

FINAL ANSWER KEY

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Question1:-To which agency of the UNO was India re-elected for a six year term in November 2015?

- A:-UNISDR
- B:-UNITAID
- C:-UNHCR
- D:-UNCITRAL

Correct Answer:- Option-D

Question2:-Which section of the Factories Act 1948 was amended vide the Factories (Amendment) Bill, 2015 of Maharashtra?

- A:-58(1)(C)
- B:-63(1)(C)
- C:-66(1)(C)
- D:-72(1)(C)

Correct Answer:- Option-C

Question3:-The Mahatma Gandhi International Centre which was inaugurated by the President of Sri Lanka Mr. Maithripala Sirisena on 22nd November 2015 is located at

- A:-Matale
- B:-Moratuwa
- C:-Matara
- D:-Monaragala

Correct Answer:- Option-A

Question4:-What is the percentage of population in India below the age of 19 as per the 2011 census?

- A:-32
- B:-36
- C:-37
- D:-41

Correct Answer:- Option-D

Question5:-Which Indian state won the National Wheelchair Basketball Championship held in 2015?

- A:-West Bengal
- B:-Maharashtra
- C:-Punjab
- D:-Haryana

Correct Answer:- Option-B

Question6:-Which was the new species of tree frog identified by a group of researchers in Western Ghats of Idukki in November 2015?

- A:-Ghatixalus Variabilis
- B:-Ghatixalus Magnus
- C:-Ghatixalus Asterops
- D:-Tetrapods

Correct Answer:- Option-B

Question7:-Nature Microbiology journal has warned that the bacteria, Burkholderia Pseudomallei will pose a serious threat to India in the immediate future. Name the disease which is caused by this bacteria.

- A:-Meliodosis
- B:-Melorheostosis
- C:-Melas syndrome
- D:-Pick's disease

Correct Answer:- Option-A

Question8:-The Chinese translation of which literary work by Rabindra Nath Tagore was withdrawn by the publishers in 2015 citing 'Poor Quality Translation'?

- A:-The Religion of Man
- B:-The Gardner
- C:-Stray Birds

D:-The Home and the World

Correct Answer:- Option-C

Question9:-Who is the author of the work 'The Gospel of Mary Magdalena and Me' which was considered for Man Booker Prize in 2014?

A:-Rethy Devi

B:-Mallika Thanecha

C:-Anuradha Roy

D:-Daya Bai

Correct Answer:- Option-A

Question10:-The book 'The Name of God is Mercy' by Pope Francis is written in the form of a conversation between the Pope and a journalist. Who is that journalist?

A:-Carlo Caffara

B:-Pietro Parolin

C:-Domenico Calcagno

D:-Andrea Tornielli

Correct Answer:- Option-D

Question11:-Which of the following combination will give an effective resistance of 4Ω , if three resistances of values 2Ω , 3Ω and 6Ω are available?

A:-Parallel combination of 2Ω and 6Ω resistance in series with 3Ω resistance

B:-Parallel combination of 2Ω and 3Ω resistance in series with 6Ω resistance

C:-All the three resistances in parallel

D:-Parallel combination of 3Ω and 6Ω resistance in series with 2Ω resistance

Correct Answer:- Option-D

Question12:-An ohmmeter indicates zero ohms when connected across an inductor. The inductor is

A:-Open

B:-Good

C:-Partly opened

D:-Shorted

Correct Answer:- Option-D

Question13:-To increase the amount of current in a resistor from 60 mA to 80 mA by changing the 12V source, what should the new voltage setting be?

A:-4V

B:-1.6V

C:-16V

D:-40V

Correct Answer:- Option-C

Question14:-The resistance of earth wire should be

A:-Very low

B:-High

C:-Reasonable

D:-Infinite

Correct Answer:- Option-A

Question15:-A series RLC circuit with $X_L = 25\text{ ohm}$, $X_C = 35\text{ ohm}$, and $R = 10\text{ ohm}$ carries an effective current of 5 A. Calculate the power dissipated in watts of a series RLC circuit

A:-50

B:-250

C:-300

D:-550

Correct Answer:- Option-B

Question16:-The lighting methods in increasing order of power consumption are

A:-LED, Incandescent, CFL

B:-CFL, LED, Incandescent

C:-LED, CFL, Incandescent

D:-CFL, Incandescent, LED

Correct Answer:- Option-C

Question17:-The rms value of a full wave rectified wave is _____ that of a sine wave with the same peak value.

A:-Same as

B:-Greater than

C:-Less than

D:-Greater or less than

Correct Answer:- Option-A

Question18:-A battery with a 100 Ah rating can deliver

- A:-10A for 1 hour
- B:-5A for 20 hours
- C:-10A for 20 hours
- D:-1A for 10 hours

Correct Answer:- Option-B

Question19:-Mobile data indicators in increasing order of speed are

- A:-E, G, H, 3G
- B:-H, G, E, 3G
- C:-G, E, H, 3G
- D:-G, E, 3G, H

Correct Answer:- Option-D

Question20:-An 8 bit microcontroller has

- A:-8-bit data bus
- B:-8-bit address bus
- C:-8-bit data and address buses
- D:-8 interrupt lines

Correct Answer:- Option-A

Question21:-The range of compression ratio that can be used in a spark ignition IC engine is _____.

- A:-6:1 - 10:1
- B:-16:1 - 20:1
- C:-26:1 - 30:1
- D:-36:1 - 40:1

Correct Answer:- Option-A

Question22:-The size of fly wheel in a two stroke cycle engine when compared to that in a four stroke cycle engine having same capacity is _____.

- A:-Same as that of four stroke cycle engine
- B:-Heavier than that of four stroke cycle engine
- C:-Lighter than that of four stroke cycle engine
- D:-Can be of any size

Correct Answer:- Option-C

Question23:-A gear box is provided in an automobile to vary the _____ on the road wheels.

- A:-Speed
- B:-Torque
- C:-Horse power
- D:-Efficiency

Correct Answer:- Option-B

Question24:-If the head available in a proposed hydro-electric power project is 7-15 m of water, then the type of hydraulic turbine suitable for this project is _____.

- A:-Pelton turbine
- B:-Francis turbine
- C:-Deriaz turbine
- D:-Kaplan turbine

Correct Answer:- Option-D

Question25:-The _____ is the thermodynamic vapour power cycle based on which a steam turbine in a steam power plant works.

- A:-Joule cycle
- B:-Brayton cycle
- C:-Rankine cycle
- D:-Otto cycle

Correct Answer:- Option-C

Question26:- A is an $n \times n$ matrix, K is a scalar and $|KA| = r |A|$, then the value of r is

- A:- Kn
- B:- n^K
- C:- K^n
- D:- $(K)/(n)$

Correct Answer:- Option-C

Question27:-For the function $f(x) = x^2 e^{-x}$, the maximum occurs when x is equal to

- A:-2

- B:-1
- C:-0
- D:- $(1)/(2)$

Correct Answer:- Option-A

Question28:-The value of $\int_0^{\pi/4} \sec^4(x)dx$ is

- A:- $(3)/(4)$
- B:- $(4)/(3)$
- C:- $(\pi)/(3)$
- D:- $(\pi)/(4)$

Correct Answer:- Option-B

Question29:-For the differential equation $(dy)/(dx)+5y = 0$; with $y(0) = 1$, the general solution is

- A:- e^{5x}
- B:- $5e^{-5x}$
- C:- $-5e^{-5x}$
- D:- e^{-5x}

Correct Answer:- Option-D

Question30:-The area bounded by the curve $y = \log x$, the x -axis and the ordinates at $x=1$ and $x = 2$ is

- A:- $\log 4 - 1$
- B:- $\log 4-3$
- C:- $\log 2- 2$
- D:- $2 \log 2 + 1$

Correct Answer:- Option-A

Question31:-The coefficients of three consecutive terms in the expansion of $(1 + x)^n$ are in the ratio 1 : 3 : 5, then the value of n is

- A:-3
- B:-5
- C:-7
- D:-9

Correct Answer:- Option-C

Question32:-Line through the points (-2, 6) and (4, 8) is perpendicular to the line through the points $(k, 24)$ and (8, 12) ; then the value of k is

- A:-2
- B:-4
- C:-8
- D:-24

Correct Answer:- Option-B

Question33:-The value of $(\sin x - \sin y)/(\cos x + \cos y)$ is

- A:- $\tan ((x-y)/(2))$
- B:- $\tan ((x+y)/(2))$
- C:- $\cot ((x-y)/(2))$
- D:- $\cot ((x+y)/(2))$

Correct Answer:- Option-A

Question34:-If the line $y = 3x + c$ is a tangent to the curve $y = 2x^2$, then the value of c is

- A:- $(3)/(4)$
- B:- $(9)/(8)$
- C:- $(-3)/(4)$
- D:- $(-9)/(8)$

Correct Answer:- Option-D

Question35:-The solution of the following simultaneous equations

$5x + 3y + 3z = 48$; $2x + 6y - 3z = 18$; $8x - 3y + 2z = 21$ is

- A:- $x = 3, y = 6, z = 5$
- B:- $x = 3, y = 5, z = 6$
- C:- $x = 6, y = 3, z = 5$
- D:- $x = 5, y = 6, z = 3$

Correct Answer:- Option-B

Question36:-As per IS specifications the initial setting time of OPC shall not be less than

- A:-20 minutes
- B:-30 minutes
- C:-60 minutes

D:-120 minutes

Correct Answer:- Option-B

Question37:-Concrete strength depends upon

A:-Water cement ratio

B:-Quality of cement

C:-Quality of aggregate

D:-Quality of water

Correct Answer:- Option-A

Question38:-The strongest bond in brick masonry is

A:-English bond

B:-Flemish bond

C:-Stretcher bond

D:-Header bond

Correct Answer:- Option-A

Question39:-Total number of links in a 30m chain should be

A:-300

B:-150

C:-100

D:-75

Correct Answer:- Option-B

Question40:-Reduced level of a point is its elevation with respect to

A:-Levelled surface

B:-Sea level

C:-Datum surface

D:-Ground surface

Correct Answer:- Option-C

Question41:-The major contributions to weight of a mature cotton fibre is due to

A:-Pectin

B:-Lumen

C:-Primary Wall

D:-Secondary Wall

Correct Answer:- Option-D

Question42:-Pick the odd one out

A:-Polyester

B:-Viscose

C:-Nylon-6

D:-Nylon-66

Correct Answer:- Option-B

Question43:-Medulla is generally found in

A:-Cotton

B:-Silk

C:-Fine wool

D:-Coarse wool

Correct Answer:- Option-D

Question44:-Which of the following fibre with highest moisture regain will exhibit highest wet/dry tenacity?

A:-Cotton

B:-Lyocell

C:-Modal

D:-Viscose

Correct Answer:- Option-B

Question45:-The highest elastic recovery is exhibited by

A:-Viscose

B:-Nomex

C:-Lycra

D:-Acrylic

Correct Answer:- Option-C

Question46:-Polyacrylonitrile polymer can be produced by using

A:-Emulsion polymerization

B:-Condensation polymerization

C:-Ring opening polymerization

D:-Solution polymerization

Correct Answer:- Option-D

Question47:-Density of cotton fibre is approximately

A:-1.52 denier

B:-1.52 g/tex

C:-1.52 kg/`m³`

D:-1.52 g/`cm³`

Correct Answer:- Option-D

Question48:-Correct sequence of major steps for production of viscose fibre is

A:-Steeping-Shredding-Xanthation-Ageing-Dissolution-Ripening-Spinning

B:-Steeping-Dissolution-Xanthation-Shredding-Ageing-Ripening-Spinning

C:-Steeping-Shredding-Ageing-Xanthation-Dissolution-Ripening-Spinning

D:-Steeping-Xanthation-Shredding-Ageing-Dissolution-Ripening-Spinning

Correct Answer:- Option-C

Question49:-Which combination is not correct?

A:-PET - T_g ≈ 79°C

B:-Viscose Rayon - X_c ≈ 35%

C:-Polypropylene - Disperse Dyes

D:-Nomex - Excellent Mechanical Properties

Correct Answer:- Option-D

Question50:-Which of the following statement is correct?

A:-Glauber salt is used in direct dye on cotton and acid dye on wool as a leveling agent

B:-Glauber salt is used in direct dye on cotton and acid dye on wool as an exhausting agent

C:-Glauber salt is used in direct dye on cotton as exhausting agent and acid dye on wool as leveling agent

D:-Glauber salt is used in direct dye on cotton as leveling agent and acid dye on wool as exhausting agent

Correct Answer:- Option-C

Question51:-Dispersing agent is used in disperse dye for polyester

A:-To make insoluble dye water soluble

B:-To increase the exhaustion of disperse dye

C:-To ensure level dyeing

D:-To prevent precipitation of disperse dye

Correct Answer:- Option-D

Question52:-Which is the true condition for reduction of vat dye?

A:-Redox potential of the dye bath must be higher than the dye

B:-Redox potential of the dye must be higher than the dye bath

C:-Redox potential of the dye and dye bath must be equal

D:-None of the above

Correct Answer:- Option-A

Question53:-CSP of yarn is equal to the product of

A:-Yarn count (Ne) and lea strength (lbf)

B:-Yarn tex and lea strength (lbf)

C:-Yarn count (Ne) and lea strength (kgf)

D:-Yarn tex and lea strength (N)

Correct Answer:- Option-A

Question54:-The trash content of cotton as fed to a beater is 3.6%. The waste extraction is 1.5% of which 80% is trash. The cleaning efficiency % of beater is

A:-24%

B:-33.3%

C:-48%

D:-66%

Correct Answer:- Option-B

Question55:-What type of hooks are preferentially removed in roller drafting?

A:-Leading

B:-Trailing

C:-Both sided

D:-Diagonal

Correct Answer:- Option-B

Question56:-Which of the following statements is correct?

- A:-Ring spun yarn is strong and hairy as compared to rotor spun yarn
- B:-Rotor spun yarn is even and weaker as compared to ring spun yarn
- C:-Air jet spun is harsh and compact as compared to ring spun yarn
- D:-All of these

Correct Answer:- Option-D

Question57:-In case of cotton, AFIS can be used to measure

- A:-Strength
- B:-Elongation
- C:-Maturity
- D:-Number of convolutions

Correct Answer:- Option-C

Question58:-A carding machine working at 90% efficiency has doffer speed 42 m/min and production rate 10.6 kg/hr. Assuming no draft between doffer and delivery roller, find the density of sliver in ktex.

- A:-2
- B:-3
- C:-4
- D:-5

Correct Answer:- Option-D

Question59:-As compared to the yarn fault A1, the fault D4 is

- A:-Thinner and longer
- B:-Thinner and shorter
- C:-Thicker and longer
- D:-Thicker and shorter

Correct Answer:- Option-C

Question60:-On a ring frame, the spindle speed is 16,000 rpm. If the yarn twist is 8 turns per cm and winding on circumference is 4 cm, the traveler rpm would be

- A:-16160
- B:-15840
- C:-15500
- D:-16500

Correct Answer:- Option-B

Question61:-In a comb, if the feeding takes place when the nippers are going backwards, it is called

- A:-Asymmetric feed
- B:-Reverse feed
- C:-Forward feed
- D:-None of these

Correct Answer:- Option-B

Question62:-For a balanced twist two fold yarn, F/S twist ratio i.e. folding twist/spinning twist =

- A:-2/3
- B:-1/2
- C:-1
- D:-none

Correct Answer:- Option-A

Question63:-Bobbin leading mechanism is preferred over flyer lead mechanism in roving frame because

- A:-It helps to reduce the power requirements of the machine
- B:-When roving breaks, it will trail and not unwind
- C:-Both of these
- D:-None of these

Correct Answer:- Option-C

Question64:-The most suitable yarn out of followings to run at warping/weaving will be

- A:-Tenacity = 22 gpt, Strength CV = 8%
- B:-Tenacity = 22 gpt, Strength CV = 18%
- C:-Tenacity = 20 gpt, Strength CV = 12%
- D:-Tenacity = 20 gpt, Strength CV = 18%

Correct Answer:- Option-A

Question65:-The wasted movement in a loom is maximum in case of

- A:-Bottom closed shed
- B:-Semi-open shed
- C:-Open shed

D:-Centre closed shed

Correct Answer:- Option-A

Question66:-In case of surface driven winding package, as the winding proceeds, angle of wind

A:-increases

B:-decreases

C:-remains constant

D:-first increases then decreases

Correct Answer:- Option-C

Question67:-In a sizing process, if add-on % is 14% and size paste concentration is 16%, the Wet pick-up% would be

A:-88%

B:-115%

C:-16%

D:-50%

Correct Answer:- Option-A

Question68:-Arrange 20 Ne, 20 Nm and 20 tex yarn in increasing order of fineness

A:-20 Ne, 20 Nm, 20 tex

B:-20 Nm, 20 Ne, 20 tex

C:-20 tex, 20 Ne, 20 Nm

D:-20 Ne, 20 tex, 20 Nm

Correct Answer:- Option-B

Question69:-A loom is designed to run at 440 ppm. If the fabric width is 2.5 m and weft crimp on loom is 6%, calculate weft insertion rate in m/min

A:-1000 m/min

B:-583 m/min

C:-1166 m/min

D:-1760 m/min

Correct Answer:- Option-C

Question70:-Which of the following knitted fabrics are visually different on face and back sides?

A:-Plain

B:-1 × 1 rib

C:-1 × 1 purl

D:-Interlock

Correct Answer:- Option-A

Question71:-A cotton woven fabric has 25 ends per cm and 28 picks per cm. The tex of warp and weft yarn are 30 and 15 respectively. Calculate the gsm of the fabric, assuming warp and weft crimp to be 12% and 6% respectively.

A:-102

B:-110

C:-84

D:-129

Correct Answer:- Option-D

Question72:-The maximum twist loss occurring in weft yarn on latest air jet weaving machine is

A:-14%

B:-24%

C:-4%

D:-none of these

Correct Answer:- Option-A

Question73:-Under lap of warp knitted fabric is basically equivalent to

A:-Closed loop

B:-Sinker loop

C:-Needle loop

D:-Open loop

Correct Answer:- Option-B

Question74:-The advantage/s of electronic jacquard over mechanical jacquard is/are

A:-High speed hook selection

B:-Elimination of cylinder, needles and design card

C:-Can be interfaced with CAD

D:-All of the these

Correct Answer:- Option-D

Question75:-Tip to tip transfer of weft takes place in

- A:-Airjet looms
- B:-Projectile looms
- C:-Gabler system
- D:-Dewas system

Correct Answer:- Option-D

Question76:-The speed of yarn in m/sec on a 30 rpm 30 inch diameter 20 gauge rib machine knitting 2 mm loop length is approximately

- A:-1.8
- B:-2
- C:-3.6
- D:-none of these

Correct Answer:- Option-A

Question77:-The application of a series of stitches or stitch types to one or several thicknesses of the material is called

- A:-Stitch
- B:-Seam
- C:-Sewing
- D:-Looping

Correct Answer:- Option-B

Question78:-The technique used to reduce or enlarge a given size pattern is called

- A:-Patterning
- B:-Grading
- C:-Marking
- D:-None of these

Correct Answer:- Option-B

Question79:-According to British Standard classification of stitches, lockstitch comes under

- A:-Class 200
- B:-Class 300
- C:-Class 400
- D:-Class 500

Correct Answer:- Option-B

Question80:-The part of the sewing machine that moves the fabric along by a predetermined amount between successive stitches is called

- A:-Throat plate
- B:-Presser foot
- C:-Feed Dog
- D:-Over edger

Correct Answer:- Option-C

Question81:-_____ stitch is frequently used on long seams in trousers.

- A:-Lock stitch
- B:-Multi-thread chain stitch
- C:-Hand stitch
- D:-Over edge chain stitch

Correct Answer:- Option-B

Question82:-Which of the following statements is correct?

- A:-In a lock stitch machine, the bobbin thread operates at a much higher tension than the needle thread
- B:-In a lock stitch machine, the needle thread operates at a much higher tension than the bobbin thread
- C:-In a lock stitch machine, the needle thread and bobbin thread operates at a similar tension
- D:-None of these

Correct Answer:- Option-B

Question83:-Choose the correct set of statements :

- P. Denim is a weft faced twill cloth made from dyed warp and grey weft yarn
 - Q. Leno weaves are made from doup and standard threads, which are made to cross each other between picks
 - R. Sateen is a warp faced fabric
 - S. Repp is a plain weave fabric with a prominently weft way rib made from two warps and two wefts
- A:-P, R
 - B:-P, S
 - C:-Q, S

D:-Q, R

Correct Answer:- Option-C

Question84:-The steep angled twill can be designed

A:-with ends per cm higher than picks per cm

B:-with upward steps more than outward steps

C:-none of these

D:-both of these

Correct Answer:- Option-D

Question85:-Terry weaves belong to

A:-Warp pile structures

B:-Weft pile structures

C:-Carpet structures

D:-None of these

Correct Answer:- Option-A

Question86:-_____ weaving comes under Extra weft figuring.

A:-Lappet

B:-Swivel

C:-Velveteen

D:-None of these

Correct Answer:- Option-B

Question87:-The primary distinction between a design principle and a design element is

A:-that principles are abstract and elements are concrete

B:-that elements are abstract and principles are concrete

C:-that principles are two dimensional and elements are three dimensional

D:-there is no clear distinction

Correct Answer:- Option-A

Question88:-Design and lifting plan look alike for

A:-straight draft

B:-skip draft

C:-pointed draft

D:-satin draft

Correct Answer:- Option-A

Question89:-Which one is not a measure of Central Tendency

A:-Mean

B:-Mean deviation

C:-Median

D:-Mode

Correct Answer:- Option-B

Question90:-Approximate moisture regain of acrylic fibre under standard conditions is

A:-4%

B:-0.4%

C:-2%

D:-12%

Correct Answer:- Option-C

Question91:-Presence of immature fibre in a sample of cotton fibre will have following effect on passage of air in the sample (at a constant pressure head)

A:-Increase air flow

B:-Decrease air flow

C:-No change of air flow

D:-First increase air flow

Correct Answer:- Option-B

Question92:-Elmendorf tearing strength tester measures

A:-Energy loss

B:-Bursting load

C:-Breaking load

D:-None of these

Correct Answer:- Option-A

Question93:-U%, as measured by Uster Evenness Tester is

A:-CV% of mass variation

B:-CV% of diameter variation

C:-PMD of mass variations

D:-None of these

Correct Answer:- Option-C

Question94:-One Kilogram of a 20 tex yarn will have a length of

A:-10 yard

B:-5 Km

C:-10 Km

D:-50 Km

Correct Answer:- Option-D

Question95:-Two roving with a CV of 8% each are fed into a spinning zone and if the spinning unit adds 8% CV, the CV% of output yarn will be approximately?

A:-9.8%

B:-16%

C:-8%

D:-none

Correct Answer:- Option-A

Question96:-An eccentric top roller in a drafting system leads to

A:-Change in draft with oscillation of nip line

B:-Change in draft without oscillation of nip line

C:-Neither change in draft nor oscillation of nip line

D:-Oscillation of nip line only

Correct Answer:- Option-D

Question97:-The angle of projectile weaving machine from front to back is

A:-8°

B:-6°

C:-5°

D:-4°

Correct Answer:- Option-D

Question98:-Erection tools and equipments used for projectile weaving machine is/are

A:-Zero error spirit level

B:-Jack

C:-Zero error adjustable spirit level and jack

D:-None of these

Correct Answer:- Option-C

Question99:-Total Base Number (TBN) which is important for deciding discard of oil (Lubricants) decreases due to

A:-Oxidation of oil

B:-Water contamination

C:-Both of these

D:-None of these

Correct Answer:- Option-C

Question100:-Bearings are to be used to meet following requirements

(i) High speed rotation

(ii) Low vibrations

(iii) Low friction

Which one is best suited to meet above requirements?

A:-Deep groove ball bearing

B:-Thrust ball bearing

C:-Cylinder roller bearing

D:-Tapered roller bearing

Correct Answer:- Option-A