Q.26 How does a rapier carry the weft across the warp?

Q.27 Explain the working principle of an air-jet warp.

Q.28 What is the role of the nozzle in an air-jet loom?

Q.29 What is a water-jet loom?

Q.30 What are the main advantages of water-jet looms?

Q.31 What types of fabrics are commonly produced using air-jet looms?

Q.32 What is the function of the water nozzle in a water-jet loom?

Q.33 How does shuttle-less weaving reduce fabric defects?

Q.34 Name two disadvantages of projectile looms.

Q.35 What are the main classification of rapier looms?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Describe the different types of unconventional picking mechanisms. Explain their working principles and compare their efficiency with the shuttle picking mechanism.

Q.37 Explain the sequence of weft insertion in a projectile loom. Include details about the projectile's movement, weft tension control, and reed function.

Q.38 What are the advantages and disadvantages of water-jet looms? Compare them to air-jet and projectile looms in terms of speed, cost, yarn suitability, and efficiency.

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5th Sem. / Textile Design

Subject:- Fabric Manufacturing-III

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which of the following is a type of unconventional picking mechanism?

a) Shuttle picking b) Bobbin picking

c) Water-jet picking d) Slay picking

Q.2 What is the function of a weft accumulator?

a) Store the weft yarn and maintain uniform tension

b) Beat the weft into place

c) Create the selvedge

d) Control the wrap tension

Q.3 In a projectile loom, how is the weft inserted?

a) The projectile grips and carries the weft through the warp shed

b) The weft is inserted using compressed air

c) A rigid rapier carries the weft across the shed

d) A shuttle moves back and forth carrying the weft

Q.4 Which type of selvedge is commonly used in Projectile looms?

a) Loose selvedge b) Tuck-in selvedge

c) Fringe selvedge d) Unfinished selvedge

Q.5 Which of the following is a method of weft insertion in a rapier loom?

a) Projectile insertion
b) Compressed air insertion
c) Water-jet insertion
d) Rapier insertion

Q.6 What is the key feature of a double-phase rapier loom?

a) A single rapier inserts the weft in one direction
b) Two rapiers meet at the centreto transfer the weft
c) The weft is inserted using compressed air
d) The weft is inserted in a circular motion

Q.7 Which of the following is a major advantage of air-jet looms?

a) Low energy consumption
b) High-speed weft insertion
c) Suitable for all fiber types
d) Low noise level

Q.8 What is the main medium used for weft insertion in an air-jet loom?

a) Water b) Air
c) Shuttle d) Rapier

Q.9 What is a key advantage of water-jet looms?

a) Suitable for all types of yarns
b) Low energy consumption compared to air-jet looms
c) Can handle natural fibers efficiently
d) Produces high moisture content in the fabric

Q.10 Which component in a water-jet loom is responsible for propelling the weft?

a) Shuttle b) Water Nozzle
c) Reed d) Projectile

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is a key advantage of water-jet looms?

Q.12 _____ medium is used for weft insertion in water-jet looms.

Q.13 Which of the following is a major advantage of air-jet looms?

Q.14 What is the main medium used for weft insertion in an air-jet loom?

Q.15 _____ is a type of unconventional picking mechanism.

Q.16 In a projectile loom, how is the weft inserted?

Q.17 _____ is a method of weft insertion in a rapier loom.

Q.18 What is the key feature of a double-phase rapier loom?

Q.19 Which type of selvedge involves twisting edge threads for a firm finish?

Q.20 What is an advantage of rapier looms?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Name four types of unconventional weft insertion methods.

Q.22 Why is cross-leno selvedge used in weaving?

Q.23 Describe the working principle of a projectile loom.

Q.24 What happens to the projectile after inserting the weft?

Q.25 What is the Gabler system of weft insertion?