INSTRUCTION:
This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:
*Bahagian ini mengandungi **EMPAT (4)** soalan struktur. Jawab **SEMUA** soalan.*

QUESTION 1
SOALAN 1

CLO1
C2

(a)   If you want to set up a textile testing room, describe the importance of controlling the temperature and its relative humidity. Name the instrument used to measure temperature and relative humidity.

Sekiranya anda ingin menyediakan bilik pengujian teksti, gambarkan kepentingan mengawal suhu and kelembapan relatif. Namakan alat yang digunakan untuk mengukur suhu dan kelembapan relative.

[8 marks]

[8 *markah*]

CLO1
C3

(b) i. Interpret the meaning of sampling in textile testing and why is it important to do it before doing a test?

Tafsirkan definisi sampel dalam pengujian tekstil dan mengapa ia penting untuk dilakukan sebelum melakukan pengujian?

[4 marks]

[4 *markah*]

ii. Solve the results from Table 1 of yarn grading testing by finding the value of mean, mode and median.

Selesaikan keputusan dari Jadual 1, pengujian pengredan yarn dengan mencari nilai min, mod dan median.

Test	Grade
1	B
2	C
3	C

4	D
5	B
6	A
7	B
8	B

Table 1 / *Jadual 1*

[8 marks]

[8 *markah*]

CLO1
C4

(c) According to Figure 1, summarize the pattern of the data distribution between bell curve A and bell curve B based on standard deviation and variation of data. Which is the most preferred data for the test result?

Berdasarkan Rajah 1, ringkaskan corak taburan data diantara kurva lonceng A dengan kurva lonceng B berdasarkan sisihan piawai dan variasi data. Yang mana merupakan taburan pilihan dalam keputusan pengujian?
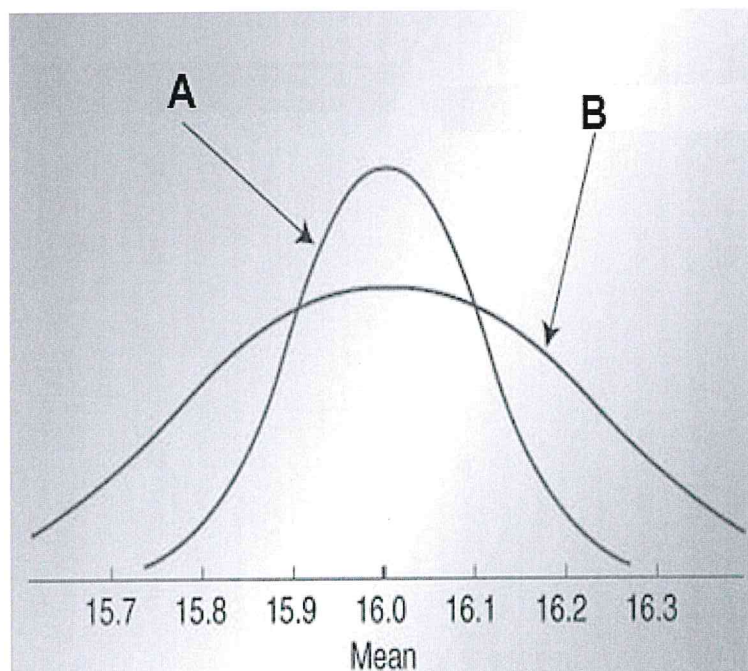

Figure 1 / *Rajah 1*

[5 marks]

[5 *markah*]

QUESTION 2
SOALAN 2

CLO1
C1

(a)   Describe the usage of mini rapid regain tester and its procedure.

Gambarkan penggunaan alat pengujian mini rapid regain dan prosedur

penggunaannya.

[5 marks]

[5 *markah*]

CLO1
C3

(b)   Based on Figure 2, predict a suitable fibre testing method in order to find the fibre

length without using any equipment. Write the procedure and determine the value of

the fibre length.

Berdasarkan Rajah 2, ramalkan kaedah pengujian serat sesuai untuk mencari

panjang serat tanpa menggunakan peralatan. Tulis prosedur dan tentukan nilai
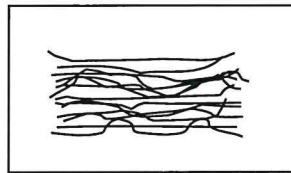
panjang serat tersebut.

Figure 2 / *Rajah 2*

[9 marks]

[9 *markah*]

CLO1
C4

(c)   Based on Figure 3, analyse each comb sorter diagram to determine the best producer

according to the fibres properties. State **THREE (3)** characters used during the

analysing of the diagram.

Berdasarkan Rajah 3, analisa setiap diagram comb sorter untuk menentukan

*pengeluar terbaik berdasarkan sifat serat. Nyatakan **TIGA (3)** karakter yang*

digunakan semasa menganalisa diagram tersebut.

Indian - Native   Egyptian

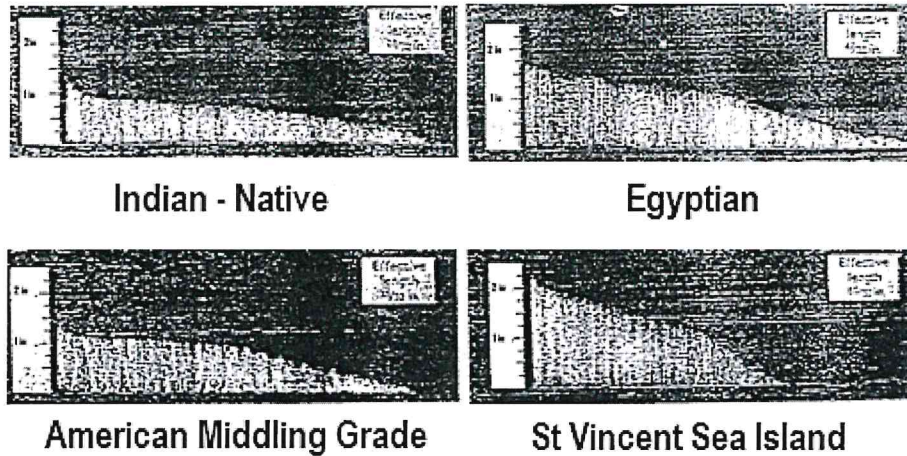American Middling Grade   St Vincent Sea Island

Figure 3 / *Rajah* 3

[6 marks]

[6 *markah*]

CLO1
C5

(d) Determine the percentage of mature fibres, N if the number of mature fibers is 74 while the total number of examines is 108.

Tentukan peratus serat matang, N sekiranya jumlah serat matang ialah 74 sementara jumlah serat diperiksa ialah 108.

[5 marks]

[5 *markah*]

QUESTION 3
SOALAN 3

CLO1
C2

(a) i. Describe the importance of yarn testing.

Gambarkan kepentingan pengujian yarn.

[2 marks]

[2 *markah*]

CLO1
C2

ii. According to figure 4, the sample from warp yarn comes from only two warp strips compared to 5 weft strips direction with each strips sufficient for 50 threads. Explain why the procedure is necessary.

Berdasarkan Rajah 4, sampel dari yarn warp datang hanya dari dua jalur arah warp berbanding 5 jalur arah weft dengan setiap jalur mencukupi 50 benang. Terangkan mengapa prosedur tersebut perlu.
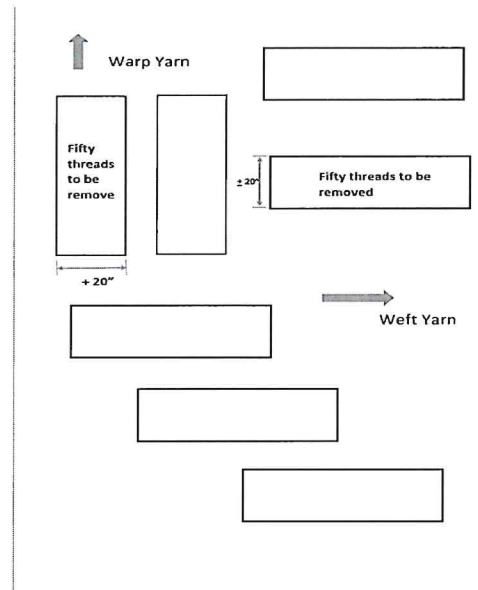

Figure 4 / *Rajah 4*

[6 marks]

[6 *markah*]

CLO1
C3

(b) Sketch with explanation the sequence for burning test observation in fibres identification test.

Lakarkan bersama penerangan turutan untuk pemerhatian pengujian pembakaran dalam pengujian pengenalpastian serat.

[12 marks]

[12 *markah*]

CLO1
C3

(c) Based on Figure 5, compare **THREE (3)** different properties between 250 denier viscose yarn with 30 denier nylon yarn.

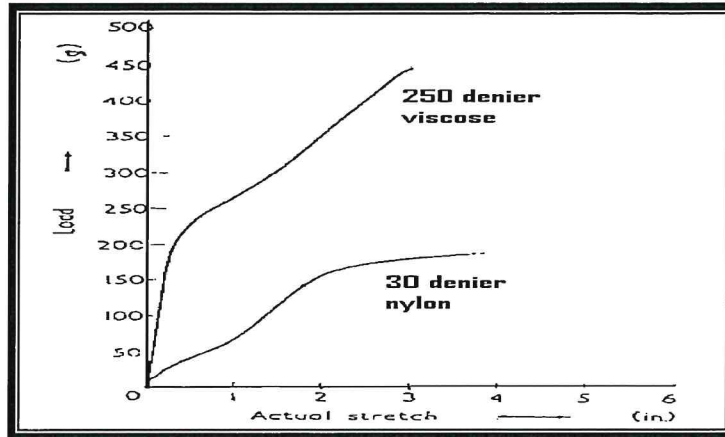*Berdasarkan Rajah 5, bandingkan TIGA (3) sifat berbeza diantara 250 denier yarn viskos dengan 30 denier yarn nilon.*

Figure 5 / *Rajah 5*

[5 marks]

[5 *markah*]

QUESTION 4
SOALAN 4

CLO1
C2

(a)   i. Give **TWO (2)** types of fabric sampling.

*Berikan **DUA (2)** jenis persampelan fabrik.*

[2 marks]

[2 *markah*]

CLO1
C2

ii. Identify the difference in fabric sampling for breaking strength test between strip

test and grab test.

Kenalpasti perbezaan dalam persampelan fabric untuk pengujian kekuatan pecahan

diantara pengujian leraian dan pengujian gengaman.

[6 marks]

[6 *markah*]

CLO1
C3

(b)   i. Interpret the meaning of:

1. Fabric abrasion

2. Fabric tensile strength

3. Fabric analysis

Tafsirkan maksud:

1. Pelelasan fabrik

SULIT

2. *Kekuatan tensil fabrik*

3. *Analisa fabrik*

[6 marks]

[6 *markah*]

CLO1
C3

ii. Write the formula for:

1. Fabric density

2. Fabric weight

3. Fabric shrinkage

Tuliskan formula untuk:

1. *Ketumpatan fabrik*

2. *Berat fabrik*

3. *Pengecutan fabrik*

[6 marks]

[6 *markah*]

CLO1
C4

(c)   Analyze the result according to AATCC Standard Spray Test Rating for water repellent test as shown in Figure 6 and explain the condition of the fabric.

Analisa keputusan berdasarkan piawaian pengujian penarafan AATCC untuk pengujian rintangan terhadap air seperti Rajah 6 dan terangkan keadaan fabrik tersebut.
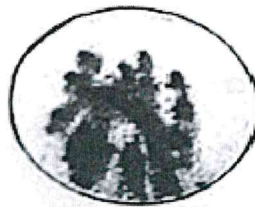

Figure 6 / *Rajah 6*

[5 marks]

[5 *markah*]

SOALAN TAMAT