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**Started on** Wednesday, 14 June 2023, 9:00 AM

**State** Finished

**Completed on** Wednesday, 14 June 2023, 9:11 AM

**Time taken** 11 mins 26 secs

Question 1

Complete

Marked out of 1.00

**On a conventional loom, increase in dimension and mass of shuttle would cause**

Select one:

- ☐ a. No change in energy consumption, loom rpm and reed width
- ☐ b. Elevated energy consumption but no change in reed width and loom rpm
- ☒ c. Elevated energy consumption and reduction in weft insertion rate

## Question 2

Complete

Marked out of 1.00

**Match the pairs**

A.Potential energy in torsion rod

B.Kinetic energy of gripper

C.Heat energy in plunger

D.Accelerating time for gripper

1. About  $8^\circ$  of loom shaft

2. Gripper velocity in free flight

3. Unused picking energy

4. Product of Torque and angular distortion

Select one:

- ☐ a. (A3, B1, C4, D2)
- ☐ b. (A2, B4, C3, D1)
- ☒ c. (A4, B2, C3, D1)
- ☐ d. (A2, B1, C4, D3)

## Question 3

Complete

Marked out of 1.00

**Same projectile propulsion system can be employed for looms of higher reed width and WIR because**

Select one:

- ☐ a. The kinetic energy of a gripper is very high and much of it is anyway wasted through braking. Hence a free flying gripper can cover varying distances without needing any changes in picking system
- ☐ b. Wider looms run with lower rpm and therefore a gripper can cover a larger distance with same velocity
- ☒ c. Availability of a greater accelerating time due to reduced loom rpm permits a higher gripper velocity which is required for wider looms that run with higher WIR.

## Question 4

Complete

Marked out of 1.00

If the diameter of a torsion rod used in projectile loom is doubled then the torque required to twist it would increase by

Select one:

- ☒ a. 16 times
- ☐ b. 2 times
- ☐ c. 8 times
- ☐ d. 4 times

## Question 5

Complete

Marked out of 1.00

: Rapier loom are suitable to produce

A- dobby fabrics,B- Jacquard fabrics,C.- stretched denim fabrics ,D-pile fabrics

select the correct answer

Select one:

- ☐ a. only B and 5
- ☐ b. only A and B
- ☐ c. only C and D
- ☒ d. all are correct

## Question 6

Complete

Marked out of 1.00

A rapier having reed width 180cm and 225picks/min. If angle of main shaft rotation  $240^\circ$  for the rapier movement in the shed ,then average rapier velocity is

Select one:

- ☐ a. 20m/s
- ☐ b. 13m/s
- ☐ c. 16m/s
- ☒ d. 10 m/s

## Question 7

Complete

Marked out of 1.00

The filling yarn density at selvage is doubled in case of

Select one:

- ☐ a. Fringe selvage
- ☐ b. Leno selvage
- ☐ c. Shuttle selvage
- ☒ d. Tucked-in selvage

## Question 8

Complete

Marked out of 1.00

**select the correct statement with regard to rigid rapiers**

Select one:

- ☒ a. More floor space is needed compare to other weft insertion systems.
- ☐ b. no diversity for both warp and weft yarns in count and character when using rigid rapiers
- ☐ c. construction of rapiers does not ensure straight movement of rapier heads
- ☐ d. Required to guide the rapiers across the warp sheet

## Question 9

Complete

Marked out of 1.00

**For displacement function of rapier handling very weak yarn**

Select one:

- ☐ a. Sinusoidal motion is better than modified trapezoidal
- ☐ b. Cycloidal is better than modified trapezoidal
- ☐ c. Sinusoidal motion is better than cycloidal
- ☒ d. Modified trapezoidal is better than cycloidal

## Question 10

Complete

Marked out of 1.00

**Match the pairs**

- |  |                                     |
|--|-------------------------------------|
| A.Rapier heads on both sides of selvages   | 1. Discontinuous weft between picks |
| B.Rapier head shared by two adjacent looms | 2. Very low value of acceleration   |
| C.Rapier at centre of shed                 | 3. Highest value of deceleration    |
| D.Rapiers at the start of motion           | 4. Bi-Phase loom                    |

Select one:

- ☐ a. (A3, B1, C4, D2)
- ☐ b. (A4, B2, C3, D1)
- ☒ c. (A1, B4, C3, D2)
- ☐ d. (A2, B1, C4, D3)

## Question 11

Complete

Marked out of 1.00

**Pirn winding is an essential preparatory process for weaving on**

Select one:

- ☐ a. Air jet loom
- ☐ b. Water jet loom
- ☐ c. Rapier loom
- ☒ d. Drop-box loom

## Question 12

Complete

Marked out of 1.00

The average angle of twist of the torsion bar and velocity of the projectile

Select one:

- ☐ a.  $20^\circ$  and 15 m/s
- ☐ b.  $30^\circ$  and 15 m/s
- ☐ c.  $15^\circ$  and 30 m/s
- ☒ d.  $30^\circ$  and 30 m/s

## Question 13

Complete

Marked out of 1.00

Is not a part or device of the projectile picking mechanism

Select one:

- ☒ a. Lug strap
- ☐ b. Torsion bar
- ☐ c. oil break
- ☐ d. Picking cam

## Question 14

Complete

Marked out of 1.00

Rapier weft insertion can be classified according to

Select one:

- ☐ a. type of rapiers
- ☐ b. number of rapiers
- ☒ c. Method of weft transfer
- ☐ d. type of yarn

## Question 15

Complete

Marked out of 1.00

Match the pairs

- |  |                          |
|--|--------------------------|
| A. Unguided shuttle flight                   | 1. Faulty picking        |
| B. Multiple impact of shuttle in shuttle box | 2. Reduced sweep of sley |
| C. Faulty pirn changing motion               | 3. Shuttle fly           |
| D. Smaller and lighter shuttle               | 4. Lashing-in            |

Select one:

- ☐ a. (A1, B4, C3, D2)
- ☐ b. (A3, B4, C2, D1)
- ☒ c. (A3, B1, C4, D2)
- ☐ d. (A2, B3, C4, D1)



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