PROVISIONAL ANSWER KEY

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Question1:-The cohesiveness is the ability of fiber to _____ together.

A:-Elasticity

B:-Cling

C:-Stretch

D:-Press

Correct Answer:- Option-B

Question2:-The main constituent of wool fiber is _____

A:-Cellulose

B:-Casien

C:-Reformation

D:-Keratin

Correct Answer:- Option-D

Question3:-Which of the following is a leaf fiber

A:-Cotton fiber

B:-Coir fiber

C:-Flax fiber

D:-Sisal fiber

Correct Answer:- Option-D

Question4:-Which of the following is a manmade cellulosic fiber ?

A:-Rayon

B:-Acrylic

C:-Dacron

D:-Nylon

Correct Answer:- Option-A

Question5:-Caustic soda is used in _____ process.

A:-Whitening

B:-Mercerization

C:-Cleaning

D:-None of these

Correct Answer:- Option-B

Question6:-Acetate is derived from

A:-Cellulose

B:-Protein

C:-Latex

D:-Leather

Correct Answer:- Option-A

Question7:-Diameter of silk filament ranges from

A:-5 to 10 micro meter

B:-12 to 30 micro meter

C:-14 to 50 micro meter

D:-60 to 80 micro meter

Correct Answer:- Option-B

Question8:-The ability of fiber to stretch and return to its shape is

A:-Crimp

B:-Elasticity

C:-Stretch

D:-Pliability

Correct Answer:- Option-B

Question9:-Resistance to _____ is ensure dimensional stability of the fabric.

A:-Water

B:-Heat

C:-Color

D:-Shrinkage

Correct Answer:- Option-D

Question10:-Inner hollow hole of cotton fiber known as

A:-Serine

B:-Cuticle

C:-Fibril

D:-Protein

Correct Answer:- Option-D

Question11:-What is ginning process ?
i. Drying, cleaning and dusting of the seed cotton.
ii. Separation of cotton fibers from the seed.
iii. Cleaning of the lint cotton.

A:-Only i and iii

B:-Only ii and iii

C:-Only i and ii

D:-All of the above i, ii and iii

Correct Answer:- Option-D

Question12:-In hand harvested seed cotton the "Foreign Matter" levels will be usually in the range

A:-5% to 10%

B:-10% to 15%

C:-15% to 30%

D:-1% to 5%

Correct Answer:- Option-D

Question13:-Optimum fibre-moisture content for roller ginning process is

A:-1% to 5%

B:-5% to 6%

C:-6% to 7%

D:-7% to 8%

Correct Answer:- Option-B

Question14:-Number of cleaning points in the Blowroom of cotton processing are decided base on
i. Type of Ginning (Roller or Saw Ginned)
ii. The amount of Trash % present in cotton
iii. The number of Trash particles and the type of Trash particles

A:-Only i and iii

B:-Only ii and iii

C:-Only i and ii

D:-All of the above i, ii and iii

Correct Answer:- Option-D

Question15:-The tuft size fed to the Bale Openers should be of

A:-Large size

B:-Medium size

C:-Small size

D:-As small as possible

Correct Answer:- Option-D

Question16:-Cleaning Efficiency % (C.E.) of the Blowroom is determined by the formula

A:-C.E. % = $\frac{A-B}{A} \times 100$

B:-C.E. % = $\frac{B-A}{B} \times 100$

C:-C.E. % = $\frac{A-B}{B} \times 100$

D:-C.E. % = $\frac{B-A}{A} \times 100$

Where, A = Trash in Feed. B = Trash in Delivery

Correct Answer:- Option-A

Question17:-In the Lap Forming unit of Scutcher 4 highly polished cast iron calendar rollers are mounted one over the other and heavily weighted with a force of upto

A:-1 tonne

B:-2 tonnes

C:-3 tonnes

D:-4 tonnes

Correct Answer:- Option-B

Question18:-The formula to find out the Neps per 100 mg Card Silver is

A:-$\frac{\text{Standard Nep Count}}{18.5}$

B:-$\frac{\text{Standard Nep Count}}{1.85}$

C:-$\frac{\text{Standard Nep Count}}{1.95}$

D:-$\frac{\text{Standard Nep Count}}{19.5}$

Correct Answer:- Option-B

Question19:-The difference in leading angle between cylinder and doffer wire should be

A:-5° to 10°

B:-10° to 15°

C:-15° to 20°

D:-20° to 25°

Correct Answer:- Option-B

Question20:-In most modern cards we can achieve a maximum cylinder speed of

A:-150 rpm

B:-300 rpm

C:-400 rpm

D:-600 rpm

Correct Answer:- Option-D

Question21:-Match the following parts of a Draw Frame with their correct functions :

Column A (Parts)	**Column B (Functions)**
A. Soft rollers	1. Converts sliver into uniform ribbon by air suction
B. Hard rollers	2. Apply pressure to hold fibres firmly during drafting
C. Pressure bar	3. Control fibre movement and improve fibre straightening
D. Condenser	4. Provide positive drive and control draft accurately

A:-A-2, B-4, C-3, D-1

B:-A-3, B-4, C-2, D-1

C:-A-4, B-2, C-3, D-1

D:-A-3, B-2, C-4, D-1

Correct Answer:- Option-B

Question22:-Combing efficiency is a measure of

A:-Increase in 50% span length of fibre

B:-Increase in 2.5% span length of fibre

C:-Decrease in 50% span length of fibre

D:-Decrease in 2.5% span length of fibre

Correct Answer:- Option-B

Question23:-**Assertion (A)** : Increasing delivery speed always increases drafting irregularity.
Reason (R) : Fibre control decreases at higher drafting speeds.

A:-Both A and R are true and R is the correct explanation of A

B:-Both A and R are true but R is not the correct explanation of A

C:-A is true but R is false

D:-A is false but R is true

Correct Answer:- Option-C

Question24:-In a sliver lap machine, 30 slivers of 0.14 Ne are combined with a draft 2.8. In a ribbon lap machine 6 of these laps are combined with draft 4.0. Linear density of resultant lap (g/m) is

A:-67.8 g/m

B:-66.9 g/m

C:-68.5 g/m

D:-45.2 g/m

Correct Answer:- Option-A

Question25:-For calculating the production (kg) of comber which of the following details are essential ?

A:-Linear density of lap, feed per nip, nips/min, draft

B:-Feed per nip, nips/min, noil%, hank of comber silver

C:-nips/min, noil%, hank of comber silver, linear density of lap

D:-linear density of lap, feed per nip, nips/min, noil%

Correct Answer:- Option-D

Question26:-In the context of combing cycle, consider the following process sequences
P : Lap feeding □ Cylinder combing □ forward movement of nipper □Top comb lowering
Q : Lap feeding □ Top comb lowering □ Cylinder combing □ Detaching
R : Cylinder combing □ Nipping □ Top comb lowering □ Forward movement of nipper
S : Nipping □ Cylinder combing □ Forward movement of nipper □ Detaching
The set of correct statement is

A:-P, Q

B:-P, S

C:-Q, R

D:-R, S

Correct Answer:- Option-B

Question27:-A roving of 15 yards weighs 104 grains. Calculate the hank (Ne) of the roving.

A:-1.1

B:-1.2

C:-1.3

D:-1.4

Correct Answer:- Option-B

Question28:-If a bobbin in a simplex machine misses alternate layers while building, the problem is

A:-Loose motor pulley

B:-Slack cone drum belt

C:-Faulty ratchet/pawl engagement

D:-Loose bobbin shaft

Correct Answer:- Option-C

Question29:-If the bobbin rail is overfilled, the symptoms include

A:-Bobbin skips layers

B:-Roving breakage at flyer hook

C:-Bowed or irregular roving build

D:-Ratchet wheel pawl slippage

Correct Answer:- Option-C

Question30:-Match the speed frame motion fault with its mechanical reason

Column A (Fault)	**Column B (Reason)**
A. Skipped layers	1. Worn ratchet/spur wheel teeth
B. Uneven traverse	2. Loose vertical shaft
C. Crooked/bowed silver build	3. Misaligned lifter pinion/rack
D. Yarn slack/uneven tension	4. Low deadweight tension

A:-A-1, B-2, C-3, D-4

B:-A-3, B-2, C-1, D-4

C:-A-2, B-1, C-4, D-3

D:-A-4, B-3, C-2, D-1

Correct Answer:- Option-A

Question31:-The optimum twist per inch is reached quickly for

A:-Longer cottons

B:-Finer cottons

C:-Longer and finer cottons

D:-Shorter and coarser cottons

Correct Answer:- Option-C

Question32:-Minimum angle of yarn pull for smooth travel of traveller is

A:-23°

B:-18°

C:-32°

D:-81°

Correct Answer:- Option-A

Question33:-The amount of coating removed from the cot diameter per buffing cycle lies in the range of

A:-0.4 mm

B:-0.2 mm

C:-0.6 mm

D:-0.8 mm

Correct Answer:- Option-B

Question34:-With increased ring diameter, for a given spindle speed

A:-The traveller speed decreases

B:-The traveller speed increases

C:-No changes in traveller speed

D:-The traveller speed first decreases then increases

Correct Answer:- Option-B

Question35:-In a ring frame, if total draft is 30 and break draft is 1.25, then main draft is

A:-31

B:-29

C:-37

D:-24

Correct Answer:- Option-D

Question36:-Calculate the Draft Change Wheel required to spin a yarn out of 0.8^{s} Ne hank fed roving with a draft constant 1300 and yarn count at front roller is 40^{s}.

A:-26 T

B:-40 T

C:-32 T

D:-23 T

Correct Answer:- Option-A

Question37:-Moire effect is associated with

A:-Yarn twist

B:-Roller nip

C:-Traveller number

D:-Ring diameter

Correct Answer:- Option-B

Question38:-Calculate the delivery speed of the ring frame in m/min for spinning the yarn at 30 tpi and spindle speed is 22000 rpm.

A:-73.3 m/min

B:-733.3 m/min

C:-18.6 m/min

D:-186.2 m/min

Correct Answer:- Option-C

Question39:-If twist multiplier is 4.2, calculate the TPI for 36 Ne yarn

A:-9

B:-25

C:-32

D:-144

Correct Answer:- Option-B

Question40:-Coil angle and wind angle collectively makes _____ degree in the package winding.

A:-90

B:-45

C:-180

D:-60

Correct Answer:- Option-A

Question41:-In sizing machine, when machine speed increases, the size pick up

A:-Increases

B:-Decreases

C:-First increase then decreases

D:-No change

Correct Answer:- Option-A

Question42:-Multi-coloured yarn effect can be achieved with

A:-Cone winding machine

B:-Warping machine

C:-Sectional warping machine

D:-Cheese winding machine

Correct Answer:- Option-C

Question43:-Joining of broken yarn ends on a winding machine : splicing is the best option to eliminate the problem of knotting and piecing; although, the tensile strength of yarn with a knot is _____ to that of the yarn with a splice.

A:-Inferior

B:-Equal

C:-Superior

D:-Negligible

Correct Answer:- Option-C

Question44:-To prevent mildew formation or bacteria from growing in sized beams or fabric woven from sized warps, antiseptics or anti-mildew agents are used _____ is the most effective antiseptic agent, since it is both an antiseptic and a humectant.

A:-Magnesium chloride

B:-Zinc chloride

C:-Barium sulphate

D:-Alginic acid

Correct Answer:- Option-B

Question45:-The number of cones in the supply package in warping machine is in the range of

A:-400 - 1200

B:-80 - 100

C:-100 - 300

D:-300 - 600

Correct Answer:- Option-A

Question46:-In surface driven winder, the winding speed is

A:-Constant

B:-Increases with increase in package diameter

C:-Decreases with increase in package diameter

D:-None of the above

Correct Answer:- Option-A

Question47:-Tension in yarn during winding from bobbin depends on the unwinding speed is proportional to
Where, T = Tension in yarn during winding, V = unwinding speed

A:-$T \propto V$

B:-$T \propto V^2$

C:-$T \propto V^3$

D:-T ∝1/V

Correct Answer:- Option-B

Question48:-If the yarn is repeatedly laid on the top of or along the same path as the previously wound yarn, this duplication of yarn path on the package creates a defect known as

A:-Cross-wound package

B:-Parallel wound package

C:-Ribboning or patterning

D:-Slough-off

Correct Answer:- Option-C

Question49:-Drawing of 4 ends per dent instead of 2 ends per dent in reed will result in

A:-increased warp breakage rate

B:-reduced warp breakage rate

C:-improved fabric quality

D:-reduced reed life

Correct Answer:- Option-A

Question50:-_____ is defined as a small length of yarn wound on to the pirn near its butt end. Generally, it consists of a length of yarn equal to about three times the width of cloth or length for 3 pick insertion.

A:-Yarn waste in the cones

B:-Slough off

C:-Bunch or reserve

D:-Stitch or Jali Formation

Correct Answer:- Option-C

Question51:-The lifting plan and design of the weave will be same in the case of _____ draft.

A:-straight

B:-pointed

C:-skip

D:-broken

Correct Answer:- Option-A

Question52:-Identify the wrong statement with respect to canvas method of weave representation.

A:-It is less time consuming than linear method

B:-X mark is most commonly used

C:-Blank square indicates warp overlap

D:-Each square indicates the intersection of warp and weft

Correct Answer:- Option-C

Question53:-Which element of a woven design denotes the number of heald shafts required for a given weave repeat ?

A:-Design

B:-Draft

C:-Peg plan

D:-Denting plan

Correct Answer:- Option-B

Question54:-Gaberdene weave is a _____ twill.

A:-warp faced

B:-weft faced

C:-balanced

D:-unbalanced

Correct Answer:- Option-C

Question55:-The move number for the construction of satin weave should _____ the repeat size of weave.

A:-be one less than

B:-be a factor of

C:-be equal

D:-not be equal

Correct Answer:- Option-D

Question56:-Extending the plain weave structure in both horizontal and vertical directions result in

A:-Matt rib

B:-Regular warp rib

C:-Irregular warp rib

D:-Irregular weft rib

Correct Answer:- Option-A

Question57:-Which is true with respect to brighton honey comb weave ?

A:-constructed on pointed draft only

B:-double line crossing a double diagonal line

C:-single diagonal line crosses a double diagonal line

D:-length of longest float is one more than half of the repeat size

Correct Answer:- Option-C

Question58:-The weave that produce longitudinal sunken lines in the warp direction is

A:-Bedford cord

B:-Mock leno

C:-Crepe weave

D:-Brighton honey comb

Correct Answer:- Option-A

Question59:-The popular twill weave such as denim is _____ in nature.

A:-warp faced

B:-weft faced

C:-equi faced

D:-none of the above

Correct Answer:- Option-A

Question60:-Choosing a simple motif and reversing at intervals within the design repeat so as to get an irregular effect produces _____ weave.

A:-mock leno

B:-crepe

C:-matt rib

D:-huck a back weave

Correct Answer:- Option-B

Question61:-Which fabric formation method ensures the highest dimensional stability in textiles ?

A:-Knitting

B:-Nonwoven

C:-Weaving

D:-Crochet

Correct Answer:- Option-C

Question62:-Which auxiliary motion precisely governs fabric density by regulating the length of fabric withdrawn during the weaving cycle ?

A:-Let-off motion

B:-Take-up motion

C:-Stop motion

D:-Reeding motion

Correct Answer:- Option-B

Question63:-Positive shedding differs from negative shedding in this way

A:-Positive shedding lifts the warp yarns up, while negative shedding lowers them down

B:-Positive shedding uses cams; negative shedding uses tappets

C:-Positive shedding mechanically returns the harnesses to their original position, but negative shedding relies on gravity or springs for the return

D:-Positive shedding is only used in shuttleless looms

Correct Answer:- Option-C

Question64:-Which statement accurately defines the function of over-picking in shuttle weaving systems ?

A:-It ensures gentle movement of the shuttle across the shed

B:-It propels the shuttle with greater speed and striking force

C:-It halts the shuttle's movement during the weaving cycle

D:-It shifts the shuttle below the weft insertion path

Correct Answer:- Option-B

Question65:-Positive let-off mechanism is designed to

A:-Maintain constant warp tension throughout weaving

B:-Ensure consistent weaving speed

C:-Control the size of the shed

D:-Deliver warp yarn intermittently

Correct Answer:- Option-A

Question66:-A fast reed mechanism is primarily used to

A:-Speed up weft insertion

B:-Safeguard the shuttle from damage during beating

C:-Assist in shed formation

D:-Enhance overall loom speed

Correct Answer:- Option-B

Question67:-Which shaft is responsible for controlling the shedding motion in a loom ?

A:-Crank shaft

B:-Bottom shaft

C:-Tappet shaft

D:-Take-up shaft

Correct Answer:- Option-C

Question68:-In the Jacquard mechanism, the process of "casting out" refers to

A:-Removing faulty needles from the needle bar

B:-Selecting which hooks will lift the harnesses to form the pattern

C:-Adjusting the position of the comber board for yarn tension

D:-Aligning the warp yarns on the loom beam

Correct Answer:- Option-B

Question69:-What does the loom constant refer to ?

A:-A fixed value representing the ratio of crank shaft speed to loom speed

B:-A constant factor used in calculating loom production efficiency

C:-The standard tension applied on warp yarns during weaving

D:-A constant numerical value related to loom dimensions

Correct Answer:- Option-B

Question70:-In a Jacquard system, to which part of the hook is the harness cord typically looped or attached ?

A:-The upper bent section that connects with the griffe

B:-The lower end, which is often doubled for secure attachment

C:-The horizontal needle of the hook

D:-Directly to the lingo weight

Correct Answer:- Option-B

Question71:-The Starch act as _____ agent in cotton yarn sizing.

A:-Lubricating

B:-Binding

C:-Antimicrobial

D:-Antistatic

Correct Answer:- Option-B

Question72:-Sodium persulphate is used in

A:-Bleaching

B:-Scouring

C:-Mercerization

D:-Singeing

Correct Answer:- Option-A

Question73:-Compared to conventional sizing, wet sizing process reduces

A:-Size Consumption

B:-Drying Energy Consumption

C:-Weavability of warp yarn

D:-Tensile strength of yarn

Correct Answer:- Option-B

Question74:-In dyeing of wool with levelling acids dyes, with time, the pH of dye bath

A:-Increases

B:-Decreases

C:-Remains constant

D:-First increases and then decreases

Correct Answer:- Option-B

Question75:-The purpose of carbonisation of wool is to remove

A:-Wax

B:-Scales

C:-Vegetable Matters

D:-Cortex

Correct Answer:- Option-C

Question76:-The maximum swelling of cotton during mercerisation occurs when

A:-NaOH concentration is below 10%

B:-NaOH concentration is around 18-20%

C:-NaOH concentration exceeds 30%

D:-NaOH is replaced with KOH

Correct Answer:- Option-B

Question77:-Why are Optical Brightening Agents less effective on wool compared to cotton ?

A:-Wool has higher crystallinity

B:-Wool absorbs less UV radiation

C:-Wool's yellowish natural chromophores mask fluorescence

D:-Wool has higher moisture regain interfering with OBA fixation

Correct Answer:- Option-C

Question78:-Which parameter most directly affects the removal of hydrophobic impurities during yarn scouring ?

A:-Bath pH

B:-Surfactant concentration

C:-Yarn twist level

D:-Liquor ratio

Correct Answer:- Option-B

Question79:-What is the primary chemical interaction responsible for the high wash fastness of reactive dyes on cotton fibers ?

A:-Ionic bonding between dye sulfonate groups and fiber

B:-Covalent bond formation between dye reactive groups and cellulose hydroxyls

C:-Hydrogen bonding between dye and fiber

D:-Physical entrapment of dye molecules within the fiber matrix

Correct Answer:- Option-B

Question80:-
Why is acid desizing (using dilute HCl or H_2SO_4) rarely practiced in modern textile processing ?

A:-It is too slow compared to enzymatic methods

B:-It causes hydrolytic damage to cellulose fibers

C:-It is incompatible with synthetic fibers

D:-It requires high liquor ratios

Correct Answer:- Option-B

Question81:-The good sunlight resistance (light-fastness) achieved with certain acid dyes in wool is primarily due to

A:-Strong ionic bond between the dye and the wool fibre

B:-Electron-stable chromophore of the dye

C:-Light-scattering property of the wool's scaly surface

D:-Covalent bonding that occurs during the dyeing process

Correct Answer:- Option-B

Question82:-The point where no more dye is taken up by the fibre and absorption equals desorption is called

A:-Strike point

B:-Migration index

C:-Equilibrium exhaustion

D:-Diffusion coefficient

Correct Answer:- Option-C

Question83:-Direct dyes are generally

A:-Dyes forming covalent bonds with cellulose

B:-Water-soluble anionic dyes with affinity for cellulose

C:-Non-ionic dyes requiring high temperature

D:-Hydrophobic dyes applied by the carrier method

Correct Answer:- Option-B

Question84:-Side-to-centre colour variations in Jigger dyeing are commonly known as

A:-Listing

B:-Ending

C:-Straining

D:-Blotching

Correct Answer:- Option-A

Question85:-Which among the following dyes are also known as "Diamine colours" ?

A:-Acid dyes

B:-Vat dyes

C:-Direct dyes

D:-Disperse dyes

Correct Answer:- Option-C

Question86:-Bronziness of shades in sulphur dyeing is primarily caused by

A:-Premature oxidation

B:-Excessive electrolyte addition

C:-Use of hard water

D:-Incorrect pH during dyeing

Correct Answer:- Option-A

Question87:-During vat dyeing, the insoluble dye is converted into a soluble leuco form by

A:-Oxidation

B:-Heating with acetic acid

C:-Reduction in alkaline medium

D:-Neutralisation with weak acids

Correct Answer:- Option-C

Question88:-Which of the following is not a chromophoric system found in chrome dyes ?

A:-Anthraquinonoid

B:-Triphenylmethane

C:-Xanthene

D:-Sulfonated aromatics

Correct Answer:- Option-D

Question89:-One of the merits of using o-phenyl phenol as a carrier in polyester dyeing with disperse dyes is

A:-Reduces the need for dispersing agents

B:-Acts as a strong reducing agent during dyeing

C:-Applicability up to pH 9.0

D:-Difficulty in removing from fabric

Correct Answer:- Option-C

Question90:-Disperse dyes are held on nylon fibres by

A:-Covalent bonding

B:-Salt linkage formation

C:-Coordination complex formation

D:-Physical bonding forces

Correct Answer:- Option-D

Question91:-The thickener in printing paste is primarily used to

A:-Reduce viscosity

B:-Improve penetration of dye

C:-Prevent colour spreading

D:-Increase drying time

Correct Answer:- Option-C

Question92:-In discharge printing, the agent used to remove colour is referred to as

A:-Thickener

B:-Reducer

C:-Binder

D:-Cross-linker

Correct Answer:- Option-B

Question93:-The method that creates the sharpest, most detailed prints is

A:-Block printing

B:-Roller printing

C:-Tie and dye

D:-Batik

Correct Answer:- Option-B

Question94:-The printing process, where a heat treatment is used for a very short time is

A:-Screen printing

B:-Transfer printing

C:-Roller printing

D:-Block printing

Correct Answer:- Option-B

Question95:-The function of photo-emulsion in screen printing is to

A:-Act as a dye

B:-Create the design on the screen

C:-Fix the colour on the fabric

D:-Thicken the print paste

Correct Answer:- Option-B

Question96:-An anti-shrinking finish is a

A:-Mechanical permanent finish

B:-Mechanical temporary finish

C:-Chemical temporary finish

D:-Chemical permanent finish

Correct Answer:- Option-A

Question97:-The finishing operation done on the fabric to impart a different degree of lustre to the fabric is

A:-Softening

B:-Milling

C:-Calendering

D:-Sizing

Correct Answer:- Option-C

Question98:-Which chemical is commonly used for crease-resistant finishing of cotton?

A:-Sodium hydroxide

B:-Formaldehyde-based resins

C:-Hydrogen peroxide

D:-Acetic acid

Correct Answer:- Option-B

Question99:-The finish that improves fabric resistance to water but allows air permeability is

A:-Water-proof finish

B:-Water-repellent finish

C:-Soil release finish

D:-Oil-repellent finish

Correct Answer:- Option-B

Question100:-The heat setting of polyester fabric is usually carried out in

A:-Kier

B:-Jigger

C:-Stenter

D:-Winch

Correct Answer:- Option-C