

**ADVANCED DIPLOMA IN KNITWEAR STUDIES AND MERCHANDISING**

**Examination Paper**

1<sup>ST</sup> Term 2015

Module Name: 327  
Module Code: Knitting Technology and Design  
Date: 10 Mar 2015  
Time Allowed: **3 hours**  
Reading Time: **15 minutes**  
Examination Time: **7:15pm – 10:15pm**

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This question paper has 4 pages (including this page).

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**INSTRUCTION TO CANDIDATES:**

- This paper has A and B sections with **EIGHT (8)** questions.
  - Section A is composed of Question 1 to Question 4.
  - Section B is composed of Question 5 to Question 8.
  - Answer **FIVE (5)** questions, at least **ONE (1)** question from each section.
  - Please answer **Section A and Section B** in two **separate** answer books.
  - All questions carry equal marks.
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The following tools with an asterisk (\*) are **NOT ALLOWED** in the examination:

- Paperback Dictionary \*
- Electronic Dictionary \*
- Open Book Examination Material \*
- Programmable Calculator \*

**DO NOT TURN OVER THE PAGE UNTIL YOU ARE TOLD TO DO SO**

## Section A

### Question 1 to Question 4

Choose at least ONE question

#### Question 1

- (a) The basic element of knitted fabric is a loop. Illustrate by drawing, **(10 %)**
- i) technical face and
  - ii) technical back.
- (b) Illustrate by a schematic diagram the five major stages of the loop forming cycle of a latch needle. Explain each stage. **(60 %)**
- (c) Explain how the loop forming cycle can be modified to form a tuck stitch. **(30 %)**

#### Question 2

What are functions of the followings on a flat knitting machine:

- i) needle bed **(10 %)**
- ii) yarn carrier **(10 %)**
- iii) raising cam **(10 %)**
- iv) stitch cam **(10 %)**
- v) tuck cam **(10 %)**
- vi) auxiliary stitch cam **(10 %)**
- vii) machine gauge **(10 %)**
- viii) carriage **(10 %)**
- ix) brush on the carriage **(10 %)**
- x) torsion spring **(10 %)**

#### Question 3

- (a) Circular knitting machine evolved from the straight bed machine. Explain why the industry needs the circular machine. **(40 %)**
- (b) What is the productivity of a circular knitting machine in lbs of fabric for a shift of 8 hours, having 120 feeders, 2072 needles revolving at 32 rpm, using 20s NeC cotton yarn knitting plain fabric to a tightness of 16.5. Assume production efficiency is 95%.  
Given: 1 kg = 2.2 lb, conversion constant for NeC and tex is 590.5,  $TF = (\sqrt{\text{tex}})/l$  **(60 %)**

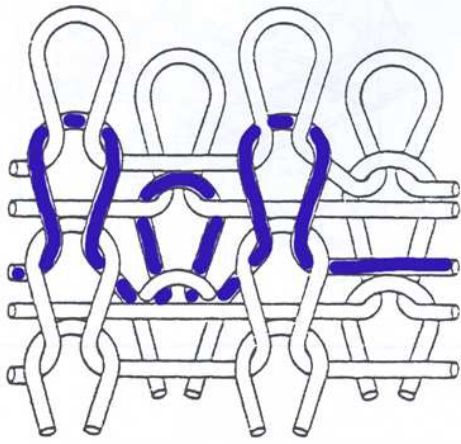
### Question 4

(a) Distinguish the following fabric types:

- i) single jersey (10 %)
- ii) double jersey rib (10 %)
- iii) double jersey interlock (10 %)
- iv) purl (10 %)

(b) For the given loop diagram write the structure using

- i) Notation (30 %)
- ii) Yarn path diagram (30 %)



## Section B

### Question 5 to Question 8

Choose at least ONE question

#### Question 5

- (a) Describe the role and responsibilities of a knitwear designer in Ready-to-wear (prêt-à-porter) fashion. Illustrate your answer with examples. (50 %)
- (b) When designing a collection, how does a knitwear designer get his/her inspiration and information? Illustrate your answer with examples. (50 %)

#### Question 6

Create a fashion illustration (black and white) inspired by ONE of the following knitwear designers' style: (100 %)

Sonia Rykiel  
Missoni  
Sibling

#### Question 7

Create a production drawing in accordance with the following product description: "Ladies 100% wool round neck long sleeves fitted pullover in plain knit structure, with a line of 3x3 cable structure on center front, 9GG, with 1x1 rib neck trim, cuff and bottom hem". (100 %)

#### Question 8

Describe the definition of stitch tension and its importance in knitwear production. (100 %)

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