

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DEPARTMENT OF TEXTILE TECHNOLOGY**

**END OF SECOND SEMESTER EXAMINATIONS - AUGUST 2009**

**TXT 4207 – YARN TECHNOLOGY III**

**TIME: 3 HOURS**

**INSTRUCTIONS**

Answer **ALL** Questions. Each question carries **25 marks**.

**QUESTION 1**

Using schematic diagrams, describe tensions involved in efficiency of yarn winding (25)

**QUESTION 2**

Discuss 5 causes of defects in cone winding and how they can be rectified (25)

**QUESTION 3**

(a) Discuss in detail the objectives of winding. (14)

(b) A cylindrical package wound on a centre diameter of 5 cm, the spindle speed is constant at 3200 rev/min. if the traverse velocity is 205 m/min, determine:

- (i) the net winding rate at the start of winding
- (ii) the net winding rate at package diameter of 16 cm,
- (iii) the angles of wind at the start and at a diameter 16 cm

(9)

**QUESTION 4**

(a) Explain the purpose of yarn clearing. (13)

(b) Compare and contrast the function of two types of clearers. (12)

**END OF QUESTION PAPER**