'**Scheme – I**

Sample Question Paper

Programme Name	: Diploma in Textile Manufacture	
Programme Code	: TX	**22366**
Semester	: Third	
Course Title	: Warp Yarn Preparation	
Max. Marks	: 70	Time: 3 Hrs.

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FIVE of the following.   **10 Marks**
    a) Classifydifferent types of warping machines.
    b) List at least four types of winding packages used in warping machine.
    c) Statethe importance of leasingon sectional warping machine.
    d) Suggest warping process require to produce warp-stripe effect in fabric.
    e) List four types of creels used on sizing machine
    f) Define the terms 1) stretch percentage.2) size add-on percentage.
    g) List minimum four types of defects in sized beams.

Q.2 Attempt any Three of the following.   **12 Marks**
    a) Compare direct warping with sectional warping based their functions, applications, speed, and creel capacity.
    b) Describe with a labelled diagram, the passage of yarn through direct warping machine
    c) Calculate the production of a direct warping machine in Kg per shift of 8 hrs, with the given data
         • Number of cones on creel – 400
         • Machine speed– 600 meters per minute
         • Efficiency- 55%
         • Count of yarn – 40^s Ne
    d) Describe the processes sequence to produce stripe pattern on weavers beam

Q.3) Attempt any Three of the following.   **12 Marks**.
    a) Describe with sketch the concept of single end Warping process.
    b) Distinguish between two cylinder and multi-cylinder sizing machine in terms of rate of drying, steam pressure sustainability, efficiency of heat transfer, and thickness of wall.
    c) Describe the functions of following parts of warping machine
         • Expanding comb
         • Pressure roller
         • Tensioners on creel
         • Length measuring device.
    d) determine creel capacity to produce following quality of fabric

- EPI:50
- reed space:40"
- Number of sections on drum: 10

Q.4) Attempt any Three of the following.   12 Marks

a) Explain with sketch the working of pressure cooker used for preparing size paste.
b) Describe keeping and congealing properties of size paste in terms of time and usability.
c) Suggest at least four factors responsible for change in size pick-up percentagefrom 15% to 10% of sized yarn.
d) Describe with sketch following types of comb used in headstock of sizing machine
    - V-shaped comb
    - Parallel comb
    - Zig-zagcomb
    - Straight comb

e) Describe with sketch the construction and working of modern saw box used in sizing machine.

Q.5) Attempt any Two of the following.   12 Marks

a) Suggest control measures required at each zone of sizing machine to reduce stretch in sized yarn.
b) Calculate sized yarn count, pickup percentage and add-on percentage from the given parameters
    - Length of sized yarn in yards= 1200
    - Number of ends on weavers beam=3000
    - Weight of dry sized warp in pounds= 120
    - Weight of wet sized yarn in pound= 130
    - Weight of un-sized yarn in pound= 110
c) Determine the efficiency of a warping machine based on the data given below
    - Machine speed: 600 mts/min
    - Number of stoppages/400 ends/1000 mts: 4
    - Time require to mend a break: 30 sec
    - Creel capacity: 500 ends
    - Time to change a full beam: 200 sec
    - Time to change a creel: 3000 sec
    - Miscellaneous stoppages/1000 mt: 100 esc

Q.6) Attempt any Two of the following.   12 Marks

a) Choose size ingredients and their quantities to prepare 1000 liters of size paste used for 40^s Ne cotton.
b) Calculate number of weavers beam produced per shift of 8 hr with the given data
    - Machine warping speed: 250 mt/min
    - Machine beaming speed: 300 mt/min
    - Yarn length per weavers beam: 10000 mts
    - Machine efficiency 45%
    - Yarn length on cone 80000 mts
c) Draw splitting and leasing arrangement used for 6 creel beams.

Sample Test Paper - I

Programme Name : Diploma in Textile Manufacture

Programme Code : TX

Semester : Third

Course Title : Warp Yarn Preparation

Max. Marks : 20

22366

Time: 1 Hour

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) List any four types of winding packages used in warping machine
b) Describe the functionof beam warping.
c) Describethe term "creel capacity" in warping machine
d) Suggest the warping machine to be used for creating stripe effect in woven fabric with justification.
e) Calculate the output tension of yarn passing through a multiplicative type of tensionerbase onthe given data
   - Input tension-2 gm,
   - Angle of wrap-20^0,
   - Coefficient of friction-0.5
f) Explain the need of Conicity given to the drum in sectional warping machine.

Q.2 Attempt any THREE. **12 Marks**

a) Compare direct warping with sectional warping based their functions, applications
b) Describe with a labelled diagram, the passage of yarn through direct warping machine
c) Determine the section width and number of sections from the data given below:
   - Cones on creel:200,
   - reed space 40",
   - Ends per inch: 40
d) calculate the production in kg per shift of 8 hr of direct warping machine with given data
   - Number of cones on creel-600
   - Machine speed-500 meters per minute
   - Efficiency of machine:64%
   - Count of yarn:30s Ne
e) Describe with sketch the sequence of processes required to produce checks pattern in sectional warping machine.
f) Describe with labelled sketch a passage of warp on sectional warping machine

Sample Test Paper - II

Programme Name	: Diploma in Textile Manufacture
Programme Code	: TX
Semester	: Third
Course Title	: Warp Yarn Preparation
Max. Marks	: 20

22366

Time: 1 Hour

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.   **08 Marks**
   a) Define gelatinisation temperature of starch paste
   b) Describe the functions of sizing process
   c) find pickup percentage form given parameters
- Dry weight of warp =100kg
- Wet weight of warp after squeezing= 120 kg

   d) Explain the function of following on sizing machine
- Comb
- Sheeting roller

   e) Suggest size pick up percentage for 10s Ne, 40s Ne, 100s Ne cotton yarn and justify.
   f) Explain the necessity of size paste level controlling devices on saw box.

Q.2 Attempt any THREE.   **12 Marks**
   a) Explain the importance of sizing process
   b) describe with neat sketches the warp passage through the multi-cylinder sizing machine
   c) Choose size ingredients and their quantity to prepare size paste used for finer cotton
   d) state any two merits and two demerits of any type of creel used in sizing machine
   e) Warp length on warper beam is 8000mts and warp length on weavers beam is 8400 mts.
- Calculate stretch percentage
- Based on result obtain suggest weather stretch is under control or not. If not suggest remedial measures to control stretch in sizing machine.

   f) Choose the temperature of saw box, pressure on squeezing roller and hardness of squeezing roller when processing cotton and polyester yarns