

**INSTRUCTIONS:**

This section consists of **FOUR (4)** essay questions. Answer all questions.

**ARAHAN:**

*Bahagian ini mengandungi EMPAT (4) soalan esei. Jawab semua soalan.*

**QUESTION 1****SOALAN 1**

- CLO1  
C1 (a) List **FIVE (5)** properties of staple yarn.  
*Senaraikan LIMA (5) sifat – sifat bagi yarn staple.*
- [5 marks]  
[5 markah]
- CLO1  
C2 (b) Describe **THREE (3)** factors which contribute to the irregularities of yarn in yarn making condenser process.  
*Terangkan TIGA (3) faktor yang menyumbang kepada ketidakseragaman yarn dalam yarn making condenser.*
- [6 marks]  
[6 markah]
- CLO1  
C3 (c) Draw **THREE (3)** types of graphs produced in irregularities of spun yarn.  
*Lakarkan TIGA (3) bentuk graf yang terbentuk dalam ketidakseragaman spun yarn.*
- [6 marks]  
[6 markah]
- CLO1  
C3 (d) Explain the process of Drafting Wave by using an appropriate diagram.  
*Terangkan proses Drafting Wave menggunakan gambarajah yang sesuai.*
- [8 marks]  
[8 markah]

**QUESTION 2**  
**SOALAN 2**

- CLO1  
C1 (a) Combing preparation process is essential before combing. Indicate the importance of doing the preparation.  
*Proses penyediaan combing penting sebelum proses combing. Nyatakan kepentingan melakukan proses persediaan ini.*
- [4 marks]  
[4 markah]
- CLO1  
C2 (b) Explain the function of hook in trailing and leading direction in combing preparation process.  
*Terangkan fungsi keadaan hook dalam keadaan trailing dan leading pada proses persediaan combing.*
- [4 marks]  
[4 markah]
- CLO1  
C3 (c) Blending process is done in order to get the suitable properties of the end product and also to control the production cost without sacrificing the yarn quality. As a manufacturer, explain what are the factors you should consider before doing a blending process.  
*Proses percampuran dilakukan bagi mendapatkan ciri-ciri yang sesuai bagi sesuatu produk akhir juga bagi mengawal kos pengeluaran tanpa mengorbankan kualiti sesuatu yarn. Sebagai seorang pengeluar, terangkan apakah faktor yang perlu diambil kira sebelum melakukan proses percampuran.*
- [8 marks]  
[8 markah]
- CLO1  
C4 (d) Discuss **THREE (3)** mechanisms in combing operations.  
*Bincangkan **TIGA (3)** mekanisma di dalam operasi combing.*
- [9 marks]  
[9 markah]

**QUESTION 3**  
**SOALAN 3**

- CLO1  
C1 (a) Define the word tow.  
*Definisikan perkataan tow.*
- [3 marks]  
[3 markah]
- CLO1  
C2 (b) Wet spinning is one of the methods in producing filament. Explain how the method is done. Support your explanation with a simple diagram of the process.  
*Perspinan basah adalah salah satu kaedah penghasilan filament. Terangkan bagaimana proses ini dijalankan berserta gambarajah.*
- [6 marks]  
[6 markah]
- CLO1  
C2 (c) Describe **TWO (2)** methods of converting tow filament to top filament.  
*Terangkan DUA (2) kaedah menukarkan filament tow kepada top.*
- [6 marks]  
[6 markah]
- CLO1  
C3 (d) Diagram 4 shows a method of converting tow to top. Interpret how the method takes place.  
*Rajah 4 menunjukkan kaedah menukar tow kepada top. Huraikan bagaimana kaedah itu dijalankan.*

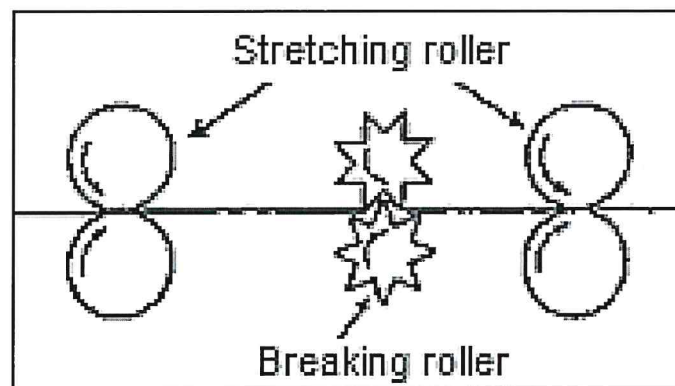


Diagram 4 / Rajah 4

[10 marks]  
[10 markah]

**QUESTION 4**  
**SOALAN 4**

- CLO2  
C1 (a) List **THREE (3)** imperial units for length measurements in yarn manufacturing.  
*Senaraikan TIGA (3) unit imperial bagi ukuran panjang di dalam penghasilan yarn.*  
[3 marks]  
[3 markah]
- CLO2  
C1 (b) A yarn with a length of 500m weighs 3.5g. State the yarn count in tex.  
*Satu yarn mempunyai panjang 500m dan beratnya 3.5g. Nyatakan yarn count tersebut dalam tex.*  
[4 marks]  
[4 markah]
- CLO2  
C2 (c) You are given two yarns with different sizes; Nm40 and 40tex. The two yarns are described in different yarn numbering systems. Discuss the two systems and state which systems does Nm40 and 40tex belongs to.  
*Anda diberikan dua yarn yang berlainan saiz iaitu Nm40 dan 40tex. Kedua-dua yarn tersebut dikelaskan menggunakan sistem penomboran yarn yang berbeza. Bincangkan kedua-dua sistem tersebut dan nyatakan Nm40 dan 40tex di dalam sistem mana.*  
[10 marks]  
[10 markah]
- CLO2  
C3 (d) The open end spinning machine produces 25200 yards of yarn per 1 pound. Find the size of the yarn in denier.  
*Sebuah mesin open end spinning mengeluarkan yarn sepanjang 25200 ela dalam 1 pound. Dapatkan saiz yarn yang dikeluarkan dalam unit denier.*  
[8 marks]  
[8 markah]

**SOALAN TAMAT**