In an impulse turbine
A) The steam is expanded in nozzles only and there is a pressure drop and heat drop
B) The steam is expanded both in fixed and moving blades continuously
C) The steam is expanded in moving blades only
D) The pressure and temperature of steam remains constant
ANSWER:A

In a reaction turbine
A) The steam is allowed to expand in the nozzle, where it gives a high velocity before it enters the moving blades
B) The expansion of steam takes place partly in the fixed blades and partly in the moving blades
C) The steam is expanded from a high pressure to a condenser pressure in one or more nozzles
D) The pressure and temperature of steam remains constant
ANSWER: B

The parson's reaction turbine has.....
A) Only moving blades
B) Only fixed blades
C) Identical moving and fixed blades
D) Fixed and moving blades of different shape
ANSWER: C

Impulse water turbine requires
A) High head and low discharge
B) High head and high discharge
C) Low head and low discharge
D) Low head and high discharge
ANSWER:A

Which of the following is an impulse turbine?
A) Pelton turbine
B) Francis turbine
C) Kaplan turbine
D) Propeller turbine
ANSWER:A

Pelton turbines are used for _____
A) medium head applications
B) low head applications
C) in steam power plants
D) for high head and low discharge applications
ANSWER: D

In which turbine the pressure energy of water is first converted into kinetic energy by means of nozzle kept close to the runner?
A) Impulse turbine
B) Reaction turbine
C) Both A and B
D) None of these
ANSWER: A

which of the following is a impulse turbine
A) Pelton wheel
B) Kaplan Turbine
C) Francis Turbine
D) Propeller Turbine

ANSWER: A

The jet of water coming out of nozzle at high velocity strikes
A) Moving Blades
B) Fixed Blades
C) Pelton Cups
D) Symmetric Blades
ANSWER: C

A pipe conveying water from Dam to water Turbine
A) Penstock
B) TailStock
C) Runner
D) Stator
ANSWER: A

Penstock is a pipe used to
A) conveying water from Dam to water Turbine
B) Safety Valve
C) Conveying water from turbine to river
D) Checks Pressure
ANSWER: A

The potential energy of water gets completely converted to kinetic energy in _____
A) Impulse water Turbine
B) Reaction water Turbine
C) Kaplan Water Turbine
D) Francis Water Turbine
ANSWER: A

The potential energy of water gets completely converted to kinetic energy in _____
A) Pelton Wheel
B) Propeller water Turbine
C) Kaplan Water Turbine
D) Francis Water Turbine
ANSWER: A

The fixed blades are designed so that the space between the blades has the shape of a nozzle, this happens in _____
A) Impulse steam turbine
B) Reaction steam turbine
C) Propeller turbine
D) Pelton Wheel
ANSWER: B

In a _____ the net propelling force is the vector sum of the impulse and the reaction force of the jet of steam
A) Impulse steam turbine
B) Reaction steam turbine
C) Propeller turbine
D) Pelton Wheel
ANSWER: B

A safety valve usually employed with boilers is
A) safety valve
B) Steam Stop valve

C) Feed Check valve
D) All of these
ANSWER: D

Cochran boiler is a
A) Horizontal fire tube boiler
B) Horizontal water tube boiler
C) Vertical water tube boiler
D) Vertical fire tube boiler
ANSWER: D

Blow off cock in a boiler is used to
A) Control the flow of steam from the boiler to the main pipe and to shut off the steam completely when required
B) Empty the boiler when required and to discharge the mud, scale or sediments which are accumulated at the bottom of the boiler
C) Put off fire in the furnace of the boiler when the level of water in the boiler falls to an unsafe limit
D) Increase the temperature of saturated steam without raising its pressure
ANSWER: B

Which of the following is a water tube boiler
A) Locomotive boiler
B) Lancashire boiler
C) Cornish boiler
D) Babcock and wilcox boiler
ANSWER: D

The economiser is used in boilers to.....
A) Increase thermal efficiency of boiler
B) Economise on fule
C) Extract heat from the exhaust the gases
D) Increase flue gas temperature
ANSWER: A

An economiser in a boiler
A) Increases steam pressure
B) Increases steam flow
C) Decreases fuel consumption
D) Decreases steam pressure
ANSWER: C

The water tubes in a simple vertical boiler are
A) Horizontal
B) Vertical
C) Inclined
D) All of the above
ANSWER: C

Water tube boilers are those in which
A) Flue gases pass through tubes and water around it
B) Water passes through the tubes and flue gases around it
C) Work is done during adiabatic expansion
D) Change is enthalpy
ANSWER: B

Fire tube boilers are those in which

A) Flue gases pass through tubes and water around it
B) Water passes through the tubes and flue gases around it
C) Work is done during adiabatic expansion
D) Change is enthalpy
ANSWER: A

Water tube boilers produces steam at a..... pressure than that of fire tube boilers.
A) Higher
B) Lower
C) Same
D) None of the above
ANSWER: A

A _____ in a boiler is used to put off fire in the furnace of the boiler when the level of water in the boiler falls to an unsafe limit.
A) Blow off cock
B) Fusible plug
C) Stop valve
D) Safety valve
ANSWER: B

Which of the following is not a boiler mounting?
A) Blow off cock
B) Feed check valve
C) Economiser
D) Fusible plug
ANSWER: C

Steam in water tube boiler as compared to fire tube boiler
A) Can be raised rapidly
B) Is raised at slower rate
C) Is raised at same rate
D) Could be raised at fast/slow rate depending on design
ANSWER: A

Superheating of steam is done at
A) Constant volume
B) Constant temperature
C) Constant pressure
D) Constant entropy
ANSWER: C

The principal function of a stop valve is to
A) Control the flow of steam from the boiler to the main pipe and to shut off the steam completely when required
B) Empty the boiler when required and to discharge the mud, scale or sediments which are accumulated at the bottom of the boiler
C) Put off fire in the furnace of the boiler when the level of water in the boiler falls to an unsafe limit
D) Increase the temperature of saturated steam without raising its pressure
ANSWER: A

Sources of energy
The quality of the coal is the measure of the following characteristics?
A) Percentage of Sulphur
B) Percentage of moisture
C) Percentage of carbon

D) How black it is
ANSWER : C

Fossil fuels are derived from the following sources?
A) Organic matter trapped in the Sedimentary rock
B) Non-organic matter trapped in the metamorphic rock
C) Organic matter trapped in the igneous rock
D) Organic matter on the earth crusts.
ANSWER: A

Natural gas is mainly composed of which type of gas?
A) Propane
B) Butane
C) Methane
D) Ethane
ANSWER: C

The amount of energy available in the wind at any instant is proportional to ___ of the wind speed.
A) Square root power of two
B) Cube Power
C) Square power
D) Square root power of three
ANSWER: B

Reflecting mirrors used for exploiting solar energy are called.....
A) Mantle
B) Ponds
C) Diffusers
D) Heliostats
ANSWER: D

The voltage of a single solar cell is.....
A) 0.2 v
B) 0.5 v
C) 1.0 v
D) 2.0 v
ANSWER: B

Difference between water height at high tide and water height at low tide is called _____
A) Tidal Variation
B) Tidal volume
C) Tidal Range
D) Tidal Current
ANSWER: C

How are moderate active solid wastes disposed?
A) Buried underground
B) Dumped to sea
C) Sent to outer space
D) Left out in streams or rivers
ANSWER: A

Which reactor consists of both fertile and fissile material?
A) Fast breeder reactor
B) Pressurize water reactor
C) Boiling Water reactor

D) Converter reactor
ANSWER: A

In hydel power plants, the water from dam is drawn by the _____
A) Canal
B) Hose
C) Stream
D) Penstock
ANSWER: D

The main function of centrifugal pumps is to _____
A) Transfer speed
B) Transfer pressure
C) Transfer temperature
D) Transfer energy
ANSWER: D

Centrifugal pumps transfer energy from _____
A) Rotor to fluid
B) Fluid to rotor
C) Draft to rotor
D) Rotor to draft
ANSWER: D

The power required for the compression is supplied by _____
A) Electric motor
B) Turbine
C) Pump
D) None of the mentioned
ANSWER: A

Compressors are used in
A) Electric motor
B) Turbine
C) refrigerator
D) All of the mentioned
ANSWER: C

The value of air sucked by the compressor during its suction stroke
A) Free air delivery
B) Capacity of compressor
C) Swept volume
D) All of the mentioned
ANSWER: C

The compressor is used to compress
A) Gas
B) water
C) salt water
D) All of the mentioned
ANSWER: A

The foot valve is used to
A) Retain the water in the suction pipe
B) Drain the pipe
C) Increase the efficiency

D) None of the mentioned
ANSWER: A

What is a major advantage of centrifugal pump?
A) Cost
B) Simple in construction
C) Efficiency
D) Pump parameters
ANSWER: B

Centrifugal pumps are used to transport _____
A) Pressure
B) speed
C) Power
D) Fluid
ANSWER: D

When the casing in a centrifugal pump decelerates the flow, what increases?
A) Pressure
B) Temperature
C) Volume
D) Flow rate
ANSWER: A

Centrifugal pumps are used to transport _____
A) Pressure
B) Speed
C) Power
D) Fluid
ANSWER: D

Centrifugal pumps transport fluids by converting _____
A) Kinetic energy to hydrodynamic energy
B) Hydrodynamic energy to kinetic energy
C) Mechanical energy to kinetic energy
D) Mechanical energy to Hydrodynamic energy
ANSWER: A

The rotational kinetic energy in centrifugal pumps comes from _____
A) Engine motor
B) Pump
C) Tank
D) Draft tube
ANSWER: A

The fluid coming into the centrifugal pump is accelerated by _____
A) Throttle
B) Impeller
C) Nozzle
D) Governor
ANSWER: B

Which among the following control the flow rate?
A) Valve
B) Pump
C) Head

D) Tank pipe
ANSWER: A

In hydroelectricity power_____
A) Kinetic energy is transferred to potential
B) Potential energy is transferred to kinetic
C) Solar energy is transferred to wind energy
D) Wind energy is transferred to solar energy
ANSWER: B

In the production of wave energy which form of energy is used?
A) Potential energy
B) Kinetic energy
C) Solar energy
D) Wind energy
ANSWER: B

Energy is released from fossil fuels when they are_____
A) Pumped
B) Cooled
C) Burnt
D) Pressurized
ANSWER: C

Trapped heat inside the earth is known as_____
A) Heat energy
B) Kinetic energy
C) Geothermal energy
D) Thermal energy
ANSWER: C

A Solar cell is an electrical device that converts the energy of light directly into electricity by the _____
A) Photovoltaic effect
B) Chemical effect
C) Atmospheric effect
D) Physical effect
ANSWER: A

In hydroelectric power, what is necessary for the production of power throughout the year?
A) Dams filled with water
B) High amount of air
C) High intense sunlight
D) Nuclear power
ANSWER: A

Which one of the following cause global warming?
A) Carbon dioxide
B) Oxygen
C) Nitrogen
D) Hydrogen
ANSWER: A

Who measures the global warming rate?
A) Astrologers
B) Physicist

C) Philosopher
D) Climatologist
ANSWER: D

Which one of the following takes place due to global warming?
A) Maintaining steady temperature
B) Changes in the rainfall
C) Pleasant environment
D) Causing less pollution
ANSWER: B

What is the main reason for melting of ice sheets?
A) Increase in the oxygen content
B) Global warming
C) Decrease in carbon dioxide content
D) Noise pollution
ANSWER: B

Which one of the following is the effect of global warming?
A) Maintaining sea level
B) Proper rainfall
C) Desertification
D) Afforestation
ANSWER: C

Between what altitudes, is the ozone layer found in highest concentrations?
A) 10-20km
B) 20-40km
C) 40-55km
D) 55-70km
ANSWER: B

Which of the following UV radiations is responsible for causing sun burns and skin cancer?
A) UV-A
B) UV-B
C) UV-C
D) All of the mentioned
ANSWER: B

Which of the following chemicals are responsible for the depletion of the stratospheric ozone layer?
A) Refrigerants
B) Propellants
C) Foam-blowing agents
D) All of the mentioned
ANSWER: D

Which of the below is an example of slow-onset disaster?
A) Earthquake
B) Tsunami
C) Cyclone
D) Draught
ANSWER: D

When does a vapour become superheated?
A) when the temperature of vapour is less than the saturation temperature at given pressure
B) when the temperature of vapour is more than the saturation temperature at given pressure

C) when the temperature of vapour is equal to the saturation temperature at given pressure
D) none of the mentioned
ANSWER: B

The superheat or degree of superheat is given by
A) difference between the temperature of saturated liquid and saturation temperature
B) difference between the temperature of superheated vapour and saturation temperature
C) sum of the temperature of superheated vapour and saturation temperature
D) none of the mentioned
ANSWER: B

Energy has different forms which include
A) Heat
B) Work
C) All of the mentioned
D) None of the mentioned
ANSWER: C

Which of the following represents the energy in storage?
A) heat
B) work
C) internal energy
D) none of the mentioned
ANSWER: C

By first law of thermodynamics,
A) Q=ΔE-W
B) Q=ΔE+W
C) Q=-ΔE-W
D) Q=-ΔE+W
ANSWER: B

Which of the following an be considered as the definition of energy?
A) Q=ΔE+W
B) Q-W=ΔE
C) first law of thermodynamics
D) all the above mentioned
ANSWER: D

What exactly is thermodynamics?
A) The study of the movement of heat.
B) The study of thermal energy.
C) The study of entropy changes.
D) All the above
ANSWER: D

What is the temperature of absolute zero in Celsius and kelvin?
A) 0deg K, 273deg C
B) 0deg K, 0deg C
C) 0deg K, -273deg C
D) -273deg K, 0deg C
ANSWER: C

A perpetual motion machine of first kind
A) is a fictitious machine
B) can supply mechanical work without dissipating energy

C) violates first law
D) all the mentioned
ANSWER: D

Which of these is a stationary boiler?
A) Locomotive boiler
B) Marine boiler
C) Mobile boiler
D) Babcock-Wilcox boiler
ANSWER: D

Which of these is a mobile boiler?
A) Lancashire boiler
B) Stirling boiler
C) Locomotive boiler
D) Cochran boiler
ANSWER: C

Which of the following medium is compressed in a diesel engine cylinder?
A) Air alone
B) Air and fuel
C) Air and lub oil
D) Fuel alone
ANSWER: A

Number of working strokes per minute in a 4-stroke engine are _____ the speed of the engine in rpm.
A) Equal to
B) One-half
C) Twice
D) Four-times
ANSWER: B

Number of working strokes per minute in a 2-stroke engine are _____ the speed of the engine in rpm.
A) Equal to
B) One-half
C) Twice
D) Four-times
ANSWER: A

The thermodynamic cycle on which the petrol engine works is
A) Otto cycle
B) Joule cycle
C) Rankine cycle
D) Stirling cycle
ANSWER: A

Which of the following does not relate to a compression ignition engine?
A) Fuel pump
B) Fuel injector
C) Governor
D) Carburettor
ANSWER: D

Which of the following does not relate to a spark ignition engine?
A) Ignition coil
B) Spark plug

C) Carburettor
D) Fuel injector
ANSWER: D

In a diesel engine, the fuel is ignited by .....
A) Spark
B) Injected fuel
C) Ignitor
D) Heat resulting from compression air that is supplied from combustion
ANSWER: D

Compression ratio of I.C. engine is .....
A) The ratio of volumes of air in cylinder before compression stroke and after compression
B) Volume displaced by piston per stroke and clearance volume in cylinder
C) Ratio of pressure after compression and before compression
D) None of the above
ANSWER: A

A carburettor is used to supply.....
A) Petrol, air, and lubricating oil
B) Air and diesel
C) Petrol and lubricating oil
D) Petrol and air
ANSWER: D

A diesel engine has.....
A) One valve
B) Two valve
C) Three valve
D) Four valve
ANSWER: C

In a 4-stroke engine, the sequence of strokes is.
A) Suction, compression, expansion and exhaust
B) Suction, expansion, compression and exhaust
C) Expansion, compression, suction and exhaust
D) Compression, expansion, suction and exhaust
ANSWER: A

To supply correct mixture of petrol and air to the engine during the suction stroke the following is employed
A) Fuel pump
B) Injector
C) Carburettor
D) None of these
ANSWER: C

A 2-stroke I.C. engine gives _____ number of power strokes as compared to the 4-stroke engine, at the same speed
A) Half
B) Same
C) Double
D) Four times
ANSWER: C

In a refrigeration cycle, the flow of refrigerant is controlled by

A) Compressor
B) Condenser
C) Evaporator
D) Expansion valve
ANSWER: D

Absorption system normally uses the following refrigerant
A) Freon-11
B) Freon-22
C) CO2
D) Ammonia
ANSWER: D

Where does the lowest temperature occur in a vapour compression cycle?
A) Condenser
B) Evaporator
C) Compressor
D) Expansion valve
ANSWER: B

The vapour absorption refrigeration system is
A) More noisy than the vapour compression refrigeration system
B) More silent than the vapour compression refrigeration system
C) Equally noisy as the vapour compression refrigeration system
D) It depends upon plant capacity
ANSWER: B

In absorber of aqua-ammonia absorption refrigeration system
A) Strong solution is taken in and weak solution is given out
B) Weak solution is taken in and strong solution is given out
C) The ammonia vapour from strong solution is taken out and made it a weak solution
D) None of the above
ANSWER: B

What is the process carried out in generator of vapour absorption refrigeration cycle?
A) Weak solution of ammonia in water is heated
B) Strong solution of ammonia in water is heated
C) Only water is heated, and heat is given to the ammonia to form its vapour
D) None of the above
ANSWER: B

What is the condition of refrigerant at the exit of evaporator in aqua-ammonia absorption system?
A) Low pressure ammonia vapour
B) High pressure ammonia vapour
C) Low pressure strong vapour mixture of ammonia and water
D) High pressure strong vapour mixture of ammonia and water
ANSWER: A

The compressor in the vapour compression refrigeration system is replaced by _____ in a vapor absorption refrigeration system
A) An absorber
B) A generator
C) An absorber-generator
D) None of the above
ANSWER: C

What is the disadvantage of ammonia using as a refrigerant?
A) ammonia cannot be detected in case of leakage
B) ammonia has a bad effect on ozone layer
C) ammonia is toxic in nature
D) ammonia has higher energy cost
ANSWER: C

What is the desirable characteristic of a refrigerant?
A) it should not be toxic
B) it should not be non-corrosive
C) it should have minimum enthalpy of vaporization
D) all of the above
ANSWER: A

Which expansion device is capable of regulating the flow of refrigerant according to the load on the evaporator?
A) capillary tube
B) throttle valve
C) both A and B
D) none of the above
ANSWER: B

One tonne of refrigeration is approximately equal to
A) 3.5 kJ / min
B) 3.5 W
C) 211 kW
D) 211 kJ / min
ANSWER: D

The heat required to melt 1 tonne of ice in 12 hours is equivalent to
A) one tonne of refrigeration
B) two tonne of refrigeration
C) half tonne of refrigeration
D) four tonne of refrigeration
ANSWER: B

In evaporation process of vapour compression refrigeration system
A) heat is rejected from refrigerant to surroundings
B) heat is rejected from surroundings to refrigerant
C) only pressure change takes place
D) none of the above
ANSWER: B

Which device is used for the expansion of refrigerant in vapour compression refrigeration cycle?
A) throttling valve
B) capillary tube
C) either throttling valve or capillary tube
D) none of the above
ANSWER: C

The velocity ratio of two pulleys connected by an open belt or crossed belt is
A) directly proportional to their diameters
B) inversely proportional to their diameters
C) directly proportional to the square of their diameters
D) inversely proportional to the square of their diameters
ANSWER: B

Due to slip of the belt, the velocity ratio of the belt drive
A) decreases
B) increases
C) does not change
D) none of the mentioned
ANSWER: A

When two pulleys of different diameters are connected by means of an open belt drive, then the angle of contact taken into consideration should be of the
A) larger pulley
B) smaller pulley
C) average of two pulleys
D) none of the mentioned
ANSWER: B

In belt drive idler pulley is used for
A) For applying tension.
B) Increasing velocity ratio.
C) Changing direction.
D) Increased life of pulley.
ANSWER: A

All Stress produce on belt are the....
A) Tensile stress
B) Compressive stress
C) Shear stress
D) Bending stress
ANSWER: A

Crowning of a pulley is done to
A) Prevent the slipping of a belt
B) To increase the tension of a belt
C) To increase the angle of contact
D) None of the above
ANSWER: A

Worm gear is used, when two shafts are at _____
A) Right angles to each other
B) Some distance apart
C) Radial direction
D) 45 cm apart
ANSWER: A

Helical gear is used for transmitting the power between two _____
A) Parallel shafts
B) Inclined shafts
C) Shafts located at long distance
D) Shafts at 90°
ANSWER: A

The gears are used to connect two parallel shafts except
A) Spur gear
B) Helical gear
C) Double helical gears
D) Bevel gears

ANSWER: D

The gears used to connect non-parallel and non-intersecting shafts is
A) Straight bevel gears
B) Spiral bevel gears
C) Spiral gears
D) Double helical gears
ANSWER: C

To connect two intersecting shafts, we use
A) Spur gear
B) Helical gear
C) Worm and wheel
D) Bevel gears
ANSWER: D

The gear used to convert rotary motion into translating motion is
A) Worm and wheel
B) Crown gear
C) Rack and pinion
D) Spiral Bevel gear
ANSWER: C

Which of the following type of gear has inclined teeth?
A) Spur gear
B) Helical gear
C) Spiral gear
D) All the above
ANSWER: B

The point of contact of two pitch circles of mating gears is called
A) Pressure point
B) Pitch point
C) Module
D) Contact point
ANSWER: B

Gear teeth formed on flat surface are called
A) Rack
B) Pinion
C) Hub
D) Spur
ANSWER: A

Which of the following statements is true for gear drive?
A) Gear drives can transmit very large power
B) Gear drives have low transmission efficiency
C) Gear drives require more space
D) All of the above
ANSWER: A

Which of the metal if present will make the alloy ferrous?
A) Aluminium
B) Lead
C) Zinc
D) Iron

ANSWER: D

Stainless steel is so called because of its _____.
A) High strength
B) High corrosion resistance
C) High ductility
D) Brittleness
ANSWER: B

Composite materials are classified based on:
A) Type of matrix
B) Size-and-shape of reinforcement
C) Both
D) None
ANSWER: C

Usually, softer constituent of a composite is
A) Matrix
B) Reinforcement
C) Both are of equal strength
D) Can't define
ANSWER: A

Usually, stronger constituent of a composite is
A) Matrix
B) Reinforcement
C) Both are of equal strength
D) Can't define
ANSWER: B

In matrix based structural composites, the matrix serves the purpose of
A) binding the reinforcement phases in place
B) deforming to distribute the stresses
C) both A and B
D) none of the above
ANSWER: C

Thermoplastics is an example of
A) Carbon and Graphic matrix composites
B) Ceramic matrix composites
C) Metal matrix composites
D) Polymer matrix composites
ANSWER: D

Following is the reinforcement form of composites
A) fibre reinforced composites
B) laminar composites
C) particulate composites
D) all of the above
ANSWER: D

Fibre Reinforced Composites are composed of fibres embedded in ___ material.
A) matrix
B) metallic
C) plastic
D) none of the above

ANSWER: A

Sandwich structures fall under ___ category.
A) Fiber reinforced composites
B) Laminar composites
C) Particulate composites
D) none of the above
ANSWER: B

Following is a type of polymer
A) thermosets
B) thermoplastics
C) both A and B
D) none of the above
ANSWER: C

Following is kind of thermoplastics.
A) Polyethylene
B) Polystyrene
C) Nylons
D) All of the above
ANSWER: D

Reinforcements for the composites can be
A) Fibres
B) fabrics particles
C) whiskers
D) all of the above
ANSWER: D

Following is (are) the function of a matrix
A) Holds the fibres together
B) Protects the fibres from environment
C) Enhances transverse properties of a laminate
D) All of the above
ANSWER: D

Which of the following is not a desired property of a Matrix?
A) Increased moisture absorption
B) Low shrinkage
C) Dimensional stability
D) Low temperature capability
ANSWER: A

Plastics are divided into thermoplastic and thermosetting on the basis of their _____
A) Behaviour with respect to heating
B) Structure
C) Physical properties
D) Mechanical properties
ANSWER: A

Which of the following statements about thermosetting plastics is not true?
A) It is possible to change their shape on heating
B) They are durable and strong
C) They are available in a variety of colours
D) They become rigid on heating

ANSWER: A

Which of the following is not a property of plastics?
A) Plastics are not ductile
B) Plastics are organic in nature
C) Plastics have good electric insulation properties.
D) PVC plastics are inflammable
ANSWER: D

Plastics are the materials obtained by mixing the _____ with the other ingredients which impart special engineering properties.
A) Resin
B) Monomer
C) Catalyst
D) Any polymer
ANSWER: A

Plastics are _____ in weight.
A) Very heavy
B) Light
C) Negligible
D) Heavy
ANSWER: B

The fabrication cost is _____ for plastics.
A) High
B) Low
C) Moderate
D) Very high
ANSWER: B

The abrasion resistance of the plastic is _____
A) Low
B) Very low
C) High
D) Moderate
ANSWER: C

The plastics are _____
A) Semi-conductors
B) Conductors
C) Conducts at above room temperature only
D) Insulators
ANSWER: D

Thermo plastics becomes _____ on heating.
A) Rigid
B) Moulded
C) Soft
D) Brittle
ANSWER: C

The heating and cooling of the thermo plastics _____the chemical nature.
A) Alters
B) Does not alter
C) Alters slightly

D) May be alters
ANSWER: B

In thermo plastic resins the force of attraction can be break easily by _____
A) Heat
B) Pressure
C) Both heat and pressure
D) Neither heat nor pressure
ANSWER: C

In which joining process, temperature is very high?
A) welding
B) brazing
C) soldering
D) none of these
ANSWER: A

In which joining process, using filler material is must?
A) soldering
B) brazing
C) both 1 and 2
D) welding
ANSWER: D

Electrode is coated to _____.
A) protect the weld
B) to remove rusting
C) both 1 and 2
D) none of these
ANSWER: C

In which of the joining process, base metal melts?
A) brazing
B) soldering
C) both 1 & 2
D) welding
ANSWER: D

In which joining process, filler material is optional?
A) soldering
B) brazing
C) both 1 and 2
D) welding
ANSWER: D

In oxy-acetylene welding, the temperature of the flame is ____degree Celsius.
A) 200-300
B) 1200-1300
C) 2200-2300
D) 3200-3300
ANSWER: D

The temperature range for soldering process is..... degree Celsius.
A) 40 to 300
B) 300 to 600
C) 600 to 1000

D) 1000 to 2000
ANSWER: B

Heat for soldering process is supplied by.....
A) Soldering iron
B) Induction furnace
C) Electric resistance method
D) Any of the above
ANSWER: A

The purpose of using flux in soldering is to.....
A) Increase fluidity of solder metal
B) Feel up gaps left in a bad joint
C) Carbon steel
D) Prevent oxides forming
ANSWER: D

Which of the following is not true?
A) Soft solder – lead-37%, tin-63%
B) Medium solder – lead-50%, tin-50%
C) Electrician solder – lead-64%, tin-36%
D) Plumber's solder – lead-70%, tin-30%
ANSWER: C

Work – piece is held on
(A) Chuck
(B) Tail Stock
(C) Carriage
(D) Head Stock
ANSWER: A

Lathe center is used for
(A) Cutting
(B) Supporting
(C) All of these
(D) Holding
ANSWER: B

In lathe work, when the tool is fed parallel to the rotation of job work, it will produce
(A) Cylindrical surface
(B) Spherical surface
(C) Tapered surface
(D) All of the above
ANSWER: A

Lathe machine produces '--------'
(A) Spherical surface
(B) Cylindrical surface
(C) Flat surface
(D) Both B and C
ANSWER:D

The machine tool used for making the hole in the work piece by forcing the rotating tool into stationary work piece is called as
(A) Drilling Machine
(B) Lathe Machine

(C) Boring Machine
(D) All the above
ANSWER:A
To support the long length job on lathe machine _____ is used
(A) Carriage
(B) Steady rest
(C) Follower rest
(D) Tails stock
ANSWER:D

To remove material in the form of large chips _____ is used
(A) Lathe Machine
(B) Soldering
(C) Brazing
(D) None of the above
ANSWER:A

Up milling and down milling are the subtypes of __ milling process.
(A) peripheral milling
(B) face milling
(C) both peripheral milling and face milling
(D) none of the mentioned
ANSWER:A

Which of the following process is also known as climb milling?
(A) up milling
(B) down milling
(C) both up milling and down milling
(D) none of the mentioned
ANSWER:B

The thickness of the chip in up milling is _____ at the beginning of the cut.
(A) minimum
(B) maximum
(C) zero
(D) none of the mentioned
ANSWER:A

More depth of cut can be used in _____milling process.
(A) up milling
(B) down milling
(C) can’t say anything
(D) none of the mentioned
ANSWER:B

Which of the following operations can be done by same tool?
(A) reaming and tapping
(B) drilling and facing
(C) counter boring and spot facing
(D) none of the mentioned
ANSWER:C

Reaming doesn’t improve the surface finish.
(A) true
(B) false
ANSWER:B

To produce more accurate holes, which of the following operation should be performed first?
(A) drilling
(B) reaming
(C) centering
(D) boring
ANSWER:C

Tapping is a forming process.
(A) true
(B) false
ANSWER:A

Which of the following operation is carried out for cutting internal threads?
(A) drilling
(B) tapping
(C) boring
(D) none of the mentioned
ANSWER:B

Which of the following is a surface finishing operation?
(A) Drilling
(B) Honing
(C) Milling
(D) Turning
ANSWER:B

Following are the type of cylindrical grinding
(A) Outside diameter grinding
(B) Plunge grinding
(C) Centerless grinding
(D) All of the above
ANSWER:D

In cylindrical grinder, how many centers hold the workpiece?
(A) One
(B) Two
(C) Three
(D) Four
ANSWER:B

In center less grinding, work piece is supported by?
(A) Centers
(B) Chuck
(C) Work rest
(D) All of the above
ANSWER:C

In cylindrical grinding, the abrasive wheel and the work piece are
(A) Rotated by separate motors and at different speed
(B) Rotated by separate motors and at same speed
(C) Rotated by single motor and at same speed
(D) Any of the above
ANSWER:A

Automation is defined as the technology involved with the use of,

(A) Mechanical system
(B) Electronics system
(C) Computer based system
(D) All the mentioned system
ANSWER: D

Which of these are not benefits of automation?
(A) Improved operational efficiency
(B) Decreases the productivity of the system
(C) Repetitive tasks can be completed faster
(D) Improved quality and consistency
ANSWER: B

Automation is the application of technology
(A) To monitor the process
(B) To control the process
(C) To monitor and control the process
(D) To monitor and control the process with minimum human effort
ANSWER: D

The automated process in which the equipment configuration determines the sequence of processing (or assembly) actions.
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: A

Which form of automation has the maximum output rates?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: A

The operating sequence is controlled by a programme in which form of automation?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: B

Which type of automation has the lowest output rates?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: B

What is the name of the automation technology that allows manufacturing equipment to adjust the sequence of operations to generate a new part?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: B

What kinds of goods can benefit from programmable automation?
(A) Goods which are produced in job shop production
(B) Goods which are produced in batch shop production
(C) Goods which are produced in mass production
(D) Goods which are produced in small scale industries.
ANSWER: B

What kind of automation can produce a wide variety of products?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: B

Which sort of automation is thought to have a medium output rate?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: C

What form of automation is capable of generating a few range of products (or parts) with little to no downtime for product changes?
(A) Fixed Automation
(B) Programmable Automation
(C) Flexible Automation
(D) Integrated Automation
ANSWER: C

Which among these are the elements of automated systems?
(A) Power
(B) Program of Instructions
(C) Control systems
(D) All the mentioned
ANSWER: D

What is the principle sources of power in the automated system?
(A) Electricity
(B) Pneumatics
(C) Hydraulics
(D) Mechanical
ANSWER: A

The actions performed by an automated process are defined by,
(A) Program of instructions
(B) Control systems
(C) Central processing systems
(D) None of the mentioned.
ANSWER: A

Which element of the automated system executes the program of instructions.
(A) Central Processing system
(B) Control system
(C) Work stations
(D) Feedback systems

ANSWER: B

A control system in which the output variable is compared with an input parameter, and any difference between the two is used to drive the output into agreement with the input is referred as
(A) A closed loop control system
(B) An open loop control system
(C) A sensor
(D) Controller
ANSWER: A

The system which operates without measuring the output variable so no comparison is made between the actual value of the output and the desired input parameter is referred as
(A) A closed loop control system
(B) An open loop control system
(C) A sensor
(D) Controller
ANSWER: B

Which among these devices is an example of the open loop system
(A) A refrigerator system
(B) The air conditioning system
(C) Traffic light controller
(D) Home temperature control system
ANSWER: C

Mechatronics is the Branch of engineering science which deals with the integration of,
(A) Microprocessor control system
(B) Electrical system
(C) Mechanical system
(D) All the mention system
ANSWER: D

The integration of mechanical system with the computer is referred as,
(A) CAD system
(B) CAM System
(C) CAD/CAM System
(D) Electro mechanical system
ANSWER: C

The most obvious anthropomorphic characteristic of an industrial robot is
(A) Arm of the robot
(B) Drives used in robot
(C) Sensors used in robot
(D) Controller of the robot
ANSWER: A

A robot is a,
(A) A general purpose machine
(B) A re-programmable machine
(C) A reprogrammable general purpose machine
(D) A customized machine used for a specific task
ANSWER: C

What form of automation is considered robotics?
(A) Fixed Automation
(B) Programmable Automation

(C) Flexible automation
(D) Programmable and flexible automation
ANSWER: D

The anatomy of the robot deals with the study of,
(A) Different links and joints of the robot
(B) Different parts of the robot
(C) Different elements of the robot.
(D) Different type of tools used in robot.
ANSWER: A

Degrees of freedom of a robot joint is referred as
(A) Number of joints axis in a robot
(B) Type of movement the robot can perform
(C) Types of links used in a robot
(D) All the mentioned
ANSWER: A

Major axis of the robot joint is referred as,
(A) Motions of the body joints
(B) Motions of the wrist joints
(C) Motions of the body and wrist joints
(D) Motion of the tool
ANSWER: A

Minor axis of the robot joint is referred as,
(A) Motions of the body joints
(B) Motions of the wrist joints
(C) Motions of the body and wrist joints
(D) Motion of the tool
ANSWER: B

The work envelope of the Cartesian robot is?
(A) Hemisphere
(B) Cylindrical.
(C) Rectangular box.
(D) Circular loop.
ANSWER: C

The work envelope of the cylindrical robot is?
(A) Hemisphere
(B) Cylindrical.
(C) Rectangular box.
(D) Circular loop.
ANSWER: B

The work envelope of the polar robot is?
(A) Hemisphere
(B) Cylindrical.
(C) Rectangular box.
(D) Circular loop.
ANSWER: A

What are the motions of the wrist of the robot?
(A) Wrist Pitch, yaw & roll motions
(B) Wrist Twisting, Rotational & Linear motions

(C) Wrist Twisting, Orthogonal & Linear motions
(D) All the mentioned.
ANSWER: A

Which component of the robot controls the activities of the robot?
(A) Program
(B) Controller
(C) Computer
(D) Operator
ANSWER: B

Which is the actual work performing device of the robot?
(A) The wrist
(B) The joints
(C) The link
(D) The links and joints.
ANSWER: A

From base to end effector what types of joints the Cartesian robot is having?
(A) Twisting, Rotational & Linear joints
(B) Twisting, Orthogonal & Linear joints
(C) Orthogonal joints
(D) 3 Rotational joints
ANSWER: C

From base to end effector what types of joints the cylindrical robot is having?
(A) Twisting, Rotational & Linear joints
(B) Twisting, Orthogonal & Linear joints
(C) Orthogonal joints
(D) 3 Rotational joints
ANSWER: B

From base to end effector what types of joints the jointed arm robot is having?
(A) Twisting, Rotational & Linear joints
(B) Twisting, Orthogonal & Linear joints
(C) Orthogonal joints
(D) 3 Rotational joints
ANSWER: D

From base to end effector what types of joints the polar robot is having?
(A) Twisting, Rotational & Linear joints.
(B) Twisting, Orthogonal & Linear joints.
(C) 3 Orthogonal joints.
(D) 3 Rotational joints.
ANSWER: A

The anatomy of Industrial robot resembles?
(A) The human arm.
(B) Human body.
(C) It has a unique structure of its own.
(D) Depends on the applications.
ANSWER: A

The drive which utilizes high pressure air to power the joints is called?
(A) Hydraulic drives.
(B) Pneumatic drives.

(C) Electric drives.
(D) Solenoid drives.
ANSWER: B