

FINAL ANSWER KEY

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Question1:-If VARANASI is coded to WCUESGZQ, then the code of KOLKATA ?

- A:-LQOOFZH
- B:-LQOZEH
- C:-LQOEEZH
- D:-LQOOFH

Correct Answer:- Option-A

Question2:-Two numbers are in the ratio 6 : 7. If 15 is added to both the numbers their ratio becomes 11 : 12. The numbers are

- A:-60, 70
- B:-18, 28
- C:-18, 21
- D:-12, 14

Correct Answer:- Option-C

Question3:-What is the one fourth of 2^{30} ?

- A:- 2^{49}
- B:- 2^{25}
- C:- 2^{26}
- D:- 2^{48}

Correct Answer:- Option-D

Question4:-If $a^2 + b^2 = 34$ and $a + b = 8$, then $a - b =$ ____

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

Correct Answer:- Option-C

Question5:- $29 \div 203 =$ _____

- A:-15%
- B:-14%
- C:-7%
- D:-100/7%

Correct Answer:- Option-D

Question6:-In an arithmetic progression (A.P.) 10^{th} term is 17 and 17^{th} term is 10. What is the common difference of the A.P. ?

- A:-2
- B:-1
- C:-1
- D:-2

Correct Answer:- Option-C

Question7:-Odd one is

- A:-Square
- B:-Cylinder
- C:-Cube
- D:-Cuboid

Correct Answer:- Option-A

Question8:- $\frac{3}{4} + \frac{1}{2} - \frac{1}{4} - \frac{1}{8} =$ _____

A:- $\frac{5}{8}$

B:- $\frac{7}{8}$

C:- $\frac{3}{4}$

D:- $\frac{1}{2}$

Correct Answer:- Option-B

Question9:-Radius of the largest sphere which can be made from a cube of side 8 cm ?

A:-8 cm

B:-4 cm

C:- $4\sqrt{2}$ cm

D:- $2\sqrt{2}$ cm

Correct Answer:- Option-B

Question10:-If 1st of April, 2015 was Wednesday, then 31st of July, 2015 ?

A:-Friday

B:-Thursday

C:-Wednesday

D:-Tuesday

Correct Answer:- Option-A

Question11:-The type of drive which does not give a constant velocity ratio

A:-Gear drive

B:-Chain drive

C:-Rope drive

D:-None of the above

Correct Answer:- Option-C

Question12:-In a simple gear drive, a gear A having teeth 24 and speed 200 rpm drives gear B having teeth 12. The speed of gear B is

A:-100 rpm

B:-400 rpm

C:-300 rpm

D:-None of the above

Correct Answer:- Option-B

Question13:-The radial distance between the pitch circle and outer circle of a spur gear is

A:-Addendum

B:-Dedendum

C:-Clearance

D:-None of the above

Correct Answer:- Option-A

Question14:-The module of a gear refers

A:-Ratio between pitch circle diameter and number of teeth

B:-Ratio between number of teeth and pitch circle diameter

C:-Ratio between circumference of pitch circle and number of teeth

D:-None of the above

Correct Answer:- Option-A

Question15:-The diametral pitch of a gear having number of teeth 16 and pitch circle diameter 80 mm is

A:-5/mm

B:-8/mm

C:-0.2/mm

D:-None of the above

Correct Answer:- Option-C

Question16:-The product of circular pitch and diametral pitch of a gear is given by

A:-1

B:- $1/\pi$

C:- 2π

D:- π

Correct Answer:- Option-D

Question17:-The gear used to overcome the lateral thrust in the shaft is

A:-Bevel gear

B:-Worm and worm wheel

C:-Herring bone gear

D:-None of the above

Correct Answer:- Option-C

Question18:-The following materials give corrosion resistance to gears

A:-Hard materials

B:-Non ferrous materials

C:-Hardened steel

D:-None of the above

Correct Answer:- Option-B

Question19:-The true statement in the case of gears.

A:-Addendum is less than dedendum

B:-Pitch circle diameter is equal to the product of module and number of teeth

C:-Pitch circle is always greater than the base circle

D:-All the above

Correct Answer:- Option-D

Question20:-The centre distance between the mating spur gears is equal to

A:-Sum of the radii of the pitch circles

B:- $0.5 \times$ (sum of the radii of pitch circles)

C:- $2 \times$ sum of the radii of the pitch circles

D:-None of the above

Correct Answer:- Option-A

Question21:-The difference between maximum and minimum limits of the size is called

A:-Tolerance

B:-Allowance

C:-Deviation

D:-None of the above

Correct Answer:- Option-A

Question22:-The algebraic difference between an actual size and the corresponding basic size is called

A:-Upper deviation

B:-Actual deviation

C:-Lower deviation

D:-None of the above

Correct Answer:- Option-B

Question23:-The difference between the minimum limit of a hole and maximum limit of shaft is

A:-Maximum clearance

B:-Average clearance

C:-Minimum clearance

D:-None of the above

Correct Answer:- Option-C

Question24:-There is either a positive clearance or negative clearance in

- A:-Transition fit
- B:-Clearance fit
- C:-Interference fit
- D:-None of the above

Correct Answer:- Option-A

Question25:-In hole basis system and for a clearance fit, the basic size of shaft is 30 mm, minimum clearance is 0.02 mm, tolerance on hole is 0.033 mm, tolerance on shaft is 0.021 mm. The maximum limit of hole equals

- A:-30 mm
- B:-30.033 mm
- C:-29.98 mm
- D:-None of the above

Correct Answer:- Option-B

Question26:-In hole basis system

- A:-The minimum limit of hole is equal to the basic size of the hole
- B:-The maximum limit of shaft is equal to the basic size of the shaft
- C:-The minimum limit of shaft is equal to the basic size of the shaft
- D:-None of the above

Correct Answer:- Option-A

Question27:-In shaft basis system the maximum limit of shaft is

- A:-Less than the basic size of the shaft
- B:-Greater than the basic size of the shaft
- C:-Equal to the basic size of the shaft
- D:-None of the above

Correct Answer:- Option-C

Question28:-The extent to which the measured value deviates from the true value is called

- A:-Error
- B:-Accuracy
- C:-Range
- D:-None of the above

Correct Answer:- Option-B

Question29:-The ratio of output to input for a given measuring system refers

- A:-Efficiency
- B:-Linearity
- C:-Stability
- D:-Sensitivity

Correct Answer:- Option-D

Question30:-The advantage of vernier caliper over micrometer is that

- A:-Is easier and quicker to use
- B:-Is more accurate
- C:-Can be used to make both inside and outside measurements over a range of sizes
- D:-All of the above

Correct Answer:- Option-C

Question31:-The valve permits movement of fluid in one direction only is called

- A:-Gate valve
- B:-Globe valve
- C:-Check valve
- D:-None of the above

Correct Answer:- Option-C

Question32:-In a 3/2 Directional control valve

- A:-3 represents number of positions and 2 represents number of ports
- B:-3 represents number of ports and 2 represents number of positions
- C:-3 represents the type of actuator and 2 represents number of positions
- D:-None of the above

Correct Answer:- Option-B

Question33:-The compressed air has the advantage

- A:-Can be stored easily
- B:-Air is available anywhere
- C:-High speed operation
- D:-All of the above

Correct Answer:- Option-D

Question34:-In a single acting pneumatic cylinder

- A:-The compressed air is applied in one side of the piston
- B:-The compressed air is applied in two sides of the piston
- C:-The system has single cylinder
- D:-None of the above

Correct Answer:- Option-A

Question35:-The absolute viscosity is

- A:-Kinematic viscosity \times mass density
- B:-Kinematic viscosity/mass density
- C:-Mass density/Kinematic viscosity
- D:-None of the above

Correct Answer:- Option-A

Question36:-Example of positive displacement pump

- A:-Gear pump
- B:-Piston pump
- C:-Vane pump
- D:-All the above

Correct Answer:- Option-D

Question37:-Disadvantage of Hydraulic system

- A:-Maintenance cost
- B:-Leakage
- C:-Fire hazard
- D:-All the above

Correct Answer:- Option-D

Question38:-In Redwood Viscometer, the viscosity can be measured by measuring the time to fill a flask with volume equal to

- A:-100 ml
- B:-200 ml
- C:-50 ml
- D:-60 ml

Correct Answer:- Option-C

Question39:-Valve switching positions are represented by

- A:-Circles
- B:-Squares
- C:-Triangles
- D:-None of the above

Correct Answer:- Option-B

Question40:-Example for valve actuation method

- A:-Lever operated

- B:-Push button type
- C:-Foot pedal operated
- D:-All the above

Correct Answer:- Option-D

Question41:-In a CNC machine tool, the part programme entered into computer memory

- A:-Can be used only once
- B:-Can be used again and again
- C:-Can be used again but it has to be modified every time
- D:-Cannot say

Correct Answer:- Option-B

Question42:-Several machine tools can be controlled by a central computer in

- A:-NC Machine tool
- B:-DNC Machine tool
- C:-CNC Machine tool
- D:-None of the above

Correct Answer:- Option-B

Question43:-NC Machine

- A:-Has no memory
- B:-Has memory
- C:-Is interfaced with computer
- D:-None of the above

Correct Answer:- Option-A

Question44:-Axis parallel to the spindle of CNC Machine is

- A:-X axis
- B:-Y axis
- C:-Z axis
- D:-A axis

Correct Answer:- Option-C

Question45:-The G function G28 refers for

- A:-Tool offset
- B:-Screw cutting cycle
- C:-Return to reference point
- D:-Tool nose radius compensation

Correct Answer:- Option-C

Question46:-In CNC lathe the miscellaneous function M 08 refers to

- A:-Coolant on
- B:-Tool change
- C:-Coolant off
- D:-None of the above

Correct Answer:- Option-A

Question47:-In a CNC lathe, if N is the speed in rpm and D is the diameter of work piece in mm, then cutting speed is

- A:- $\frac{\pi DN}{60}$ m/min
- B:- $\frac{\pi DN}{1000}$ m/min
- C:- $\frac{\pi DN}{60}$ m/min
- D:-None of the above

Correct Answer:- Option-B

Question48:-Data in absolute dimension system

- A:-Refers to a fixed reference point
- B:-Previously dimensioned position
- C:-Refers both fixed reference point and previously dimensioned position

D:-None of the above

Correct Answer:- Option-A

Question49:-In an NC programme character N represents

A:-Preparatory function

B:-Block Number

C:-Tool

D:-None of the above

Correct Answer:- Option-B

Question50:-In CNC, tool change is represented by

A:-M 03

B:-M 04

C:-M 05

D:-M 06

Correct Answer:- Option-D

Question51:-The step to be taken to control the bleeding from a nose is

A:-Lie casualty down and pinch soft part of nose

B:-Lie casualty down and pinch top of nose

C:-Sit casualty down, lean backward and pinch soft part of nose

D:-Sit casualty down, lean forward and pinch soft part of nose

Correct Answer:- Option-D

Question52:-For treating an electrical burn, the first action is

A:-Ensure that the casualty is still breathing

B:-Wash the burn with cold water

C:-Check for danger and ensure that contact with the electrical source is broken

D:-None of the above

Correct Answer:- Option-C

Question53:-Industrial safety management is the branch of management which concerned with

A:-Reducing hazards

B:-Controlling hazards

C:-Eliminating hazards

D:-All the above

Correct Answer:- Option-D

Question54:-Water Fire Extinguisher is suitable for extinguishing fire involving

A:-Paper and wood

B:-Flammable liquid

C:-Flammable gas

D:-Electrical apparatus

Correct Answer:- Option-A

Question55:-Class B fire represents fire involving

A:-Paper and wood

B:-Flammable liquid

C:-Flammable gas

D:-Electrical apparatus

Correct Answer:- Option-B

Question56:-An accident may be defined as

A:-An unexpected occurrence which may involve injury

B:-An unexpected occurrence which may or may not involve injury

C:-Unexpected and unplanned occurrence which may or may not involve injury

D:-None of the above

Correct Answer:- Option-C

Question57:-Accidents occur due to

- A:-Lack of knowledge on the activity being undertaken
- B:-Lack of discipline and control
- C:-Lack of safety aspects in design
- D:-All the above

Correct Answer:- Option-D

Question58:-Energy conservation means

- A:-Reducing energy consumption by reducing the production
- B:-Reducing energy consumption without compromising in the quality and quantity of production
- C:-Increasing the output by consuming more energy
- D:-Reducing energy consumption by reducing output

Correct Answer:- Option-B

Question59:-Preventive maintenance helps

- A:-Prolonged life of equipments
- B:-Reduction in unexpected breakdowns
- C:-To ensure accuracy of the equipments thus maintaining the quality and continuity of production
- D:-All the above

Correct Answer:- Option-D

Question60:-The monthly preventive maintenance schedule is prepared in

- A:-Proforma 1
- B:-Proforma 2
- C:-Proforma 3
- D:-None of the above

Correct Answer:- Option-C

Question61:-A 25 W and 100 W bulb are joined in series and connected to the mains of 220 V. Which bulb will glow brighter ?

- A:-25 W bulb
- B:-100 W bulb
- C:-Both bulbs will glow brighter
- D:-None will glow brighter

Correct Answer:- Option-A

Question62:-Which one is more efficient damping system ?

- A:-Air friction
- B:-Eddy current
- C:-Gravity control
- D:-Fluid friction

Correct Answer:- Option-B

Question63:-Example for an Integrated instrument is

- A:-Galvanometer
- B:-Ammeter
- C:-Wattmeter
- D:-Energy meter

Correct Answer:- Option-D

Question64:-In measuring instruments spring is made from

- A:-Silver
- B:-Copper
- C:-Phosphor bronze
- D:-Aluminium

Correct Answer:- Option-C

Question65:-Which of the following has low resistance ?

- A:-Insulation resistance

- B:-Armature resistance
 - C:-Field winding resistance
 - D:-25 W lamp resistance
- Correct Answer:- Option-B

Question66:-Which of the following is suitable for measurement of capacitance ?

- A:-Whetstone's bridge
 - B:-Maxwell's bridge
 - C:-Schering's bridge
 - D:-Anderson's bridge
- Correct Answer:- Option-C

Question67:-Two 10 Ω resistances are connected in parallel and that combination is connected in series with a 5 Ω resistance. The effective resistance is

- A:-25 Ω
 - B:-10 Ω
 - C:-15 Ω
 - D:-20 Ω
- Correct Answer:- Option-B

Question68:-In purely inductive circuit power become

- A:-Maximum
 - B:-Minimum
 - C:-Zero
 - D:-Average
- Correct Answer:- Option-C

Question69:-An SCR is a _____ triggered device.

- A:-Current
 - B:-Voltage
 - C:-Current and voltage
 - D:-Power
- Correct Answer:- Option-A

Question70:-If firing angle is increased, then the output of an SCR

- A:-Remains the same
 - B:-Is increased
 - C:-Is decreased
 - D:-None of the above
- Correct Answer:- Option-C

Question71:-In a transformer zero voltage regulation at full load is

- A:-Possible at UPF load
 - B:-Possible at lagging PF load
 - C:-Possible at leading PF load
 - D:-Not possible
- Correct Answer:- Option-C

Question72:-In a 6 pole wave connected armature, the number of parallel paths are

- A:-2
 - B:-4
 - C:-6
 - D:-8
- Correct Answer:- Option-A

Question73:-Form Factor is the ratio of

- A:-Maximum value/RMS value
- B:-RMS value/Maximum value
- C:-Average value/RMS value

D:-RMS value/Average value

Correct Answer:- Option-D

Question74:-In 3 phase power measurement by two wattmeter method one of the wattmeter read zero when PF become

A:-1

B:-0.5

C:-0

D:-None of the above

Correct Answer:- Option-B

Question75:-Eddy current loss will depends on

A:-Temperature

B:-Current

C:-Voltage

D:-Frequency

Correct Answer:- Option-D

Question76:-Core of a transformer is laminated for reduce

A:-Hysteresis loss

B:-Eddy current loss

C:-Friction loss

D:-Copper loss

Correct Answer:- Option-B

Question77:-In case of delta-star connection of three phase transformer, secondary line voltage with respect of primary line voltage is at

A:-60 degree lagging

B:-60 degree leading

C:-30 degree leading

D:-30 degree lagging

Correct Answer:- Option-C

Question78:-In a bipolar transistor the thinnest region is

A:-Emitter

B:-Collector

C:-Base

D:-Collector and Base

Correct Answer:- Option-C

Question79:-For maximum transfer of power, internal resistance of the source should be

A:-Less than that of the load

B:-More than that of the load

C:-Equal to load resistance

D:-Zero

Correct Answer:- Option-C

Question80:-Super-Position Theorem is applicable for a

A:-Linear Uni-lateral Network

B:-Non-Linear Bilateral Network

C:-Non-Linear Uni-lateral Network

D:-Linear Bilateral Network

Correct Answer:- Option-D

Question81:-Which of the following motor has a high starting torque ?

A:-DC series motor

B:-Synchronous motor

C:-Slip ring motor

D:-AC series motor

Correct Answer:- Option-A

Question82:-The efficiency of a transformer is maximum when

- A:-Its Cu loss equals iron loss
- B:-Its Cu loss greater than iron loss
- C:-Its Cu loss less than iron loss
- D:-It runs at half load

Correct Answer:- Option-A

Question83:-Earth fault relays are

- A:-Under voltage relay
- B:-Directional relay
- C:-Non-directional relay
- D:-Over voltage relay

Correct Answer:- Option-B

Question84:-Which of the following relays has inherent directional characteristics ?

- A:-Power relay
- B:-Impedance relay
- C:-Mho relay
- D:-Reactance relay

Correct Answer:- Option-C

Question85:-Which braking system is used to save energy during braking ?

- A:-Plugging
- B:-Rheostatic braking
- C:-Dynamic braking
- D:-Regenerative braking

Correct Answer:- Option-D

Question86:-Commutator in DC generator is used for

- A:-Reduce sparking
- B:-Increase voltage
- C:-Collecting of current
- D:-Convert AC armature current in to DC

Correct Answer:- Option-D

Question87:-If field current is decreased in a shunt motor, the speed

- A:-Decreases
- B:-Increases
- C:-Remains same
- D:-Zero

Correct Answer:- Option-B

Question88:-Inter pole winding is connected in

- A:-Series with armature
- B:-Parallel with armature
- C:-Series with main poles
- D:-Parallel with main poles

Correct Answer:- Option-A

Question89:-The time base signal in a CRO is

- A:-A square wave signal
- B:-A sinusoidal signal
- C:-A saw tooth signal
- D:-A triangular wave signal

Correct Answer:- Option-C

Question90:-The effect of increasing the length of the air gap in an induction motor will be to increase

- A:-Air gap flux

B:-Torque

C:-Magnetising current

D:-Speed

Correct Answer:- Option-C

Question91:-The demand factor for the electrical system is the ratio of

A:-Maximum demand to connected load

B:-Maximum demand to total power

C:-Average load to maximum power

D:-Relative power to total power

Correct Answer:- Option-A

Question92:-For the operation of a depletion-type N-MOSFET, the gate voltage has to be

A:-Zero

B:-High positive

C:-High negative

D:-Low negative

Correct Answer:- Option-A

Question93:-Ideal operational amplifier has input impedance of

A:-10 MΩ

B:-100 MΩ

C:-Zero

D:-Infinity

Correct Answer:- Option-D

Question94:-The phenomenon of rise in voltage at the receiving end of the open circuited line is called

A:-Skin effect

B:-Corona effect

C:-Ferranti effect

D:-Stroboscopic effect

Correct Answer:- Option-C

Question95:-The material generally used for armouring of high voltage cable is

A:-Steel

B:-P.V.C.

C:-Copper

D:-Aluminium

Correct Answer:- Option-A

Question96:-Three phase voltages are applied to the three windings of an electrical machine. If any two Supply terminals are interchanged, then the rotating MMF wave

A:-Direction remains same, amplitude unaltered

B:-Direction remains same, amplitude alters

C:-Direction reverses, amplitude unaltered

D:-Direction reverses, amplitude alters

Correct Answer:- Option-C

Question97:-In DC Generator Brushes are placed

A:-Along magnetic neutral axis

B:-Perpendicular to magnetic neutral axis

C:-Perpendicular to geometrical neutral axis

D:-Along geometrical neutral axis

Correct Answer:- Option-D

Question98:-Unit of Luminous intensity of a source is

A:-Flux

B:-Lumen

C:-Steradian

D:-Candela

Correct Answer:- Option-D

Question99:-Reduction factor of a source is given by the ratio of

A:-M.H.C.P./M.S.C.P.

B:-M.S.C.P./M.H.C.P.

C:-M.S.C.P./Total flux

D:-M.H.C.P./Total flux

Correct Answer:- Option-B

Question100:-Reciprocal of reluctance is called

A:-Reluctivity

B:-Conductivity

C:-Permeance

D:-Conductance

Correct Answer:- Option-C