SPM 2010 - ICT

Section A – [36 marks]

Answers **all** questions. Write your answers in the spaces provided on the Answer Sheet. Each answer carries **one** mark.

1. Figure 1 shows three technologies used in the generations of computers.

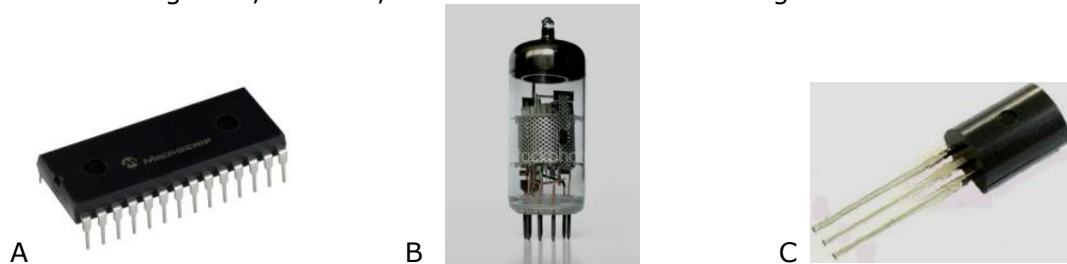   Based on Figure 1, **write** A, B or C to match the following :

   A   B   C

   Figure 1

   (i) Second Generation : _____   (ii) Third Generation : _____

2. **Complete** the following statement :

   Information and Communication Technology is the use of computers,

   (i) _____ devices and (ii) _____ applications for processing, storing, retrieving, protecting and transmitting informationn from anywhere at anytime.

3. Figure 2 show two input devices.

   R   S

   Figure 2

   Based on figure 2, **state** the type of input for :

   (i) R :_____   (ii) S : _____

4. **State** whether the following statement is **True** of **False**

   Secondary storage is an internal memory that can be accessed directly by the processor
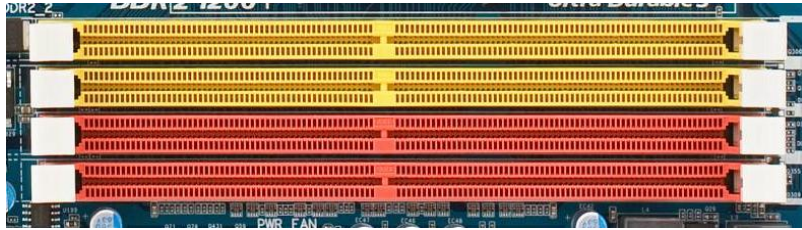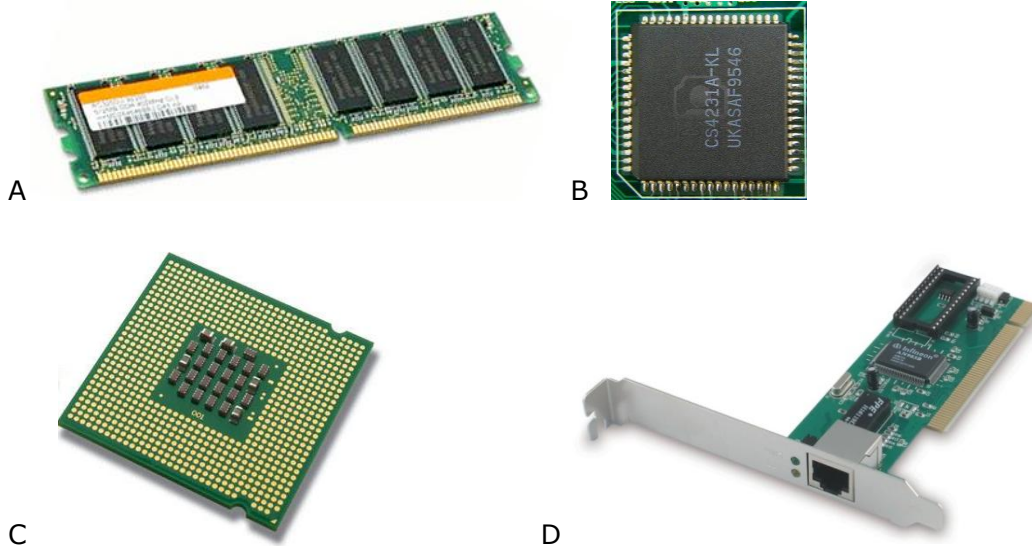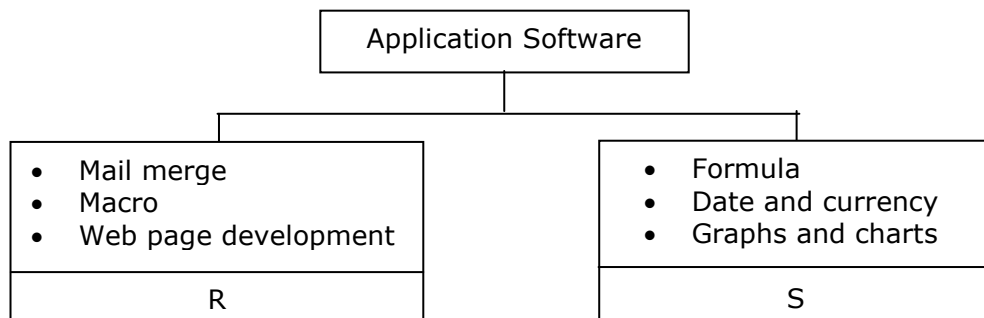
5. Figure 3 shows part of a motherboard

Figure 3

Which of the components can be placed in one of the slots in figure 3

A

B

C

D

6. The following are features in application software

```
                    Application Software
          ┌──────────────────┴──────────────────┐
    • Mail merge                          • Formula
    • Macro                               • Date and currency
    • Web page development                • Graphs and charts

            R                                    S
```
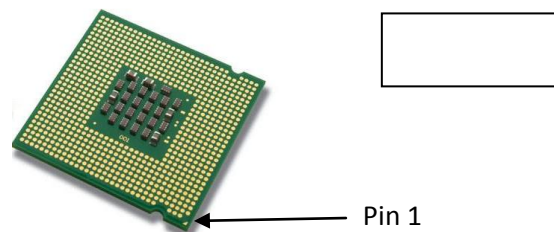
Identify application

(i) R : _____   (i) S : _____

7. **State** whether the following statement is **True** of **False**

When placing CPU onto a ZIF socket, Pin 1, as shown in Figure 4, can be placed at any one of the four corners of the socket.

Pin 1

8. **State** whether the following statement is **True** or **False**

Based on Figure 5, if computer X stops functioning, the entire
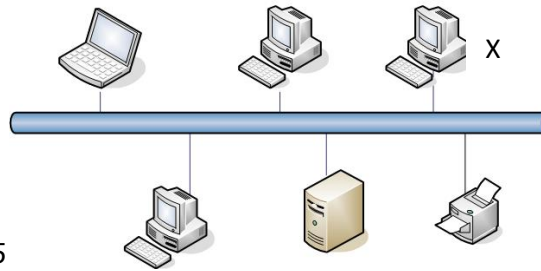network stops

Figure 5

9. **State** whether the following statement is **True** or **False**

Transmission Control Protocol/Internet Protocol (TCP/IP) is the
network standard for Internet Communication

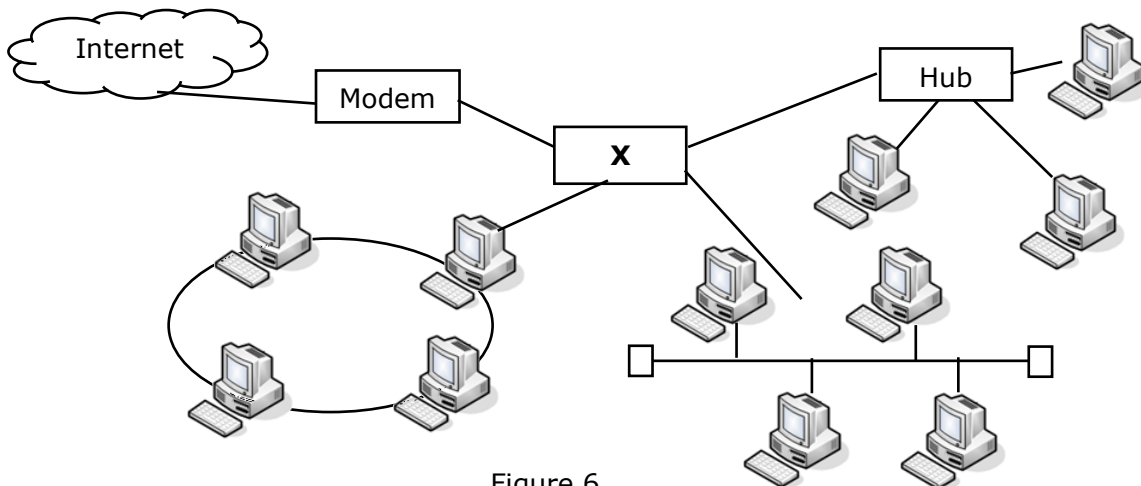10. Figure 6 show the network design used for Batu Nilam Sdn. Bhd.

Figure 6

Based on Figure 6, X can be used on any size of network and transmits data to the
correct destination

State the name of device X : _____

11. **State** whether the following statement is **True** or **False**

Network Operating Systems organise and coordinate multiple
user access and resource sharing on a network.

12. Figure 7 shows the design of two different multimedia presentations.
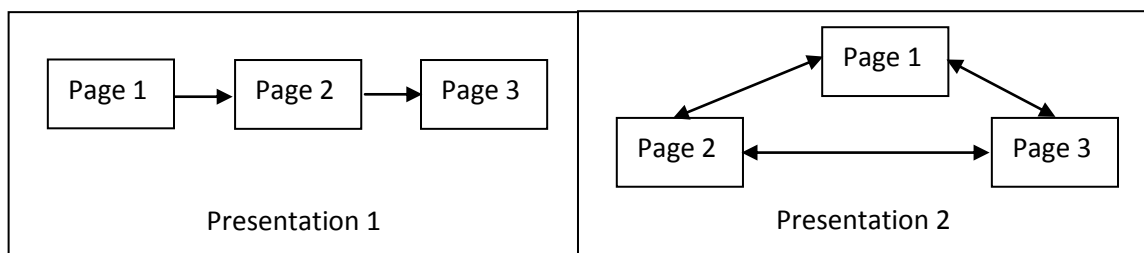
Based on Figure 7, **which** is a linear multimedia presentation ? _____

13. Table 1 shows the files used in developing a multimedia presentation.

Element	Filenames
P	cat.jpg goose.tiff line.bmp
Q	m1.avi p2.mpg c4.mov

Table 1

Based on Table 1, identify the type of file in element:

(i) P : _____ (ii) Q : _____

14. Figure 8 shows a display of a piece of software.

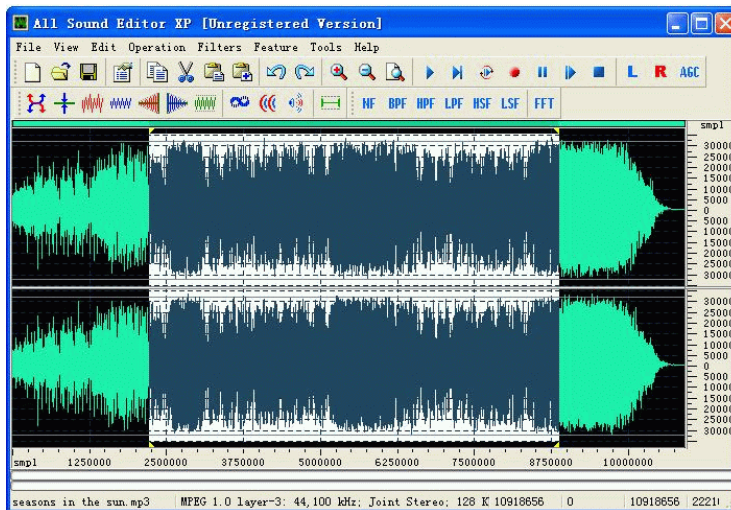

Figure 8

Based on Figure 8, **state** the type of software : _____

15. **Which** of the following are **WYSIWYG** web editors ?

I. Frontpage   II. Notepad

III. Dreamweaver   IV. Internet Explorer
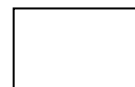
A. I and III   B. I and IV   C. II and III   D. II and IV

16. The following statements refer to tasks carried out in one phase of multimedia production.

> ❖ Take pictures using a digital camera
> ❖ Download pictures from the Internet
> ❖ Edit pictures using an image editor

State the name of the phase. _____

17. Table 2 shows the criteria of two generations of low-level programming languages

X	Human readable notation Use sysmbolic instruction code
Y	Instrcutions can be executed directly by CPU Uses binary number

Table 2

Based on Table 2, **name** the generation of programming language for :

(i) X : _____ (ii) Y : _____

18. Table 3 shows the characteristics of a piece of software, S, is used to run written in a programming language.

S
• Read statement and convert to object code • Execute line by line

Table 3

Based on Table 3, **S**   is _____

A. an assember   B.   a compiler

C. an interpreter   D.   a translator

19. **Write** the correct words to complete the following statement :

During the execution of a program the value of a (i) _____
can be changed the value of a (ii) _____ cannot be changed.

20. Figure 9 shows an incomplete program.

```
Dim Name as X
Dim PI as Y

    Name = "Ali"
    PI = 3.142
```

Figure 9

Based on Figure 9, **identify** :

(i) X : _____ (ii) Y : _____

21. Figure 10(a) and 10 (b) shows partial flowcharts of two programs
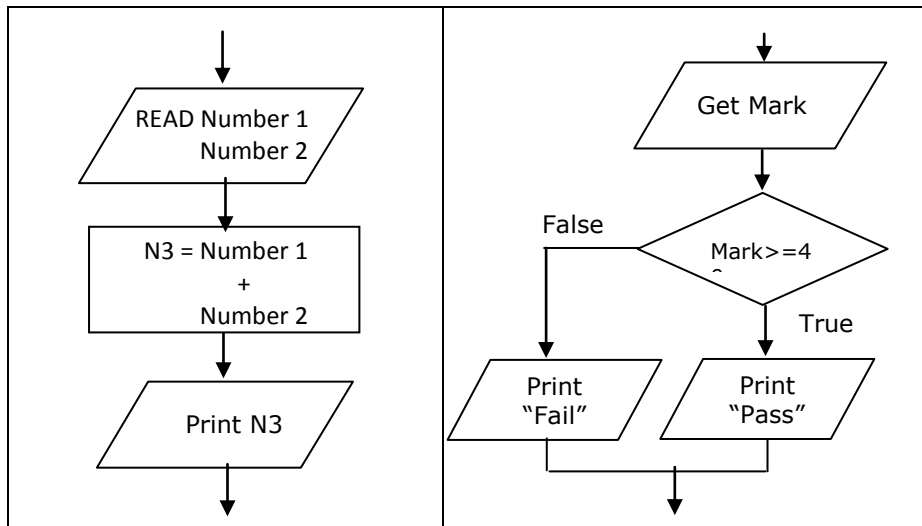
Figure 10 (a)   Figure 10 (b)

Identify the control structure used in :

(i) Figure 10 (a) : _____

(ii) Figure 10 (b) : _____

22. Figure 11 shows the data hierarchy in an information system.
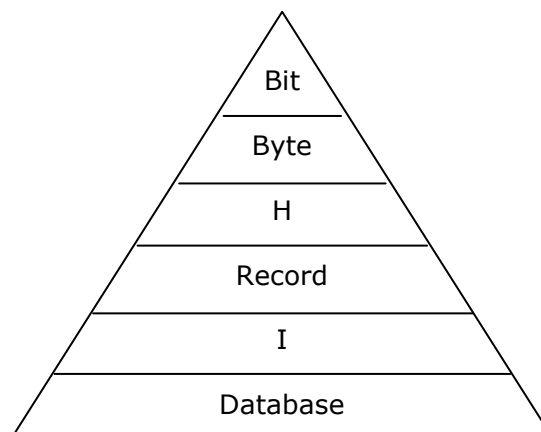
Figure 11

Based on figure 11, **state** the name of :

(i) H : _____   (ii) I : _____

23. **Complete** the following statement:

A group of programs that allows users to add, update, access, manage and analyse the contents of a database is known as a _____

24. Figure 12 shows the relationship between two tables of an information system

STUDENT	CLASS
Student ID Name Gender Class ID	Class ID Location
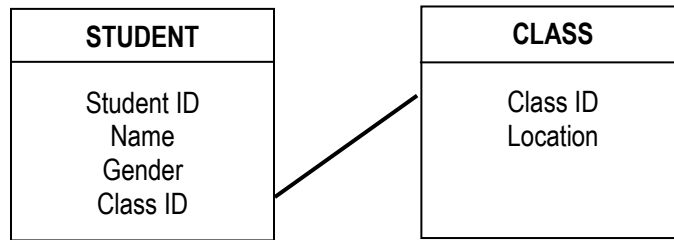
Figure 12

Based of Figure 12, from STUDENT table, **state** the function of :

(i) primary key

_____

_____

_____

(ii) foreign key

_____

_____

_____

25. Figure 13 shows a database screen

Student ID	S007	
Student	SUSILA A/P RAMASAMY	
Gender	FEMALE	Photo
MyKad Number	901111-00-5122	
Address	67, JALAN LABU LABI	
Email Address	rafas09@yahoo.com	
Tel Number	07-33432555	

⏮ ◀ ▶ ⏭   Add   Find   Delete

Figure 13

Based on Figure 13, **which** of the following describes the screen?

A. Form   B. Switchboard   C. Report   D. Design view

Section B [20 marks] - Answer **all** questions.

26. Figure 14 is a pie chart showing how students of SMK Taman Gembira communicate with their friends.
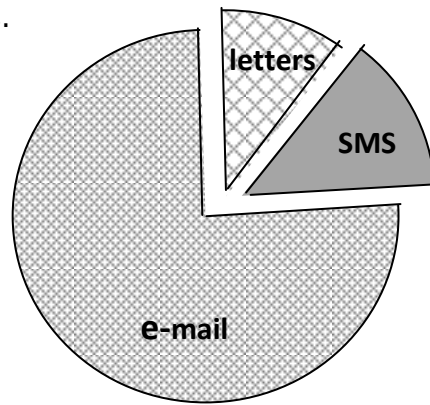
Figure 14

Based on Figure 14 :

(a) **State** one reason why the students choose email to letters

_____

(b) **State** three reason why email is better than Short Messaging System using handphone.

_____

_____

_____

27. Figure 15 shows a user interface of a program used in Holborn Restaurant to calculate the yearly bonus for their employees. The employees who have been working for at least three years will be given a bonus of RM1 000.

Program to Calculate Yearly Bonus	
Employee Name	Zaki Abdullah
Employee's ID	E 0435
Identity Card No	721011-00-0043
Year of experience >= 3 years	◯ Yes ⦿ No
Compute Bonus	Bonus : RM **0.00**

Based on Figure 15 :

(a) **State** an appropriate data type for the variable 'Identity Card No.'

_____

State one reason for your answer

_____

(b) **Identify** the control structure used in the program

_____

Justify your answer

_____

28. Figure 16 shows the location of the headquartes and branches of Company X. Company Z is a customer of Branch R.

Branch P
Phuket

Branch C
Ipoh

Headquarters
Kuala Lumpur

Branch R
Kota Kinabalu
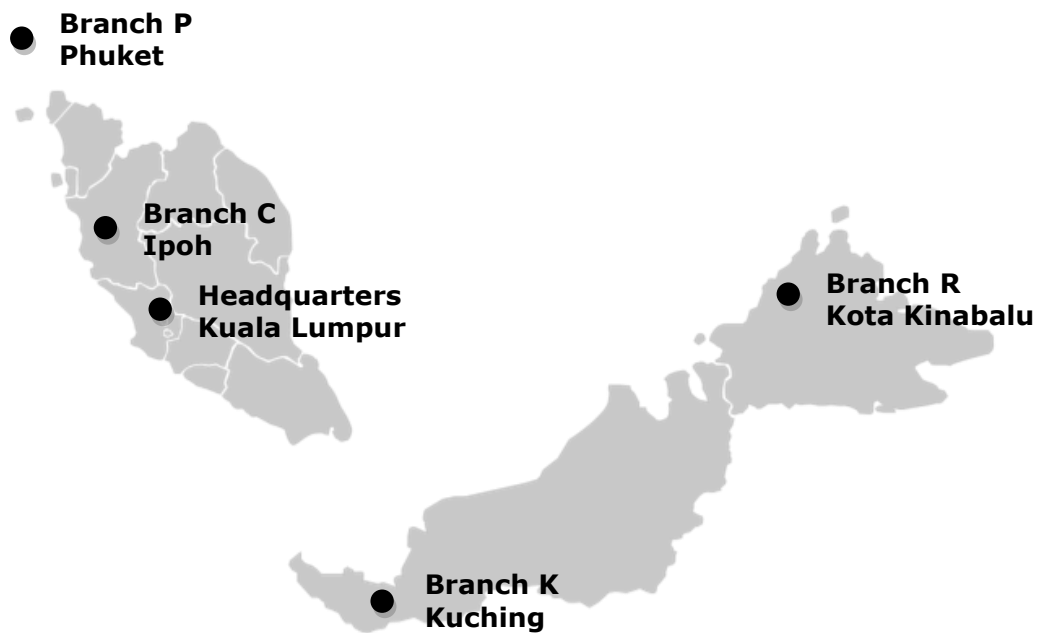
Branch K
Kuching

Figure 16

Based on Figure 16

(a) **Explain** the type of network for Company X to connect its **headquarters** with all its branches.

_____

_____

_____

(b) (i) **Suggest** the type of private network communication technology to be used between Branch R and Companay Z

_____

   (ii) **Justify** your answer

_____

_____

29. Figure 17 shows a web page in a web editor

Figure 17

Based on Figure 17 :

(a) **State** two advantages of using this type of web editor.

_____

_____

_____

_____

(b) Based on user interface principles, **give two** modifications which would improve the design

_____

_____

_____

_____

_____

_____

30. Figure 18 shows the interrelation of five main components of an online ticketing system for a cinema.

```
                        ┌─────────────────────┐
                        │    COMPONENT A      │
                        │                     │
                        │     Customer        │
                        └─────────────────────┘

┌─────────────────────┐                         ┌─────────────────────┐
│    COMPONENT B      │                         │    COMPONENT C      │
│                     │◄──────────────────────►│                     │
│ _____   │                         │ _____   │
└─────────────────────┘                         └─────────────────────┘

┌─────────────────────┐                         ┌─────────────────────┐
│    COMPONENT D      │                         │    COMPONENT  E     │
│                     │                         │                     │
│ Customer's name,    │◄──────────────────────►│     User guide      │
│ identity card       │                         │                     │
│ number, credit card │                         │                     │
│ number, date        │                         │                     │
└─────────────────────┘                         └─────────────────────┘
```
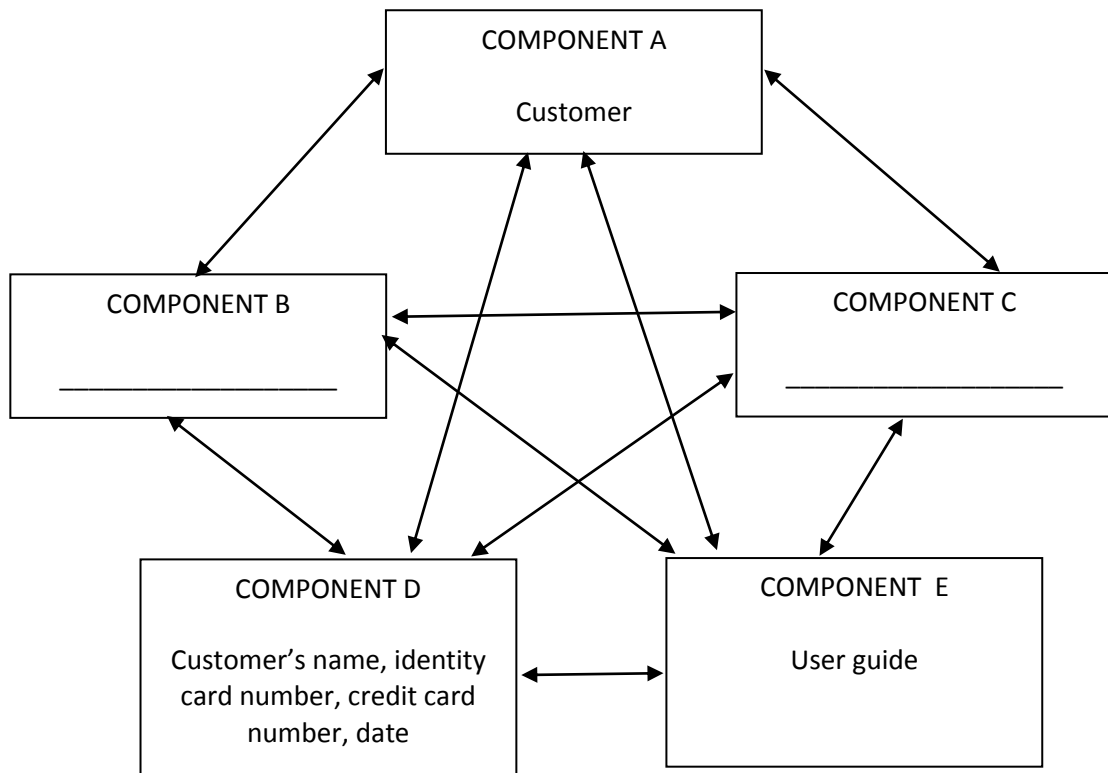
Figure 18

Based on Figure 18 :

(a) **State** one example of component:

(i) B : _____ (ii) C : _____

(b) **Describe** the interrelation between Component A and Component E.

_____

_____

_____

_____

Section C – [14 marks]

Answer two questions only.
(i) **Question 31** and   (ii) Either **Question 32** or **Question 33.**

31. Figure 19 shows the user interface of a program to calculate monthly income of a car salesman in Friendly Car Company Sdn. Bhd. The monthly income is the total of a basic salary and 5% commision of his monthly sales.

```
┌─────────────────────────────────────────┐
│         Friendly Car Company            │
│      Monthly Income of Salesman         │
│  ─────────────────────────────────────  │
│                                         │
│   Name of Salesman   [            ]     │
│                                         │
│   Basic Salary       [            ]     │
│                                         │
│   Monthly Sales      [            ]     │
│                                         │
│              [    Calculate    ]        │
│                                         │
│   Monthly Income     [            ]     │
│                                         │
│   [   Reset   ]      [    Exit    ]     │
│                                         │
└─────────────────────────────────────────┘
```

Figure 19

Based of Figure 19, **draw** a complete flow chart of the program which includes a formula to calculate the commision and the monthly income.
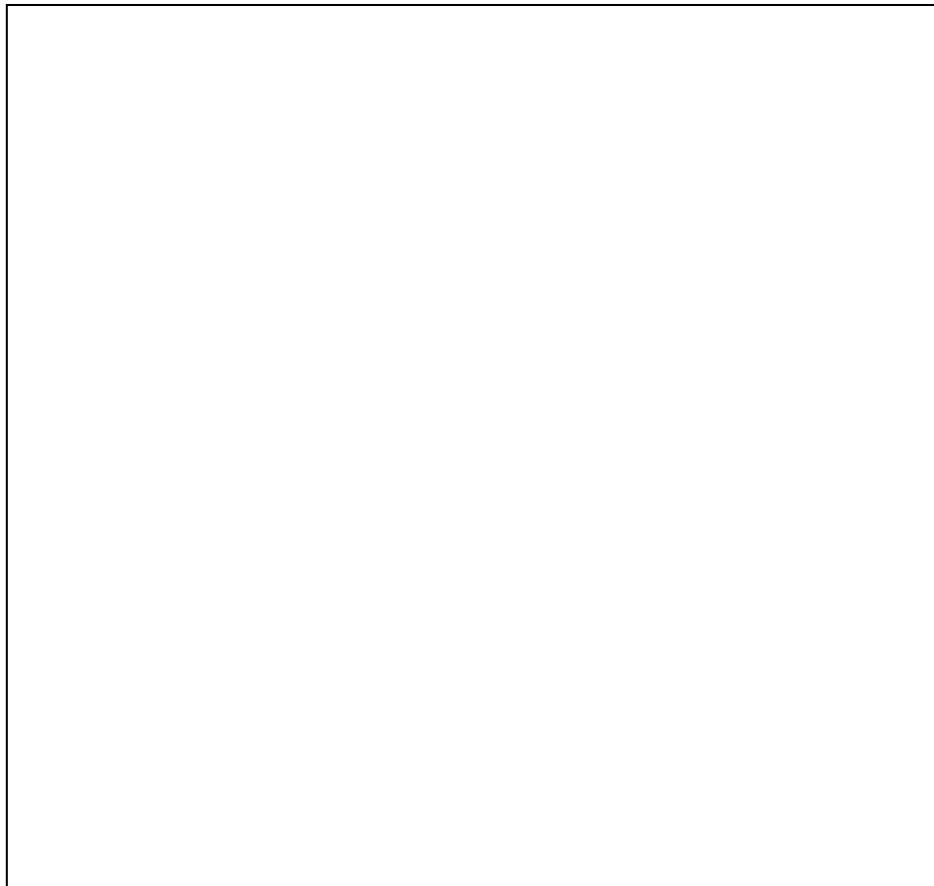
32. Figure 20 shows symptoms of a computer problem

> Screen displays unsual messages
>
> Files become corrupted
>
> Files mysteriously appear

Figure 20

Based on figure 20 :

(a) **Identify** the type of computer threat which mathces the symptoms

_____

State two different examples of the threat

_____

_____

_____

_____

(b) **Describe** two reasons why the computer may have been affected by the threat in (a)

_____

_____

_____

_____

_____

_____

Suggest two ways to prevent it

_____

_____

33. Table 4 shows text and grading range for all subjects in Sekolah Menengah Kebangsaan Pelita

Sekolah Menengah Kebangsaan Pelita requests a group of students to develop a School Examination Information System (SEIS). Ahmad is given the task of program analysis and Ravi is given program testing and debugging. The grading rang for all subjects in the school is shown in Table 4

Range of marks	Grade
80-100	A
70-79	B
60-69	C
50-59	D
40-49	E
0 - 39	G

Table 4

Based on the text

(a) **State** four activities which will be performed by Ahmad in program analysis.

_____

_____

_____

_____

(b) Ravi tested the system and entered the mark 69 and the output is grade D.

    (i) **What** type of **error** is this ?

    _____

    (ii) **Justify** your answer.

    _____

    _____

    _____

    _____