NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF TEXTILE TECHNOLOGY

END OF SECOND SEMESTER EXAMINATIONS - AUGUST 2009

TXT– 1208 WEAVING TECHNOLOGY I

TIME: 3 HOURS

INSTRUCTIONS

Answer **ALL** Questions in Section A and **ANY TWO** in Section B. Each section carries **50 marks**

SECTION A

QUESTION 1

What is the function of a loom?   **(2)**

QUESTION 2

Explain how each of the primary motions in weaving is produced?   **(9)**

QUESTION 3

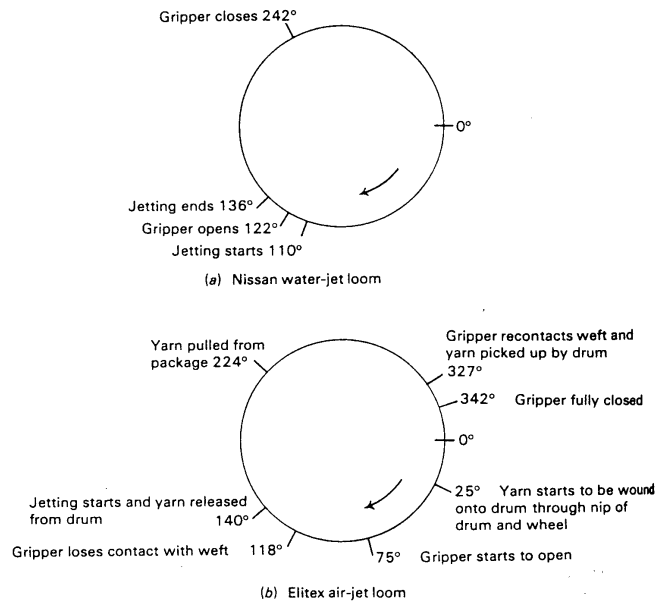Explain the Diagram in Figure 1 below.   **(8)**

Gripper closes 242°

0°

Jetting ends 136°
Gripper opens 122°
Jetting starts 110°

(a) Nissan water-jet loom

Yarn pulled from package 224°

Gripper recontacts weft and yarn picked up by drum 327°

342° Gripper fully closed

0°

25° Yarn starts to be wound onto drum through nip of drum and wheel

Jetting starts and yarn released from drum 140°

Gripper loses contact with weft 118°

75° Gripper starts to open

(b) Elitex air-jet loom

Figure 1

QUESTION 4

With the aid of a diagram explain the sizing process. **(7)**

QUESTION 5

Use schematic diagram to explain negative Dobby shedding. **(10)**

QUESTION 6

Draw and describe the 4 types of shed. **(8)**

QUESTION 7

Describe the timing of primary motions. **(6)**

SECTION B

QUESTION 8

(a) With the aid of diagrams discuss the causes of variation in spacing. **(15)**

(b) Explain what leads to disturbed weaving conditions. **(10)**

QUESTION 9

With the use of diagrams describe the functions of each of the temples. **(25)**

QUESTION 10

Using diagrams and formulae, explain tensions involved in the cloth fell position.

(25)

END OF QUESTION PAPER