

SULIT



**BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENGAJIAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN MALAYSIA**

JABATAN PENGAJIAN AM

PEPERIKSAAN AKHIR

SESI 1 2018/ 2019

BUE3033 : ENGLISH FOR ENGINEERING & TECHNOLOGY

TARIKH : 09 JANUARI 2019

MASA : 9.00 PAGI – 12.00 TENGAH HARI (3 JAM)

Kertas ini mengandungi **LAPAN (8)** halaman bercetak.

Bahagian A: Struktur (4 soalan)

Bahagian B: Esei (2 soalan)

Dokumen sokongan yang disertakan : Tiada

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

SECTION A: 40 MARKS

INSTRUCTION:

This section consists of **FOUR (4)** structured questions. Answer all the questions in the provided answer booklet.

CLO1
C2

QUESTION 1

1. Evaporator
Cooling coils remove heat and humidity from the air using refrigerant.

2. Blower
A blower (or fan) circulates air over the evaporator, dispersing the chilled air.

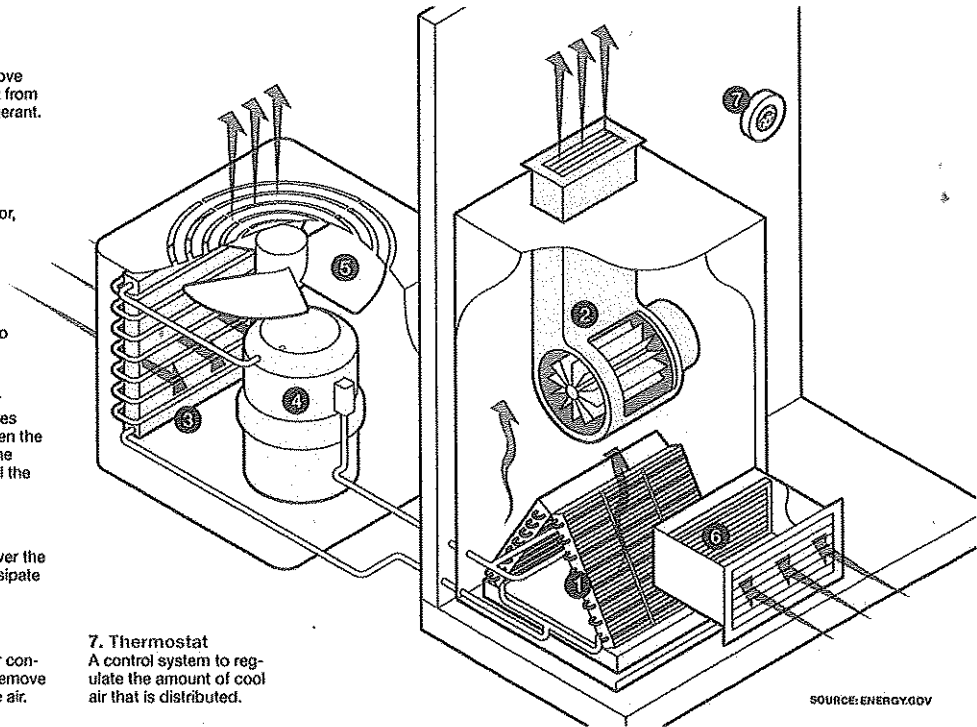
3. Condenser
Hot coils release collected heat into the outside air.

4. Compressor
A pump that moves refrigerant between the evaporator and the condenser to chill the indoor air.

5. Fan
A fan blows air over the condenser to dissipate the heat outside.

6. Filter
Located in the air conditioning unit to remove particles from the air.

7. Thermostat
A control system to regulate the amount of cool air that is distributed.



The diagram above illustrates how an Air Conditioner works. Describe the process by using passive sentences.

1. _____ (2 marks)
2. Air over the evaporator is circulated by a blower, dispersing the chilled air
3. _____ (2 marks)
4. _____ (2 marks)
5. _____ (2 marks)
6. Particles are removed from the air using filter located in the air conditioning unit.
7. _____ (2 marks)

(10 marks)

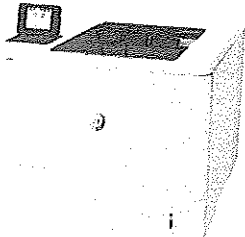
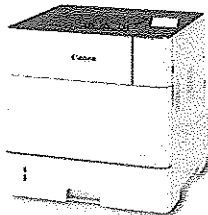
CLO3
C3

QUESTION 2

You are the purchasing officer for SkiTarii Sdn Bhd and your company plans to purchase a new laser printing machine. Read the following specifications and recommend one of these laser printing machines for your company.

- i) State your selection and provide **FIVE** reasons for your choice.

(10 marks)

 <p style="text-align: center;">Hewlett Packard HP LaserJet Enterprise M607dn RM 5,199.00</p>	 <p style="text-align: center;">CANON imageCLASS LBP351x RM 5,526.00</p>
<p>Features:</p> <ul style="list-style-type: none"> • Print A4size Monochrome • Print/copy speed: up to 43 ppm • First Paper Out Time (printer performance) FPOT (A4): 5.4secs. • Input capacity: 650 sheets (standard), Max. paper input capacity: Up to 4400 sheets • Print Resolution: Up to 1200 x 1200 dpi (equivalent) • Secure Print with reboot able system • Mobile printing capability: Print using mobile apps • 3 Years Next Business Day Onsite Hardware Support and Defective Media Retention 	<p>Features:</p> <ul style="list-style-type: none"> • Print A4size Monochrome • Print Speed (A4): Up to 55ppm • First Paper Out Time (printer performance) FPOT (A4): 7.2secs. • Input capacity: 500 sheets (standard) Max. paper input capacity: Up to 3,600 sheets • Print Resolution: Up to 1200 x 1200dpi (equivalent) • Support Multiple Printing Environments can be shared in any network environment, capable of handling the most demanding workload • Secure Print • All-in-One Cartridge System • Mobile Printing Solutions: Print using mobile apps • Won 'Design Award 2017'

Questions 3 and 4 refer to the situation given below.

QUESTION 3

CLO4
C3

Read and understand the situation below.

In the last 3 years, Renaissance Sdn. Bhd., a local producing automotive company had failed to increase its sales as well as its production. The executive teams have discussed options to ensure the company keeps on remaining and maintaining itself as an active competitor in the local automobile industry. One of the proposed options is reducing the production sections of the company. They had already stated that the company does not desire to develop and produce any new model of cars in the nearest future. An assigned external consultant had come out with suggestions on ways to be done on certain sections or units that need to be shut down to reduce the size of the department and maintain its competitiveness. Use the information in the given table below to support the suggestions based on the operation feasibility.

Table 1: Function and status for sections at Renaissance Sdn. Bhd.

Section	Function	Status
R&D unit	Design new product	Quite Active – conduct research for improvement
Innovation unit	Innovate with the current product	Have been dormant – not one innovation has been produced for the last 4 years
Workshop A	Production line 1	Highly active – main production line
Workshop B	Production line 2	Very active – secondary production line
Workshop C	Production line 3	Rarely active – support Workshop A but closed on weekends and public holidays, operate only 3 days per week
Workshop D	Production line 4	Hardly active – support Workshop B at a time when needed to speed up production
Warehouse	Storage for complete assembled products	Very active – store the products before transporting to sale outlets

Provide the suggestions based on importance; i.e. which unit or section is considered least important and should be closed immediately. You are required to give 4 suggestions with reasons.

Operation Feasibility

Suggestion 1

Reason

(2.5 marks)

Suggestion 2

Reason

(2.5 marks)

Suggestion 3

Reason

(2.5 marks)

SECTION B: 60 MARKSCLO3
C4

This section contains 2 essay questions. Answer both questions in the provided answer booklet.

QUESTION 1**WHAT'S THE DIFFERENCE BETWEEN A GAS AND ELECTRIC FURNACE?**

Since furnaces first came into existence, they have used many different fuel sources. The earliest modern furnaces in homes and businesses relied on wood or coal. Over time, furnaces became cleaner, more refined, and more efficient. Most contemporary furnaces use natural gas, electricity, or propane. Propane has started to fade, however, with many homes converting over to gas.

If you are considering a furnace for your home for the coming winter, your choice will most likely come down to gas or electric.

In this post, we'll explain some of the differences between the two to help you make a choice. Both have advantages and disadvantages, but since your home has specific heating needs (as well as fuel availability), you should turn to professionals to help you make the final decision and then install your new system.

However, the way they generate that heat is where the differences appear.

When the thermostat signals to a gas furnace that it needs heat, a silicon nitride igniter activates the gas-powered burners. Gas jets ignite and create heat in a combustion chamber. The heat transfers to the air through a heat exchanger. Air blows around and through the heat exchanger (usually a series of steel chambers), and this heated air then gets picked up by the blower fans and sent into the ductwork.

The two furnaces share a distribution system: blower fans that move heated air through ducts and out vents into your home.

An electric-powered furnace doesn't have burners or a combustion chamber: instead, the cabinet contains an array of heating elements, which are sets of electric coils that burn hot when current runs through them.

The more heat the thermostat requires, the more heating elements will turn on. The blower fans then distribute the air warmed from the heating elements.

Electric furnaces have the advantages of lower initial installation costs and generally smaller sizes.

If your home doesn't have a gas line, an electric furnace is usually the best option. Electric furnaces also have no safety issues from potential gas leaks. However, natural gas furnaces tend to cost less to run because gas is a cheaper energy source than electricity, and they usually provide more effective and even heating.

- i) Write the information given above by discussing on the similarities and differences of these furnaces.
- (20 marks)
- ii) Draw a table to show on the advantages and disadvantages of these furnaces.
- (10 marks
(30 marks)

CLO4
C5

QUESTION 2

You are the officer in charge of Safety and Occupational Health and Hazards at a manufacturing plant named Tanjat Core Sdn. Bhd. You have been told by the owner of the plant Mr. Takterdon San to examine the problems related to the safety at the plant. Describe in detail the three main problems that you have identified:

- Available two exit doors yet blocked with broken machines of the plant- dangerous in case of sudden fire and in need of immediate evacuation.
- Poor indoor air quality- too noisy, insufficient air cooler and blower to control temperature and air circulation
- Workers lacked safety awareness-handled machines without adhering and following to machine handling SOPs.

First decide what type of report that you are to prepare and addressed it to Mr. Takterdone San. Your report should discuss on how the problems mentioned above might affect the occupational safety and health of the plant workers and give recommendations on how best to overcome these highlighted problems.

(30 marks)

SOALAN TAMAT