)

## OVERALL PERFORMANCE

In Semester 3, 506 candidates sat for the examination for this subject and 54.15% 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	11.07	3.16	3.56	3.36	10.67	8.89	13.44	11.26	12.25	7.51	14.82

## CANDIDATES' RESPONSES

### *General comments*

Overall, the candidates answered the questions accordingly. Most scripts were presentable and understandable. However, it seems that many candidates performed better in answering the “implementation” (Section B, Q6 and Q7) questions rather than the “concept” questions (Section A, Q1 until Q5).

### *Comments on the individual questions*

#### **Question 1**

The question asked for deliverables in the analysis phase. The answer was direct from the syllabus, which were users' requirements, process model, decision table, and data model. However, most candidates could not answer this question. Some answers given were the activities during this phase and some gave generic answers such as “understanding the problem”, “problem statement” and “objectives”. There were also some candidates who did not even attempt to answer it.

#### **Question 2**

The question asked the candidates to draw elements in a data flow diagram. Again, the answer was direct from the notes. Most candidates were not able to answer this question correctly. Some drew the element but were not able to name it and some candidates were confused between the data flow diagram and the ER diagram, and drew elements found in the ER diagram such as the diamond shape.

#### **Question 3**

This question checked the understanding of the candidates regarding primary and foreign keys. This was not a memorizing type of question. This question required the candidates to apply their understanding on primary and foreign keys. The candidates must name the keys from a given table schema and they also had to explain why other attributes were not suitable to become the keys. Most candidates were able to name the keys, however quite a number of candidates were not able to explain why other attributes were not suitable to become the keys.

**Question 4**

This was a concept question. Candidates were asked to explain data redundancy, how it contributed to data inconsistency and what were the consequences of it. Similar with the previous concept question (Q1), most candidates were not able to answer this question.

**Question 5**

The first part of the question was about “techniques” of feasibility study, the second part was on problem statement, and the last part was on Gantt chart. Some candidates were able to answer it and some could not answer it.

**Question 6**

For this question, the candidates were asked to draw an ER diagram to represent the short case given in the question. Most of the information were available in the case and were quite straightforward hence, no additional assumptions were required. Most candidates who chose this question were able to get at least 10 to 15 marks.

**Question 7**

This question required the candidates to write SQL commands based on one specific table. The required commands were quite simple and basic. Again, most candidates who chose this question were able to score at least 10 marks or more.

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