



# Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited

Roll No	
Participant Name	Engineers' Forum   ErForum
Test Center Name	
Test Date	
Test Time	2:30 PM - 5:30 PM
Subject	UPRVUNL UPJVNL JE MECHANICAL

## Section : TECHNICAL

Q.1 What is the value of taper angle provided in draft allowances?

- Ans
- 1.  $11^\circ$ - $12^\circ$
  - 2.  $0^\circ$ - $3^\circ$
  - 3.  $5^\circ$ - $7^\circ$
  - 4.  $8^\circ$ - $10^\circ$

Question ID : 595408871

Chosen Option : 2

Q.2 A nozzle meter is used to measure:

- Ans
- 1. Viscosity
  - 2. Flow rate
  - 3. Volume
  - 4. Velocity

Question ID : 595408810

Chosen Option : 2

Q.3 A pair of spur gear consists of a 20 teeth pinion meshing with a 120 teeth gear. The module is 4mm. Calculate the center distance:

- Ans
- 1. 360
  - 2. 280
  - 3. 240
  - 4. 320

Question ID : 595408944

Chosen Option : 2

Q.4 A circular shaft is subjected to torque. The torsional rigidity is defined as:

- Ans
- 1. product of polar moment of inertia and modulus of rigidity
  - 2. ratio of torque and polar moment of inertia
  - 3. product of torque and length
  - 4. sum of polar moment of inertia and modulus of rigidity

Question ID : 595408925

Chosen Option : 1

Q.5 What is the purpose of crowning of pulleys?

- Ans
- 1. To prevent belt running off the pulley

Question ID : 595408951

Chosen Option : 1

2.

To increase the tightness of the belt on the pulley

3. To increase the torque transmitted

4. To improve the shape and strength of pulley

Q.6 Which of the following is a 'Natural Circulation' boiler?

Ans  1. Cochran

2. Velox

3. Benson

4. Lamont

Question ID : 595408850

Chosen Option : 1

Q.7 A work piece is turned on a lathe at 100m/min cutting speed, 0.4 mm/rev and 1.5 mm depth of cut. What is the rate of metal removal?

Ans  1. 1000mm<sup>3</sup>/min

2. 20000mm<sup>3</sup>/min

3. 60000mm<sup>3</sup>/min

4. 155mm<sup>3</sup>/min

Question ID : 595408899

Chosen Option : 3

Q.8 In an isothermal process, the internal energy of ideal gas:

Ans  1. increases

2.

may increase or decrease, depends on properties of gas

3. remain constant

4. decreases

Question ID : 595408848

Chosen Option : 3

Q.9 A tank containing air is stirred by a paddle wheel. The work input to the wheel is 14000 kJ and heat transferred to the surrounding from the tank is 5000 kJ. The change in internal energy of the system (air) is:

Ans  1. -9000 kJ

2. +9000 kJ

3. +19000 kJ

4. -19000 kJ

Question ID : 595408844

Chosen Option : 2

Q.10 In a reverted gear train, the axes of the first and last gear are:

Ans  1. Neither parallel nor axial

2. Co-axial

3. Skew

4. Parallel

Question ID : 595408949

Chosen Option : 2

Q.11 Poisson's ratio for aluminium is:

Ans  1. 0.13

2. 0.33

3. 0.23

4. 0.43

Question ID : 595408904

Chosen Option : 2

Q.12 The Bernoulli's equation refers to conservation of:

- Ans
- 1. Mass
  - 2. Linear momentum
  - 3. Viscosity
  - 4. Energy

Question ID : 595408828

Chosen Option : 4

Q.13 The speed of an engine varies from 110 rad/s to 90 rad/s. During cycle the change in kinetic energy is found to be 200 N-m. The inertia of the flywheel in Kg-m<sup>2</sup> is:

- Ans
- 1. 0.2
  - 2. 0.8
  - 3. 0.1
  - 4. 0.4

Question ID : 595408940

Chosen Option : 3

Q.14 Which of the following abrasive material is not used for grinding wheel?

- Ans
- 1. cubic boron nitride
  - 2. silicon carbide
  - 3. aluminium oxide
  - 4. manganese oxide

Question ID : 595408891

Chosen Option : 4

Q.15 In casting, misrun occurs due to:

- Ans
- 1. very low fluidity of molten metal
  - 2. absorption of gases by liquid metal
  - 3. improper alignment of mould flask
  - 4. high pouring temperature of metal

Question ID : 595408870

Chosen Option : 1

Q.16 For the state of stress of pure shear  $\tau$ , the shear strain energy stored per unit volume in the elastic, homogenous isotropic material having elastic constants E and  $\nu$  will be:

- Ans
- 1.  $\tau^2(1+\nu)/E$
  - 2.  $\tau^2(2+\nu)/2E$
  - 3.  $\tau^2(1+\nu)/2E$
  - 4.  $2\tau^2(1+\nu)/E$

Question ID : 595408919

Chosen Option : --

Q.17 The direction of driven pulley and direction of driving pulley in case of open belt drive and cross belt drive respectively are:

- Ans
- 1. opposite and same
  - 2. opposite and opposite
  - 3. same and opposite
  - 4. same and same

Question ID : 595408954

Chosen Option : 3

Q.18 In which of the following welding technique, heat is generated by high velocity narrow beam of electron:

- Ans
- 1. Electron beam welding
  - 2. Laser beam welding

Question ID : 595408875

Chosen Option : 1

3. Plasma arc welding

4. Ultrasonic welding

Q.19 The tool signature in American system is 8-10-6-6-12-2-30-0. Side rake angle is:

Question ID : 595408894  
Chosen Option : 3

Ans  1.  $6^\circ$

2.  $8^\circ$

3.  $10^\circ$

4.  $12^\circ$

Q.20 Reynold number is the ratio of:

Question ID : 595408825  
Chosen Option : 3

Ans  1. Viscous force to Inertia force

2. Surface force to Viscous force

3. Inertia force to Viscous force

4. Shear force to Inertia force

Q.21 In sand casting, fluidity of the molten metal increases with:

Question ID : 595408868  
Chosen Option : 2

Ans  1. increase in sand grain size

2. increase in degree of superheat

3. decrease in pouring rate

4.

increase in thermal conductivity of the mould

Q.22 Let the atmospheric pressure at sea level is 70 cm of mercury. Convert this pressure in terms of height of water (in meter).

Question ID : 595408807  
Chosen Option : 4

Ans  1. 8

2. 9

3. 8.5

4. 9.5

Q.23 Elongation of a prismatic bar under its self weight is  $\Delta$ . When all its dimension becomes double while material remain same. What will be the elongation of new bar?

Question ID : 595408901  
Chosen Option : 2

Ans  1.  $\Delta$

2.  $4\Delta$

3.  $2\Delta$

4.  $3\Delta$

Q.24 Point of contraflexure occur when:

Question ID : 595408911  
Chosen Option : 1

Ans  1. bending moment is zero

2. bending moment is constant

3. loading is constant

4. bending moment is maximum or minimum

Q.25

A solid circular shaft of 40mm diameter transmits a torque of 3200 N-m. The value of maximum stress developed is

- Ans
- 1.  $400/\pi$
  - 2.  $800/\pi$
  - 3.  $1600/\pi$
  - 4.  $600/\pi$

Question ID : 595408928

Chosen Option : 2

Q.26 Which of the following operation is not done on the drilling machine?

- Ans
- 1. reaming
  - 2. milling
  - 3. counter boring
  - 4. counter sinking

Question ID : 595408884

Chosen Option : 2

Q.27 Double hemispherical buckets are used in:

- Ans
- 1. bulb turbine
  - 2. kaplan turbine
  - 3. pelton wheel
  - 4. propeller turbine

Question ID : 595408818

Chosen Option : 3

Q.28 The air is expanding from a very minute hole of cycle tube in an evacuated room. The work done during process is:

- Ans
- 1. minimum
  - 2. negative
  - 3. zero
  - 4. positive

Question ID : 595408847

Chosen Option : 3

Q.29 The outside diameter of a hollow shaft is thrice to its inside diameter. The ratio of its torque carrying capacity to that of a solid shaft of the same material and the same outside diameter is:

- Ans
- 1. 80/81
  - 2. 1/81
  - 3. 8/9
  - 4. 1/9

Question ID : 595408926

Chosen Option : 1

Q.30 An aircraft engine is an example of:

- Ans
- 1. quasi equilibrium
  - 2. closed system
  - 3. isolated system
  - 4. open system

Question ID : 595408845

Chosen Option : 4

Q.31 A Carnot engine rejects 40% of heat absorbed from a source to sink at 27°C. What is the value of source temperature in °C?

- Ans
- 1. 327
  - 2. 54
  - 3. 477
  - 4. 600

Question ID : 595408835

Chosen Option : 3

Q.32 What is degree of freedom at triple point of water?

- Ans
- 1. Two
  - 2. One
  - 3. Three
  - 4. Zero

Question ID : 595408853  
Chosen Option : 4

Q.33 Engine overheating may be due to:

- Ans
- 1. open thermostat
  - 2. excess coolant
  - 3. stuck radiator pressure cap
  - 4. broken fan belt

Question ID : 595408862  
Chosen Option : --

Q.34 A hydroelectric reservoir can supply water continuously at a rate of  $100 \text{ m}^3/\text{s}$ . The head is 75 m. The theoretical power that can be developed is (in MW).

- Ans
- 1. 73.5
  - 2. 65.7
  - 3. 68.5
  - 4. 70.8

Question ID : 595408809  
Chosen Option : --

Q.35 A newtonian fluid having viscosity of  $0.39 \text{ Ns/m}^2$  and specific gravity of 0.91 flows through a 25 mm diameter pipe with velocity of 3.6 m/s. Then the value of Reynold's number is:

- Ans
- 1. 210
  - 2. 240
  - 3. 175
  - 4. 155

Question ID : 595408813  
Chosen Option : 2

Q.36 The maximum fluctuation of energy in a flywheel is not equal to:

- Ans
- 1.  $2KE$
  - 2.  $\omega(1 - \omega_2)$
  - 3.  $I\omega^2K$
  - 4.  $I\omega^2K/2$

Question ID : 595408936  
Chosen Option : 2

Q.37 A water jet,  $0.0020 \text{ m}^2$  in area, is issued from a nozzle with a velocity of 10 m/s. It is made to impinge perpendicular on a plate that moves away from the jet with a velocity of 5 m/s. The force on plate is:

- Ans
- 1. 75 N
  - 2. 100 N
  - 3. 50 N
  - 4. 150 N

Question ID : 595408822  
Chosen Option : --

Q.38 Maximum energy that a given component can absorb without undergoing any permanent deformation upto elastic limit is known as:

- Ans
- 1. Proof Resilience
  - 2. Resilience
  - 3. Hardness

Question ID : 595408908  
Chosen Option : 1

4. Toughness

Q.39 A draft tube is used in a reaction turbine

Ans  1.

to guide water downstream without splashing

2.

to convert residual kinetic energy into pressure energy

3.

to convert residual pressure energy into kinetic energy

4. to streamline the flow in tail race

Question ID : 595408808

Chosen Option : --

Q.40 Which of the following is not a casting defect?

Ans  1. Scar

2. Scab

3. Hot cracks

4. Hot tears

Question ID : 595408887

Chosen Option : 1

Q.41 A heat engine working on Carnot cycle receives heat at the rate of 80 kW from source at 1500 K and rejects it to a sink at 300 K. The heat rejected is:

Ans  1. 48 kW

2. 32 kW

3. 64 kW

4. 16 kW

Question ID : 595408859

Chosen Option : 4

Q.42 Superheating of steam in boiler is done at:

Ans  1. constant volume

2. constant entropy

3. constant temperature

4. constant pressure

Question ID : 595408855

Chosen Option : 4

Q.43 Find the height of watt governor, if angular speed of ball is 100 rad/sec. Take  $g=10 \text{ m/s}^2$ .

Ans  1. 3mm

2. 2mm

3. 1mm

4. 4mm

Question ID : 595408941

Chosen Option : 3

Q.44 Which of the following theory is applicable when friction lining is new?

Ans  1. Uniform pressure theory

2. Uniform torque theory

3. Uniform wear theory

4. Uniform dimensional theory

Question ID : 595408947

Chosen Option : --

Q.45 Which of the following is not a function of fixture?

- Ans
- 1. Holding the workpiece
  - 2. Clamping the workpiece
  - 3. Locating the workpiece
  - 4. Guiding the tool

Question ID : 595408878

Chosen Option : 4

Q.46 Sensitivity of U- tube manometer with inclined leg depends on:

- Ans
- 1. specific weight of fluid
  - 2. length of inclined leg
  - 3. angle of inclination of leg
  - 4. atmospheric pressure

Question ID : 595408816

Chosen Option : 3

Q.47 A uniformly distributed load  $w$  (kN/m) is acting over the entire length of 8m long cantilever beam. If the shear force at the midpoint of cantilever beam is 12kN. What is the value of  $w$ ?

- Ans
- 1. 6
  - 2. 4
  - 3. 5
  - 4. 3

Question ID : 595408906

Chosen Option : 4

Q.48 In d.c. welding, the straight polarity (electrode negative) results in:

- Ans
- 1. Less heating of work piece
  - 2. Smaller weld pool
  - 3. Lower deposition rate
  - 4. Lower penetration

Question ID : 595408876

Chosen Option : 3

Q.49 Moulds made of metals that maintain their strength at high temperature are:

- Ans
- 1. Permanent moulds
  - 2. Composite moulds
  - 3. Expendable moulds
  - 4. Green sand mould

Question ID : 595408867

Chosen Option : 1

Q.50 For a given material the bulk modulus is 100 GPa and Poisson's ratio is 0.25, then the value of modulus of rigidity is (in GPa).

- Ans
- 1. 100
  - 2. 60
  - 3. 125
  - 4. 75

Question ID : 595408921

Chosen Option : 2

Q.51 Two processes isobaric and isochoric are represented on T-s diagram. They are starting from same point. Out of these process, which shall have higher slope?

- Ans
- 1. isobaric
  - 2. both have same slope
  - 3. isochoric

Question ID : 595408854

Chosen Option : 3



4. depend on final point

**Q.52** A 200W electric bulb was switched on in a 5\*6\*6 meter size thermally insulated room having a temperature of 50°C. The room temperature at the end of 24 hours will be

- Ans
- 1. 145°C
  - 2. 181.5°C
  - 3. 135°C
  - 4. 161.5°C

Question ID : 595408841

Chosen Option : --

**Q.53** Hollow casting with thin walls can be made by process of:

- Ans
- 1. Die casting
  - 2. Vacuum casting
  - 3. Slush casting
  - 4. Pressure casting

Question ID : 595408869

Chosen Option : 2

**Q.54** In a four link mechanism, the sum of the shortest and the longest link is less than the sum of the other two links. It will act as a rocker-rocker mechanism if:

- Ans
- 1. the shortest link is fixed
  - 2. shortest and adjacent to the shortest both are fixed
  - 3. the link opposite to the shortest link is fixed
  - 4. any link adjacent to the shortest link is fixed

Question ID : 595408932

Chosen Option : 3

**Q.55** The defect caused, due to low permeability in sand casting is:

- Ans
- 1. Drop
  - 2. Blow holes
  - 3. Rough surface
  - 4. Hot tears

Question ID : 595408886

Chosen Option : 2

**Q.56** The rate of flow through venturimeter varies as:

- Ans
- 1.  $H^{3/2}$
  - 2.  $H^2$
  - 3.  $H^{1/2}$
  - 4.  $H$

Question ID : 595408815

Chosen Option : 3

**Q.57** Which one of following pump is not a positive displacement pump?

- Ans
- 1. rotary pump
  - 2. reciprocating pump
  - 3. vane pump
  - 4. centrifugal pump

Question ID : 595408819

Chosen Option : 4

**Q.58** In an inert gas welding process, the commonly used gas is:

Ans

Question ID : 595408874

1. Krypton

2. Helium or Argon

3. Oxygen

4. Hydrogen

Chosen Option : 2

**Q.59** What will be the radius of gyration (in) for a rectangular column having cross-section of 12mm × 20mm and length of 1m?

Ans  1.  $1.44 \times 10^{-2}$

2.  $2.88 \times 10^{-3}$

3.  $3.464 \times 10^{-3}$

4.  $1.44 \times 10^{-3}$

Question ID : 595408929

Chosen Option : 3

**Q.60** Backward curved vanes are used in:

Ans  1. axial flow pump

2. vane pump

3. reciprocating pump

4. centrifugal pump

Question ID : 595408814

Chosen Option : 4

**Q.61** If the speed of the engine fluctuates between 990 and 1010 rpm in a cycle operation, the coefficient of fluctuation of speed is:

Ans  1. 0.05

2. 0.01

3. 0.02

4. 0.04

Question ID : 595408938

Chosen Option : 3

**Q.62** In power plant, function of air pre heater is:

Ans  1. to avoid hazard

2. to raise temperature of entering air

3. to raise temperature of feed water

4. to increase temperature of steam

Question ID : 595408846

Chosen Option : 2

**Q.63** Which of the following cycle consist of two adiabatic and constant volume process?

Ans  1. joule cycle

2. diesel cycle

3. dual cycle

4. otto cycle

Question ID : 595408832

Chosen Option : 4

**Q.64** If a rod expands freely due to heating it will develop:

Ans  1. no stress

2. compressive stress

3. thermal stress

Question ID : 595408915

Chosen Option : 1

4. bending stress

Q.65 The diameter of long column is D and buckling load is P. If the diameter is reduced by 50%, new buckling load will be:

- Ans
- 1.  $0.4 P$
  - 2.  $0.25 P$
  - 3.  $0.0825 P$
  - 4.  $0.0625 P$

Question ID : 595408924

Chosen Option : 4

Q.66 In some carburetors, economizer device is used for:

- Ans
- 1. Power enrichment
  - 2. Idling
  - 3. Cold starting
  - 4. Acceleration

Question ID : 595408831

Chosen Option : --

Q.67 Which of the following is an interference fit?

- Ans
- 1. Shrink fit
  - 2. Push fit
  - 3. Sliding fit
  - 4. Running fit

Question ID : 595408895

Chosen Option : 2

Q.68 Which of the following defines the useful property called 'energy'?

- Ans
- 1. third law of thermodynamics
  - 2. zeroth law of thermodynamics
  - 3. first law of thermodynamics
  - 4. second law of thermodynamics

Question ID : 595408851

Chosen Option : 3

Q.69 Which one of the following methods is suitable to calculate the working depth of the gear?

- Ans
- 1. Center distance between engaging gears
  - 2. Sum of their addendum
  - 3. Sum of their dedendum
  - 4. Sum of the addendum of one gear

Question ID : 595408945

Chosen Option : 2

Q.70 In a plane mechanism, total number of links is 4 and number of turning pairs is 4. The degree of freedom of mechanism is.

- Ans
- 1. 2
  - 2. 1
  - 3. 0
  - 4. 3

Question ID : 595408931

Chosen Option : 2

Q.71 Which one of the following mediums is used for the fastest cooling rate of steel quenching?

- Ans
- 1. Brine
  - 2. Air

Question ID : 595408897

Chosen Option : 3

- 3. Oil
- 4. Water

Q.72 At critical point the enthalpy of vaporization is:

- Ans  1. dependent on temperature
- 2. zero
  - 3. minimum
  - 4. maximum

Question ID : 595408836  
Chosen Option : 4

Q.73 A grinding wheel is specified by C 70 G 7 R 23  
Here C stands for:

- Ans  1. Diamond
- 2. Silicon carbide
  - 3. Cubic boron nitride
  - 4. Aluminium oxide

Question ID : 595408893  
Chosen Option : --

Q.74 If the SF diagram for a beam is a triangle with length of the beam as its base, the beam is:

- Ans  1.  
A cantilever with uniformly distributed load over its whole span
- 2.  
Simply supported with a concentrated load at its mid-point
  - 3.  
A cantilever with a concentrated load at its free end
  - 4.  
Simply supported with a uniformly distributed load over its whole span

Question ID : 595408907  
Chosen Option : 2

Q.75 The radiator cooling tubes are generally made of:

- Ans  1. Brass
- 2. Rubber
  - 3. Plastic
  - 4. Copper

Question ID : 595408861  
Chosen Option : 4

Q.76 Which of the following has got the highest value of specific speed?

- Ans  1. pelton wheel with single jet
- 2. Francis
  - 3. pelton with three jet
  - 4. Kaplan

Question ID : 595408806  
Chosen Option : 4

Q.77 Relationship between the elastic constants E, G, K is:

- Ans  1.  $E=KG/(K+G)$
- 2.  $E=9KG/(3K+G)$
  - 3.  $E=2KG/(3K+G)$

Question ID : 595408902  
Chosen Option : 2

4.  $E=3KG/(3K+G)$

**Q.78** Glycerine ( $\mu=1.50 \text{ Pa}\cdot\text{s}$ ;  $\rho=1260 \text{ kg/m}^3$ ) flows at a velocity of  $6.0 \text{ m/s}$  in  $10 \text{ cm}$  diameter pipe. Head loss in a length of  $7 \text{ m}$  pipe will be ( $g=10 \text{ m/s}^2$ ).

- Ans  1.  $14 \text{ m}$   
 2.  $16 \text{ m}$   
 3.  $7 \text{ m}$   
 4.  $8 \text{ m}$

Question ID : 595408805

Chosen Option : --

**Q.79** In which of the following tools, flutes are provided on:

- Ans  1. Drill bit  
 2. Grinding wheel  
 3. Chisel  
 4. Hacksaw blades

Question ID : 595408883

Chosen Option : 1

**Q.80** Capastan lathe is also known as:

- Ans  1. engine lathe  
 2. ram type lathe  
 3. turret lathe  
 4. cam type lathe

Question ID : 595408872

Chosen Option : 3

**Q.81** The reaction at the two supports of a simply supported beam carrying a uniformly distributed load over its entire span is (the intensity of loading on the beam is  $w$ /unit length and  $l$  is length of the beam).

- Ans  1.  $wl, wl/2$   
 2.  $wl/2, wl/2$   
 3.  $w/2, w/2$   
 4.  $wl/4, wl/4$

Question ID : 595408905

Chosen Option : 2

**Q.82** A grinding wheel of  $200 \text{ mm}$  diameter is having peripheral speed of  $30 \text{ m/s}$ . What is the speed of grinding wheel in revolution per minute (rpm)?

- Ans  1. 95  
 2. 5730  
 3. 2866  
 4. 11460

Question ID : 595408880

Chosen Option : --

**Q.83**  $\sigma_1, \sigma_2, \sigma_3$  are the three mutually perpendicular principal stresses with  $\epsilon_1, \epsilon_2,$  and  $\epsilon_3$  being the strains produced in the respective directions of the stress, the strain energy stored per unit volume in a cube is

- Ans  1.  $1/2(\sigma_1^2 \epsilon_1^2 + \sigma_2^2 \epsilon_2^2 + \sigma_3^2 \epsilon_3^2)$   
 2.  $\sigma_1 \epsilon_1 + \sigma_2 \epsilon_2 + \sigma_3 \epsilon_3$   
 3.  $1/2(\sigma_1 \epsilon_1^2 + \sigma_2 \epsilon_2^2 + \sigma_3 \epsilon_3^2)$   
 4.  $1/2(\sigma_1 \epsilon_1 + \sigma_2 \epsilon_2 + \sigma_3 \epsilon_3)$

Question ID : 595408900

Chosen Option : --

**Q.84** Which of the following is not a point function?

- Ans  1. pressure

Question ID : 595408833

Chosen Option : 3

- 2. volume
- 3. heat transfer
- 4. internal energy

Q.85 The reheat cycle in steam power plant is mainly adopted to:

- Ans  1. increase moisture content in low pressure stages to a safe value
2. decrease the capacity of condenser
3. decrease moisture content in low pressure stages to a safe value
4. recover the waste heat of boiler

Question ID : 595408840

Chosen Option : --

Q.86 An ideal gas at 227°C is heated at constant pressure till volume becomes three times. The temperature of gas will then be:

- Ans  1. 927°C
2. 1027°C
3. 1227°C
4. 681°C

Question ID : 595408830

Chosen Option : 3

Q.87 Water is flowing through pipe. Flow through pipe will be steady when

- Ans  1. velocity changes with time
2. at any point velocity does not change with time
3. pressure variation does not change along with the flow
4. density changes with time

Question ID : 595408811

Chosen Option : 2

Q.88 A spur gear has following specification

No of teeth=22

Pitch circle diameter =14mm

Find out the value of circular pitch.

- Ans  1. 2mm
2. 16mm
3. 4mm
4. 8mm

Question ID : 595408930

Chosen Option : 1

Q.89 Under filling in a weld joint is due to:

- Ans  1. melting away of base metal
2. incomplete filling of weld joints
3. low temperature of welding
4. incomplete fusion

Question ID : 595408890

Chosen Option : 1

Q.90 The primary function of the flywheel is:

Question ID : 595408937

Ans  1.

To maintain the constant speed of rotation of the crankshaft when the load on the engine increases

2.

To absorb energy during these periods of crank rotation when turning moment is less than the resisting points

3.

To limit the fluctuations of speed during each cycle

4.

To maintain constant speed of rotation of the crank shaft when the load on the engine decreases

Chosen Option : 3

Q.91 Which of the following casting processes uses expendable pattern and expendable mould?

Ans  1. Centrifugal casting

2. Pressure die casting

3. Investment casting

4. Shell mould casting

Question ID : 595408885

Chosen Option : 3

Q.92 A thermodynamic property:

Ans  1. depends on path

2.

does not depend on the past history of the system

3.

can have different values when the system is in a particular state

4. depends on the past history of the system

Question ID : 595408856

Chosen Option : 2

Q.93 Which of the following sentence is not correct?

Ans  1.

Pressure angle varies from maximum at the beginning of engagement, reduces to zero at the pitch point and again increases to maximum at the end of engagement in cycloidal profile.

2.

Pressure angle is constant in involute profile throughout the engagement.

3.

There is no phenomena of interference in cycloidal profile.

4.

Involute teeth are easy to manufacture and thus are cheaper.

Question ID : 595408948

Chosen Option : 1

Q.94 Hollow pipes and barrels are produced in:

Ans  1. centrifugal casting

2. true centrifugal casting

3. die casting

4. semi centrifugal casting

Question ID : 595408888

Chosen Option : 2

Q.95 The ratio of circular pitch and the module is:

Ans  1.  $1/\pi^2$

2.  $\pi$

Question ID : 595408950

Chosen Option : 2

3.  $\pi^2$

4.  $1/\pi$

**Q.96** As the number of contacting surface increase in case of clutch, the torque transmission capacity will:

- Ans  1. Decrease  
 2. Remain constant  
 3. May be increase or decrease  
 4. Increase

Question ID : 595408946

Chosen Option : --

**Q.97** Patterns are usually coated with a parting agent to:

- Ans  1. Increase strength of pattern  
 2. protect pattern  
 3. Facilitate their removal from the moulds  
 4. Increase strength of mould

Question ID : 595408865

Chosen Option : 2

**Q.98** A carnot engine operates between the temperatures of 300K and 600K. If engine produces 600 KJ of work, what is the entropy change during heat addition in KJ/K?

- Ans  1. 1  
 2. 0.5  
 3. 1.5  
 4. 2

Question ID : 595408837

Chosen Option : --

**Q.99** A machine which is transferring heat from lower temperature body to higher temperature body without consuming any external work. Such machine is an example of:

- Ans  1. Perpetual Motion Machine of the fourth kind  
 2. Perpetual Motion Machine of the second kind  
 3. Perpetual Motion Machine of the third kind  
 4. Perpetual Motion Machine of the first kind

Question ID : 595408857

Chosen Option : 2

**Q.10**  
0 Pressure loss for laminar flow through pipeline is dependent:

- Ans  1. directly on square of pipe radius  
 2. inversely on flow of velocity  
 3. directly on length of pipe  
 4. inversely on viscosity of flowing medium

Question ID : 595408823

Chosen Option : 3

**Q.10**  
1 For given compression ratio in otto cycle, which of the following will give the highest efficiency?

- Ans  1. Air  
 2. Argon  
 3. Oxygen  
 4. Nitrogen

Question ID : 595408849

Chosen Option : 2



Q.10 A 50mm × 10mm × 4mm copper bar, free to expand, is heated from 20°C to 50°C. what shall be developed?

2

- Ans
- 1. shear stress
  - 2. tensile stress
  - 3. no stress
  - 4. compressive stress

Question ID : 595408918

Chosen Option : 3

Q.10 The included angle of a pulley for a V-Belt is in the range of:

3

- Ans
- 1. 50°-60°
  - 2. 30°-40°
  - 3. 40°-50°
  - 4. 20°-30°

Question ID : 595408953

Chosen Option : 2

Q.10 A fluid is flowing through a pipe of radius R. For fully developed laminar flow through pipe, shear stress is maximum at (r is measured from midpoint).

4

- Ans
- 1. at wall surface ( $r=R$ )
  - 2. at  $r=R/2$
  - 3. at midpoint ( $r=0$ )
  - 4. at  $r=R/\sqrt{2}$

Question ID : 595408826

Chosen Option : 1

Q.10 The dynamic viscosity of fluid is 0.7 poise and specific gravity is 0.8, then the kinematic viscosity of fluid in stokes is:

5

- Ans
- 1. 0.22
  - 2. 1.14
  - 3. 0.87
  - 4. 0.34

Question ID : 595408812

Chosen Option : 3

Q.10 Supercharging is the process of:

6

- Ans
- 1. providing clean air.
  - 2. injecting excess fuel for raising more load
  - 3. providing forced cooling air
  - 4. supplying the intake of an engine with air at a density greater than the density of the surrounding atmosphere

Question ID : 595408858

Chosen Option : 2

Q.10 Oldham's coupling contains:

7

- Ans
- 1. 2 turning pairs and 2 sliding pairs
  - 2. 1 turning pairs and 3 sliding pairs
  - 3. 2 turning pairs and 1 sliding pairs
  - 4. 3 turning pairs and 1 sliding pairs

Question ID : 595408934

Chosen Option : 1

Q.10 A solid circular shaft of 4 cm in diameter is subjected to a shear stress of 20 kN/cm<sup>2</sup>, then the value of twisting moment (kN-cm) will be:

8

- Ans
- 1.  $80\pi$

Question ID : 595408927

Chosen Option : 1

- 2.  $20\pi$
- 3.  $15\pi$
- 4.  $10\pi$

Q.10  
9 Which of the following is an inversion of double slider crank chain?

Question ID : 595408933

Chosen Option : 2

- Ans
- 1. Rotatory engine
  - 2. Scotch yoke
  - 3. Reciprocating compressor
  - 4. Whitworth quick return mechanism

Q.11  
0 Vents, which are placed in moulds are used:

Question ID : 595408866

Chosen Option : 1

- Ans
- 1. To carry off gases produced when molten metal comes into contact with sand
  - 2. To pour molten metal into mould
  - 3. To hold pattern
  - 4. To provide strength to mould

Q.11  
1 Bernoulli's equation cannot be applied when the flow is:

Question ID : 595408824

Chosen Option : 3

- Ans
- 1. Streamlined
  - 2. Irrotational
  - 3. Rotational
  - 4. Non viscous

Q.11  
2 Which type of governor is Hartnell governor?

Question ID : 595408942

Chosen Option : 3

- Ans
- 1. Dead weight
  - 2. Inertia
  - 3. Spring-loaded
  - 4. Pendulum type

Q.11  
3 Pattern material used for precision casting is:

Question ID : 595408889

Chosen Option : 2

- Ans
- 1. wooden pattern
  - 2. wax pattern
  - 3. no pattern
  - 4. metal pattern

Q.11  
4 Water is fed to a boiler at  $50^\circ\text{C}$ ; the enthalpy of vaporization at atmospheric pressure in the boiler is  $2400\text{ kJ/kg}$ ; steam coming out from boiler is 0.7 dry; the net heat supplied in the boiler is ( $C_p = 4\text{ kJ/kgK}$ ).

Question ID : 595408842

Chosen Option : 4

- Ans
- 1.  $2160\text{ kJ/kg}$
  - 2.  $1940\text{ kJ/kg}$
  - 3.  $1980\text{ kJ/kg}$

4. 1880 kJ/kg

Q.11  
5 The phenomenon of water hammer takes place in pipes:

Ans  1.

when water is suddenly accelerated by opening the valve.

2. when fluid is moving with high head.

3. when pressure is reduced to zero.

4.

when fluid is suddenly brought to rest by closing the valve.

Question ID : 595408817

Chosen Option : 4

Q.11  
6 An object is deformed by applying force. Energy stored in the material during deformation is known as:

Ans  1. elastic energy

2. potential energy

3. strain energy

4. plastic energy

Question ID : 595408916

Chosen Option : 3

Q.11  
7 The ratio between Oxygen and Acetylene gases for neutral flame in gas welding is:

Ans  1. 02 : 01

2. 01 : 02

3. 04 : 01

4. 01 : 01

Question ID : 595408877

Chosen Option : 4

Q.11  
8 The reading of temperature on Celsius scale is 40°C. What is equivalent reading of temperature on Fahrenheit scale?

Ans  1. 104°F

2. 134°F

3. 110°F

4. 114°F

Question ID : 595408834

Chosen Option : 1

Q.11  
9 An otto cycle has compression ratio of 9. If 1000 kJ of work is extracted from the cycle, the heat rejected by the cycle is (take  $\gamma=1.5$ ).

Ans  1. 500 kJ

2. 125 kJ

3. 250 kJ

4. 1000 kJ

Question ID : 595408852

Chosen Option : --

Q.12  
0 The lubricants commonly used in the automobiles are:

Ans  1. cooking oils

2. animal oils

3. alcohols

4. mineral oils

Question ID : 595408863

Chosen Option : 4

Q.12

1 Thermostat is used in radiators to:

Ans  1. control the pressure of water

2.

control distribution of water to various cylinders

3. control the water temperature

4. control the velocity of water

Question ID : 595408860

Chosen Option : --

Q.12 A simply supported beam of length 3m carries a concentrated load of 15 kN at a 1 m from left support. The maximum bending moment in the beam:

2  
Ans  1. 15 kNm

2. 5 kNm

3. 10 kNm

4. 40 kNm

Question ID : 595408910

Chosen Option : 3

Q.12 Tool life can be increased by increasing:

3  
Ans  1. depth of cut

2. feed

3. cutting speed

4. nose radius

Question ID : 595408898

Chosen Option : 4

Q.12 If a fluid jet discharging from a 50 mm diameter orifice has a 40 mm diameter at its vena contracta, then its coefficient of contraction will be:

4  
Ans  1. 0.64

2. 0.8

3. 1.25

4. 1.8

Question ID : 595408829

Chosen Option : 1

Q.12 What is the cetane value of  $\alpha$ -methyl naphthalene?

5  
Ans  1. 100

2. 0

3. 75

4. 50

Question ID : 595408839

Chosen Option : 2

Q.12 For a single point cutting tool, Taylor's life exponent is 0.5. If the cutting speed is halved, tool life will be increased by

6  
Ans  1. two times

2. four times

3. eight times

4. sixteen times

Question ID : 595408881

Chosen Option : 2

Q.12 In engine, which of the following is an advantage of liquid cooling system.

7  
Ans  1. Even cooling

2. Power absorbed by pump is considerable

Question ID : 595408864

Chosen Option : 4

- 3. Very cheap
- 4. Dependent only on water supply

Q.12  
8 Grinding of soft material is not economic because of:

Question ID : 595408879

Chosen Option : 3

- Ans
- 1. low work piece stiffness
  - 2. high temperature involved
  - 3. frequent wheel clogging
  - 4. rapid wheel wear

Q.12  
9 Beams of uniform strength vary in section such that:

Question ID : 595408913

Chosen Option : 3

- Ans
- 1. shear force remains constant
  - 2. maximum bending stress remains constant
  - 3. bending moment remain constant
  - 4. deflection remain constant

Q.13  
0 In a fly wheel, the value of safe stress is  $25 \text{ MN/m}^2$  and density of material is  $10000 \text{ kg/m}^3$ . The maximum peripheral velocity will be:

Question ID : 595408939

Chosen Option : --

- Ans
- 1. 200
  - 2. 100
  - 3. 50
  - 4. 25

Q.13  
1 The velocity in m/s for laminar flow through a pipe of cross-sectional area  $0.5 \text{ m}^2$  having discharge of  $2 \text{ m}^3/\text{s}$  is:

Question ID : 595408827

Chosen Option : 3

- Ans
- 1. 6
  - 2. 2
  - 3. 4
  - 4. 8

Q.13  
2 The relationship between Young's modulus (E), Bulk modulus (K) and Poisson's ratio ( $\mu$ ) is given by:

Question ID : 595408920

Chosen Option : 3

- Ans
- 1.  $E = 3 K (1 - \mu)$
  - 2.  $K = 3 E (1 - 2\mu)$
  - 3.  $E = 3 K (1 - 2\mu)$
  - 4.  $K = 3 E (1 - \mu)$

Q.13  
3 The ratio of modulus of rigidity to young's modulus is 0.40. What will be the Poisson's ratio?

Question ID : 595408903

Chosen Option : 3

- Ans
- 1. 0.55
  - 2. 0.45
  - 3. 0.25
  - 4. 0.35

Q.13

4 On which of the following surface, flank wear occurs:

- Ans
- 1. Cutting edge of the tool
  - 2. Nose of the tool
  - 3. Relief face of the tool
  - 4. Rake face of the tool

Question ID : 595408896

Chosen Option : 4

Q.13  
5 Bearing characteristics no. is represented by:

- Ans
- 1.  $\mu P/N$
  - 2.  $\mu NP$
  - 3.  $P/\mu m$
  - 4.  $\mu N/P$

Question ID : 595408943

Chosen Option : --

Q.13  
6 Which of following is an example of fire tube boiler?

- Ans
- 1. Babcock and Wilcox boiler
  - 2. Locomotive boiler
  - 3. Benson boiler
  - 4. Stirling boiler

Question ID : 595408843

Chosen Option : 2

Q.13  
7 A member is subjected to the combined action of bending 400N-m and torque 300N-m. What respectively are the equivalent bending moment and equivalent torque?

- Ans
- 1. 450 N-m and 500 N-m
  - 2. 900 N-m and 500 N-m
  - 3. 400 N-m and 500 N-m
  - 4. 900 N-m and 350 N-m

Question ID : 595408917

Chosen Option : 2

Q.13  
8 Two pipes are connected in series. Diameters of pipes are 10cm and 20 cm. Velocity of flow in smaller diameter pipe is 8m/s. What is the head loss (in meter) due to sudden enlargement? Take  $g=10m/s^2$ ?

- Ans
- 1. 1.2m
  - 2. 2.4m
  - 3. 1.8m
  - 4. 3.6m

Question ID : 595408821

Chosen Option : 2

Q.13  
9 Spinning operation is carried out on:

- Ans
- 1. Milling machine
  - 2. Mechanical press
  - 3. Hydraulic press
  - 4. Lathe

Question ID : 595408873

Chosen Option : 4

Q.14  
0 Which of the following is the motion of tool in shaping process?

- Ans
- 1. Oscillatory
  - 2. Reciprocating

Question ID : 595408882

Chosen Option : 2

3. Rotating

4. Stationary

Q.14  
1 The buckling load for a column hinged at both ends is 20 kN. What will be the buckling load when both ends are fixed?

Question ID : 595408922

Chosen Option : 3

Ans  1. 800 kN

2. 400 kN

3. 80 kN

4. 40 kN

Q.14  
2 Slenderness ratio of a column is defined as the ratio of its length to its:

Question ID : 595408923

Chosen Option : 3

Ans  1. Maximum radius of gyration

2. Maximum lateral dimension

3. Least radius of gyration

4. Least lateral dimension

Q.14  
3 Torque transmitted by hollow shaft as compared to solid shaft (material and cross-sectional area of both the shaft are same) will be:

Question ID : 595408914

Chosen Option : 3

Ans  1.

either same or less depending on other parameters.

2. same

3. more

4. lesser

Q.14  
4 In a kinematic chain, a tertiary joint is equivalent to:

Question ID : 595408935

Chosen Option : 1

Ans  1. two binary joints

2. four binary joint

3. three binary joints

4. one binary joint

Q.14  
5 Consider the following

1. Temperature

2. Enthalpy

3. internal energy

4. specific entropy

Which of these are extensive properties?

Question ID : 595408838

Chosen Option : 4

Ans  1. 1,2,3,4

2. 2,4

3. 3,4

4. 2,3

Q.14  
6 Positive bending moment is also known as:

Question ID : 595408912

Ans  1. hogging

2. some time hogging and some time sagging

3. sagging

4. contraflexure

Chosen Option : 3

Q.14 Two pulton wheels A and B are having same specific speed and are working under same head. Wheel A provides 900kW at 800 RPM. If Wheel B produces 100 kW, then its RPM will be:

Ans  1. 2400

2. 1250

3. 7200

4. 4000

Question ID : 595408820

Chosen Option : --

Q.14 A beam is subjected to bending moment M. What is the relationship between shear force F and bending moment M?

8

Ans  1.  $M = \frac{d^2 F}{dx^2}$

2.  $M = \frac{dF}{dx}$

3.  $F = \frac{d^2 M}{dx^2}$

4.  $F = \frac{dM}{dx}$

Question ID : 595408909

Chosen Option : 4

Q.14 The instrument or device used to measure the cutting forces during machining is:

9

Ans  1. Lactometer

2. Comparator

3. Tachometer

4. Dynamometer

Question ID : 595408892

Chosen Option : 4

Q.15 Which of the following relation is valid for belt drive when the belt is on the point of slipping on the pulley?

0

$T_1$  = Tension on tight side,  $T_2$  = Tension on slack side  
 $\theta$  = angle of lap or contact of belt over pulley  
 $\mu$  = coefficient of friction between belt and pulley

Ans  1.  $T_1 \times T_2 = e^{\mu\theta}$

2.  $\frac{T_2}{T_1} = e^{\mu/\theta}$

3.  $\frac{T_1}{T_2} = e^{\mu\theta}$

4.  $\frac{T_2}{T_1} = e^{\mu\theta}$

Question ID : 595408952

Chosen Option : 4

Section : NUMERICAL AND LOGICAL REASONING

Q.1 A sum of money amounts to ₹ 1320 in 2 years and ₹ 1380 in 3 years at simple interest. What is the sum of money?

Ans  1. ₹ 1200

2. ₹ 1220

Question ID : 595408957

Chosen Option : 1



3. ₹ 1150

4. ₹ 1100

**Q.2** Rachna is taller than Sapna and Diwakar. Ravi is not as tall as Diwakar. Sapna is taller than Ravi. Rachna is not as tall as Amit. Who among them is the tallest?

Ans  1. Diwakar

2. Amit

3. Rachna

4. Sapna

Question ID : 595408968

Chosen Option : 2

**Q.3** Keshav travels one km towards East from his house; then turns right and covers 4 kms; then turns left and walks 3 kms and then finally turns left and walks 4 kms. In which direction is Keshav now from his starting point?

Ans  1. East

2. West

3. South

4. North

Question ID : 595408971

Chosen Option : 4

**Q.4** If  $a : 2b = 2 : 3$  and  $b : 2c = 5 : 4$ , then what is value of  $c : a$ ?

Ans  1. 3 : 10

2. 6 : 5

3. 10 : 3

4. 5 : 6

Question ID : 595408956

Chosen Option : 1

**Q.5** What is the quadratic equation whose roots are the squares of the roots of the equation  $x^2 + x + 1 = 0$ ?

Ans  1.  $x^2 - 3x + 1 = 0$

2.  $x^2 + 3x + 1 = 0$

3.  $x^2 + x + 1 = 0$

4.  $x^2 - x + 1 = 0$

Question ID : 595408964

Chosen Option : --

**Q.6** Find the missing number from the given alternatives.

4	11	7
8	17	9
9	21	?

Ans  1. 15

2. 13

3. 14

4. 12

Question ID : 595408972

Chosen Option : 4

**Q.7** The ratio of 4<sup>th</sup> term to 7<sup>th</sup> term of a G.P. is 8 : 27. What is the common ratio of the G.P.?

Ans  1.  $\frac{8}{27}$

Question ID : 595408962

Chosen Option : 2

2.  $\frac{3}{2}$

3.  $\frac{27}{2}$   
 4.  $\frac{3}{3}$

**Q.8** 15 men can complete a work in 12 days. 4 days after they started the work, 5 more men joined them. How many more days will they take to finish the remaining work?

**Ans**  1. 6  
 2. 4  
 3. 5.5  
 4. 5

Question ID : 595408961

Chosen Option : --

**Q.9** Two vessels A and B contain spirit and water in the ratio 2 : 7 and 5 : 4 respectively. Their contents are mixed in the ratio of 1 : 2. What is the ratio of spirit and water in the new mixture?

**Ans**  1. 7 : 4  
 2. 7 : 5  
 3. 2 : 5  
 4. 4 : 5

Question ID : 595408959

Chosen Option : --

**Q.10** A train 130 m long is moving at a speed of 120 km/h. It crosses a train 140 m long moving in the same direction along parallel tracks in 27 seconds. What is the speed of the second train?

**Ans**  1. 66 km/h  
 2. 84 km/h  
 3. 102 km/h  
 4. 112 km/h

Question ID : 595408960

Chosen Option : 2

**Q.11** In a certain code language CRAFT is written as ETCHV, how NATURE will be written in the same language?

**Ans**  1. OBUVSF  
 2. ERUTAN  
 3. PCVTWG  
 4. PCVWTG

Question ID : 595408970

Chosen Option : 4

**Q.12** Two years ago, Ramesh was three times as old as his brother Suresh was. In three years' time, Ramesh will be twice as old as his brother. Suresh will then be. How old is each one of them now?

**Ans**  1. 8 years, 4 years  
 2. 17 years, 7 years  
 3. 24 years, 10 years  
 4. 21 years, 9 years

Question ID : 595408969

Chosen Option : 2

**Q.13** Consider the given statements to be true, even if they are at variance from commonly known facts and decide which of the given conclusions can definitely be drawn from the given statements.

**Statements:**  
 I. All tables are benches.  
 II. No benches are Almirahs.

**Conclusions:**  
 I. No tables are Almirahs.  
 II. All benches are tables.

**Ans**  1. Only conclusion I follows  
 2. Only conclusion II follows  
 3. Neither conclusion I nor II follows

Question ID : 595408974

Chosen Option : --

4. Both conclusion I and II follow

Q.14 Ravi and Amit are brothers. Rama and Kusum are sisters. Ravi's son is Kusum's brother. How is Amit related to Rama?

- Ans  1. Cousin  
 2. Uncle  
 3. Brother  
 4. Father

Question ID : 595408965

Chosen Option : 2

Q.15 Select the related word from the given alternatives.  
 Cricket : Pitch :: Boxing : ?

- Ans  1. Ground  
 2. Court  
 3. Ring  
 4. Stadium

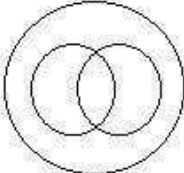
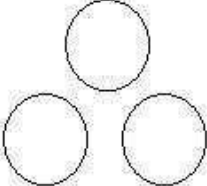
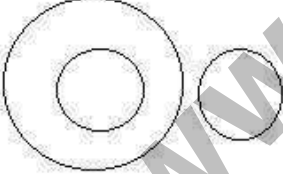

Question ID : 595408967

Chosen Option : 2

Q.16 Identify the diagram that best represents the relationship among classes given below:

Furniture, Bench, Table

Ans

1. 
2. 
3. 
4. 

Question ID : 595408973

Chosen Option : 4

Q.17 The selling price of an article is ₹ 720. If loss is 10%, what is the cost price of the article?

- Ans  1. ₹ 730  
 2. ₹ 800  
 3. ₹ 792  
 4. ₹ 648

Question ID : 595408958

Chosen Option : 2

Q.18 Select the related number from the given alternatives.  
 8 : 20 :: 14 : ?

Question ID : 595408966

Chosen Option : 2

- Ans
- 1. 20
  - 2. 35
  - 3. 28
  - 4. 30

Q.19 वह छोटी से छोटी संख्या क्या है, जिसे 18, 48 तथा 120 से विभाजित करने पर प्रत्येक स्थिति में 5 शेष बचता है?

- Ans
- 1. 1440
  - 2. 720
  - 3. 725
  - 4. 1445

Question ID : 595408955

Chosen Option : 3

Q.20 A spherical balloon of radius 150 cm subtends an angle of  $60^\circ$  at the eye of an observer. If the angle of elevation of its centre is  $45^\circ$ , what is the height of centre of the balloon? (Assume that eye of observer is at the ground level.)

- Ans
- 1.  $300\sqrt{2}$  cm
  - 2.  $150\sqrt{2}$  cm
  - 3.  $180\sqrt{2}$  cm
  - 4. 300 cm

Question ID : 595408963

Chosen Option : --

Section : GENERAL KNOWLEDGE/AWARENESS

Q.1 Who was canonized as a saint by Pope Francis in September 2016?

- Ans
- 1. Maria Elizabeth Hesselblad
  - 2. Louis Martin
  - 3. Teresa of Calcutta
  - 4. Pope John Paul II

Question ID : 595408977

Chosen Option : 3

Q.2 Who invented "Dynamite"?

- Ans
- 1. Thomas Alva Edison
  - 2. Benjamin Franklin
  - 3. Rudolf Diesel
  - 4. Alfred Nobel

Question ID : 595408983

Chosen Option : 1

Q.3 Deficiency of which of the following nutrients causes Kwashiorkor?

- Ans
- 1. Vitamins
  - 2. Carbohydrates
  - 3. Minerals
  - 4. Proteins

Question ID : 595408981

Chosen Option : --

Q.4 Which of the following statements is NOT correct about the Goods and Services Tax (GST)?

- Ans
- 1. It is a direct tax.
  - 2.

Question ID : 595408988

Chosen Option : 1

It will replace all indirect taxes with a single tax.

3.

It aims to simplify the existing system of taxation in India.

4.

The GST system is expected to make goods cheaper for the end consumer.

Q.5 The dance form “**Mohiniyattam**” originated in:

- Ans  1. Odisha  
 2. Andhra Pradesh  
 3. Kerala  
 4. Maharashtra

Question ID : 595408985

Chosen Option : --

Q.6 Who built ‘Jantar Mantar’, the famous observatory, in Delhi?

- Ans  1. Emperor Akbar  
 2. Aurangzeb  
 3. Maharaja Jai Singh  
 4. Maharajah Churaman

Question ID : 595408991

Chosen Option : 2

Q.7 Which of the following statements is NOT correct?

- Ans  1.  
The President has the power to declare war and conclude peace.  
 2.  
Once appointed, nobody can remove the President from his office.  
 3. The Prime Minister is the Head of the State.  
 4.  
The President of India is the supreme commander of the armed forces.

Question ID : 595408994

Chosen Option : 2

Q.8 Who won the US Open Women’s Tournament, 2016?

- Ans  1. Angelique Kerber  
 2. Karolina Pliskova  
 3. Venus Williams  
 4. Serena Williams

Question ID : 595408978

Chosen Option : --

Q.9 Where is the famous 13<sup>th</sup>-century Sun Temple, also known as ‘Black Pagoda’, located?

- Ans  1. Puri  
 2. Madurai  
 3. Kammauj  
 4. Konark

Question ID : 595408986

Chosen Option : --

Q.10 Which pair of cities does the Yamuna Expressway connect?

- Ans  1. Agra – Panipat  
 2. Lucknow – Allahabad

Question ID : 595408990

Chosen Option : 2

3. Greater Noida – Agra

4. Delhi – Jaipur

Q.11 Which country is also known as "Nippon" (roughly translated as "the Land of Rising Sun")?

Ans  1. Norway

2. China

3. East Timor

4. Japan

Question ID : 595408982

Chosen Option : --

Q.12 Who won the Nobel Peace Prize for 2016?

Ans  1. Juan Manuel Santos

2. Barack Obama

3. Rodrigo Londono

4. Al Gore

Question ID : 595408976

Chosen Option : 1

Q.13 When did the Constituent Assembly meet for the first time?

Ans  1. 9 December, 1946

2. 26 January, 1950

3. 26 November, 1949

4. 15 August, 1947

Question ID : 595408975

Chosen Option : 3

Q.14 Which statement about the Pradhan Mantri Suraksha Bima Yojana (PMSBY) is CORRECT?

Ans  1.

A newborn infant can also be enrolled into this insurance scheme.

2.

The death benefits are up to ₹ 2 Crore per policyholder.

3.

The premium is just ₹ 12 per annum for each policyholder.

4. It is limited to the North-Eastern states.

Question ID : 595408987

Chosen Option : 3

Q.15 Which Indian State has the lowest density of population?

Ans  1. Arunachal Pradesh

2. Tamil Nadu

3. Sikkim

4. Kerala

Question ID : 595408989

Chosen Option : 3

Q.16 What is the full form of the abbreviation NCPDR?

Ans  1.

National Commission For People's Care And Rights

2.

National Commission for Protection of Child Rights

3.

Question ID : 595408980

Chosen Option : --

National Commission For Poverty And Community Resources

4.

National Commission To Protect And Care for Religions

Q.17 Which of the following statements about Sambhar lake is true?

Ans  1.

It was formed due to hypervelocity impact of a comet.

2. It is the largest inland salt lake in India.

3. It is the highest lake in India.

4. It drains into the Arabian sea.

Question ID : 595408984

Chosen Option : --

Q.18 Who started the Civil Disobedience Movement?

Ans  1. Jawaharlal Nehru

2. Maulana Abul Kalam Azad

3. Muhammad Ali & Shaukat Ali

4. Mahatma Gandhi

Question ID : 595408992

Chosen Option : --

Q.19 Who won Gold in the men's high jump T-42 event at the 2016 Rio Paralympics?

Ans  1. Mariyappan Thangavelu

2. Varun Singh Bhati

3. Shahradd Nasajpour

4. Devendra Jhajharia

Question ID : 595408979

Chosen Option : 1

Q.20 Who is the ex-officio Chairman of the Rajya Sabha (Council of States)?

Ans  1. The Prime Minister of India

2. The Vice-President of India

3. The President of India

4. The Chief Justice

Question ID : 595408993

Chosen Option : 2

Section : GENERAL HINDI

Q.1 'जिसने प्रतिष्ठा पा ली हो' वाक्यांश के लिए एक शब्द होगा -

Ans  1. लब्धप्रतीष्ठ

2. लब्धप्रतिष्ठवान

3. लब्धप्रतिष्ठ

4. लब्धप्रतिष्ठीत

Question ID : 5954081002

Chosen Option : 4

Q.2 'किसी वस्तु से विरक्त भाव आना' के लिए उपुक्त मुहावरा है -

Ans  1. जी मचलना

2. जी हलका होना

3. जी उड़ना

Question ID : 5954081005

Chosen Option : 2

✓ 4. जी खड़ा होना

Q.3 निम्नलिखित शब्दों में से कौनसे शब्द की वर्तनी सही है?

- Ans
- ✗ 1. वर्त्स्य
  - ✗ 2. वत्स्य
  - ✗ 3. व्रत्स्य
  - ✓ 4. वर्त्स्य

Question ID : 5954081001  
Chosen Option : 4

Q.4 कौन-सा शब्द 'पेड़' का पर्याय नहीं है?

- Ans
- ✗ 1. विटप
  - ✗ 2. वृक्ष
  - ✓ 3. कानन
  - ✗ 4. पादप

Question ID : 5954081004  
Chosen Option : 3

Comprehension:



SubQuestion No : 5

Q.5 सत्य भाषण का परिणाम होता है -

- Ans
- ✓ 1. प्रतिष्ठा
  - ✗ 2. अभाव
  - ✗ 3. पतन
  - ✗ 4. क्षय

Question ID : 595408996  
Chosen Option : 1

Comprehension:



SubQuestion No : 6

Q.6 सत्य बोलने वाले पर नहीं किया जाता -

- Ans
- ✓ 1. संदेह
  - ✗ 2. विश्वास
  - ✗ 3. जिम्मेदारी
  - ✗ 4. निर्भरता

Question ID : 595408997  
Chosen Option : 1

Comprehension:



SubQuestion No : 7

Q.7 'ताके हिरदय आप' पंक्ति में 'आप' का अर्थ है -

- Ans
- ✗ 1. मैं
  - ✓ 2. ईश्वर

Question ID : 5954081000  
Chosen Option : 3



✗ 3. तुम

✗ 4. प्रकृति

Comprehension:



SubQuestion No : 8

Q.8 गाँधीजी ने सत्य को तप क्यों कहा है?

- Ans
- ✗ 1. साँच को आँच आ ही जाती है।
  - ✗ 2. गृहत्याग करना पड़ता है।
  - ✗ 3. इसमें भी ध्यान लगाना पड़ता है।
  - ✓ 4. कष्ट झेलने पड़ते हैं।

Question ID : 595408998

Chosen Option : 4

Comprehension:



SubQuestion No : 9

Q.9 महापुरुषों ने सत्य का गुणगान किया है, क्योंकि –

- Ans
- ✗ 1. सत्य से व्यक्ति ज्ञानी बनता है।
  - ✗ 2. सत्य से ही व्यापार फलता है।
  - ✗ 3. सत्यवादी को ही शक्ति मिलती है।
  - ✓ 4. सत्य से संबंध विश्वसनीय बनते हैं।

Question ID : 595408999

Chosen Option : 4

Q.10 'आकर्षण' शब्द का विलोम होता है –

- Ans
- ✗ 1. अप्रिय
  - ✓ 2. विकर्षण
  - ✗ 3. अपकर्षण
  - ✗ 4. संकर्षण

Question ID : 5954081003

Chosen Option : 2