Unit – 1 Introduction				
1	In system of units, MKS full name _____.			
	A.	Meter, Kilo Newton, Second	B.	Centimetre, Gram, Second
	C.	Meter, Kilogram, Second	D.	Meter, Kilo ton, Second
2	Scalar quantity is specified by _____.			
	A.	Magnitude only	B.	Direction only
	C.	Both magnitude and direction	D.	None of the above
3	_____ is the branch of applied science, which deals with the laws and principles of mechanics along with their applications to engineering problems.			
	A.	Engineering mechanics	B.	Kinematics
	C.	Applied mechanics	D.	Kinetics
4	In S. I. system what is the unit of power?			
	A.	T	B.	Gram
	C.	Watt	D.	Kg
5	Displacement is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
6	1 degree = _____ radian.			
	A.	Π/180	B.	180/Π
	C.	180 x Π	D.	180 + Π
7	The unit of stress is _____.			
	A.	Newton-metre	B.	Newton/metre^2
	C.	Newton	D.	Metre
8	1 kW = _____ watt.			
	A.	100	B.	1000
	C.	10	D.	1
9	The unit of energy is _____.			
	A.	Newton-metre	B.	Newton/millimetre^2
	C.	Newton	D.	Metre
10	1 MPa = _____ N/mm^2.			
	A.	100	B.	1000
	C.	10	D.	1
11	In system of units, FPS means _____.			
	A.	Foot, Pound, Second	B.	Centimetre, Gram, Second
	C.	Meter, Kilogram, Second	D.	Meter, Kiloton, Second
12	Vector quantity is specified by _____.			
	A.	Magnitude only	B.	Direction only

	C.	Both magnitude and direction	D.	None of the above
13	_____ is deals with the forces and their effects, while acting upon the bodies at rest.			
	A.	Kinematics	B.	Dynamics
	C.	Kinetics	D.	Statics
14	The unit of Couple is _____.			
	A.	N.m	B.	kN
	C.	m	D.	m/s
15	Energy is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
16	1 Joule = _____ N.m.			
	A.	1000	B.	100
	C.	10	D.	1
17	The unit of pressure is _____.			
	A.	Newton-metre	B.	Newton/metre^2
	C.	Newton	D.	Metre
18	1 kN = _____ newton.			
	A.	1000	B.	100
	C.	10	D.	1
19	1 watt = _____ N.m/s.			
	A.	1000	B.	100
	C.	10	D.	1
20	The unit of torque is _____.			
	A.	Newton-metre	B.	Newton/millimetre^2
	C.	Newton	D.	Metre
21	In system of units, CGS means _____.			
	A.	Mass, length, time	B.	Metre, kilogram, second
	C.	Foot, pound, second	D.	Centimetre, Gram, second
22	A _____ quantity is one which requires magnitude only to completely specify it.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
23	_____ is deals with the forces and their effects, while acting upon the bodies in motion.			
	A.	Kinematics	B.	Dynamics
	C.	Kinetics	D.	Statics

24	The unit of work is _____.			
	A.	Joule	B.	Watt
	C.	Newton	D.	None of the above
25	Temperature is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
26	1cm = _____ m.			
	A.	100	B.	10
	C.	1	D.	0.1
27	The unit of volume is _____.			
	A.	m	B.	m^2
	C.	m^3	D.	None of these
28	1 MN = _____ kN			
	A.	10	B.	100
	C.	1000	D.	1
29	Angular velocity is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
30	1 N = _____ kN			
	A.	0.1	B.	0.01
	C.	0.001	D.	1.0
31	_____ System of units is used internationally.			
	A.	MKS	B.	CGS
	C.	S.I	D.	FPS
32	A _____ quantity is one which requires magnitude and direction both to completely specify it.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
33	_____ is deals with the bodies in motion due to the application of forces.			
	A.	Kinematics	B.	Dynamics
	C.	Kinetics	D.	Statics
34	The unit of acceleration is _____.			
	A.	Metre	B.	Metre/sec
	C.	$Metre/sec^2$	D.	None of the above

35	Moment of inertia is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
36	1 kg = _____ gram.			
	A.	1000	B.	100
	C.	10	D.	10000
37	The unit of area is _____.			
	A.	m	B.	m^2
	C.	m^3	D.	None of these
38	1 km = _____ m			
	A.	1000	B.	100
	C.	10	D.	10000
39	Momentum is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
40	1 hp = _____ watt.			
	A.	746	B.	0.746
	C.	0.0746	D.	None of these
41	_____ is deals with the bodies in motion without any reference to the forces which are responsible for the motion.			
	A.	Kinematics	B.	Dynamics
	C.	Kinetics	D.	Statics
42	The units of three fundamental quantities are called _____.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
43	The units of some physical quantities are derived from fundamental units. Such units are called _____ units.			
	A.	Fundamental	B.	Derived
	C.	Vector	D.	None of these
44	The unit of moment is _____.			
	A.	Newton-metre	B.	Newton/metre
	C.	Newton	D.	Metre
45	Weight is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above

46	1 kgf = _____ newton.			
	A.	9.81	B.	9.91
	C.	9.71	D.	None of these
47	The unit of force is_____.			
	A.	Newton	B.	Joule
	C.	Watt	D.	None of the above
48	1 Pascal = _____ N/m^2			
	A.	10	B.	100
	C.	1	D.	1000
49	Impulse is _____ quantity.			
	A.	Scalar	B.	Vector
	C.	Fundamental	D.	None of above
50	The unit of density is _____.			
	A.	Kg/m	B.	Kg/m^2
	C.	Kg/m^3	D.	None of these

Unit – 3 Centroid and centre of gravity				
1	The area of a semi-circle is given by the equation			
	A.	πR^2	B.	$\pi R^2/2$
	C.	R^2	D.	$\pi R^2/4$
2	The volume of a cylinder having radius 'R' and height 'h' is given by which equation?			
	A.	πR^2	B.	$\pi R^2 h$
	C.	Rh	D.	πRh
3	Centre of gravity is a point about which?			
	A.	Entire Area of body is concentrated	B.	Entire Mass of body is concentrated
	C.	Entire Volume of body is concentrated	D.	Entire Length of body is concentrated
4	What is the area of a Triangle having width 10 cm and height 20 cm?			
	A.	100 cm^2	B.	120 cm^2
	C.	80 cm^2	D.	160 cm^2
5	For a horizontal wire AB of length 150 mm, the value of $\bar{x}$ from point A is equal to			
	A.	0 mm	B.	100 mm
	C.	75 mm	D.	50 mm
6	If the area is symmetrical about Y axis, then the Centroid lies on which axis?			
	A.	X axis	B.	Y axis
	C.	Both X and Y axis	D.	None of the above
7	A c.g. of a right circular cone having height 300 mm lies at what distance from base measured along vertical axis?			
	A.	100mm	B.	150mm
	C.	50mm	D.	75mm
8	Centroid is the			
	A.	Centre of plane area	B.	Centre of mass
	C.	Centre of weight	D.	None of the above
9	Centre of gravity is the			
	A.	Centre of plane area	B.	Centre of plane
	C.	Centre of mass	D.	None of the above
10	A circle has			
	A.	Two axes of symmetry	B.	Three axes of symmetry
	C.	Four axes of symmetry	D.	All of the above
11	The 'y' coordinate of Centroid of a right angle triangle lies			
	A.	Half of the height of triangle	B.	On third of height of triangle
	C.	Three fourth of height of triangle	D.	None of the above
12	The 'y' coordinate of Centroid of a semi circle lies at a distance of			

	A.	5r/3π from base	B.	2r/3π from base
	C.	3r/3π from base	D.	4r/3π from base
13	The 'y' coordinate of Centroid of a solid cone lies at			
	A.	Half of height from base of cone	B.	One fourth of height from base of cone
	C.	1/3rd of height from base of cone	D.	One fifth of height from base of cone
14	An ' L' section has			
	A.	One axis of symmetry	B.	Two axes of symmetry
	C.	No axis of symmetry	D.	Three axes of symmetry
15	The area of a circle is given by the equation			
	A.	πR^2	B.	$\pi R^2/2$
	C.	R^2	D.	$\pi R^2/4$
16	What is the area of a Triangle having width 10 cm and height 16 cm?			
	A.	100 cm^2	B.	120 cm^2
	C.	80 cm^2	D.	160 cm^2
17	For a horizontal wire AB of length 100 mm, the value of x from point A is equal to			
	A.	0 mm	B.	100 mm
	C.	75 mm	D.	50 mm
18	A c. g of a right circular cone having height 200 mm lies at what distance from base measured along vertical axis?			
	A.	100 mm	B.	150 mm
	C.	50 mm	D.	75 mm
19	If the area is symmetrical about X axis, then the Centroid lies on which axis?			
	A.	X axis	B.	Y axis
	C.	Both X and Y axis	D.	None of the above
20	The area of Rectangle is given by the equation _____.			
	A.	B x D	B.	D x H
	C.	D^2	D.	$\pi R^2/4$
21	The C.G of hemisphere lies at a distance of _____ from its base along the vertical axis.			
	A.	4r/3π	B.	2r/3π
	C.	r/2	D.	3r/8
22	For a T-section having flange 60 x 10 mm and web 10 x 60 mm, $\bar{x}$ = ____.			
	A.	30 mm	B.	60 mm
	C.	5 mm	D.	20 mm
23	The C.G of quadrant of a circle lies along its central radius at a distance of			
	A.	0.3 R	B.	0.44 R
	C.	5 R	D.	0.6 R
24	The Centroid of plane lamina is not at its geometrical centre if it is a			
	A.	Square	B.	Rectangle

	C.	Circle	D.	Right angle triangle
25	The point, through which the whole weight of the body acts, irrespective of its position, is known as			
	A.	Moment of inertia	B.	Centre of gravity
	C.	Centre of percussion	D.	Centre of mass
26	An irregular body may have more than one centre of gravity.			
	A.	Yes	B.	NO
	C.		D.	
27	The centre of gravity of rectangle lies at a point where its two diagonals meet each other.			
	A.	Agree	B.	Disagree
	C.		D.	
28	The centre of gravity of a triangle lies at a point where its medians intersect each other.			
	A.	True	B.	False
	C.		D.	
29	The centre of gravity a T-section 100mm x 150mm x 50mm from its bottom is			
	A.	50 mm	B.	75 mm
	C.	87.5 mm	D.	125 mm
30	Which of the following laminas do not have Centroid at its geometrical centre?			
	A.	Circle	B.	Equilateral triangle
	C.	Right angled triangle	D.	None of the above
31	What is the C.G of an isosceles triangle of base 20 cm and side 40 cm?			
	A.	12.90 cm	B.	13.28 cm
	C.	19.36 cm	D.	38.72 cm
32	If a material has no uniform density throughout the body, then the position of Centroid and centre of mass are _____.			
	A.	Identical	B.	Not identical
	C.	Independent upon the density	D.	unpredictable
33	What is the angle made by side of square lamina, if it is freely suspended from a corner with the horizontal?			
	A.	0°	B.	45°
	C.	90°	D.	180°
34	What is the centroidal distance of an equilateral triangle of side 2m?			
	A.	0.866 m	B.	0.769 m
	C.	1.000 m	D.	0.577 m
35	Which method is used to determine Centroid of composite figure?			
	A.	Analytical method	B.	Graphical method
	C.	Both A. And B.	D.	None of the above
36	Pick up the incorrect statement from the following:			
	A.	The C.G of circle is at its centre	B.	The C.G of a triangle is at the intersection

	C.	The C.G of a rectangle is at the intersection of its diagonals	D.	The C.G of a semicircle is at a distance of r/2 from the centre
37	The centre of gravity of a uniform lamina lies at			
	A.	The centre of heavy portion	B.	The bottom surface
	C.	The midpoint of its axis	D.	All of the above
38	From a circular plate of diameter 6 cm is cut out a circle whose diameter is a radius of the plate. Find the C.G of the remainder from the centre of circular plate			
	A.	0.5 cm	B.	1.0 cm
	C.	1.5 cm	D.	2.5 cm
39	The centre of gravity of a right circular solid cone is at a distance of _____ from its base, Measured along the vertical axis. (where h = height of a right circular solid cone)			
	A.	h/2	B.	h/3
	C.	h/4	D.	h/6
40	The C.G of a right circular solid cone height h lies at the following distances from the base			
	A.	h/2	B.	h/3
	C.	h/4	D.	h/6
41	The centre of gravity of triangle lies at the point of			
	A.	Concurrence of the medians	B.	Intersection of its altitudes
	C.	Intersection of bisector of angles	D.	Intersection of diagonals
42	The point through which the whole weight of the body acts is called			
	A.	Inertial point	B.	Centre of gravity
	C.	Centroid	D.	Central point
43	Centre of gravity is usually located where			
	A.	More weight is concentrated	B.	Less weight is concentrated
	C.	Less mass is concentrated	D.	More mass is concentrated
44	Centre of gravity of an object depends on it’s			
	A.	Weight	B.	Mass
	C.	Density	D.	shape
45	Where will be the centre of gravity of a uniform rod lies?			
	A.	At its end	B.	At its middle point
	C.	At its centre of its cross sectional area	D.	Depends upon its material
46	Where the centre of gravity of a circle lies?			
	A.	At its centre	B.	Anywhere on its radius
	C.	Anywhere on its circumference	D.	Anywhere on its diameter
47	A simple method to find centre of gravity of a body is usage of			
	A.	Stop watch	B.	Plumb line
	C.	Pendulum	D.	Gauge
48	What is one way you might increase the stability of an object?			

	A.	Lower the centre of gravity	B.	Raise the centre of gravity
	C.	Increase the height of the object	D.	Shorten the base of the object
49	Where is the centre of gravity of a ball			
	A.	On the outside edge of the ball	B.	A point not touching the ball
	C.	The centre of the ball	D.	On the top of the ball
50	Do all objects have a centre of gravity?			
	A.	No objects have a centre of gravity	B.	Only some objects have a centre of gravity
	C.	Only very heavy objects have a centre of gravity	D.	Yes all objects have a centre of gravity

Unit – 4 Friction				
1	Frictional force acts			
	A.	Along the applied force	B.	Perpendicular to the applied force
	C.	Parallel to y axis	D.	Opposite to the applied force
2	Static friction is			
	A.	Higher than dynamic friction	B.	Less than dynamic friction
	C.	Equal to dynamic friction	D.	None of the above
3	Ball bearing is an example of			
	A.	Sliding friction	B.	Static friction
	C.	Rolling friction	D.	None of the above
4	Reciprocating of piston inside a cylinder is an example of			
	A.	Sliding friction	B.	Static friction
	C.	Rolling friction	D.	None of the above
5	The angle between normal reaction(N) and resultant (R) of limiting friction(F)and nor mal reaction is known as			
	A.	Coefficient of friction	B.	Angle of friction
	C.	Normal friction	D.	None of the above
6	Impending motion of the body refers to a _____.			
	A.	Body at rest	B.	Body above to move
	C.	Body moving with uniform speed	D.	Body moving with uniform acceleration
7	Friction depends on the			
	A.	Area of contact	B.	Length of contact
	C.	Roughness of contact surfaces	D.	None of the above
8	Coefficient of friction is the ratio between			
	A.	Applied force & frictional force	B.	Resultant force and normal reaction
	C.	Frictional force & resultant force	D.	Frictional force and normal reaction
9	The motion in the screw jack can be compared to motion on			
	A.	An inclined plane	B.	A horizontal plane
	C.	A vertical plane	D.	None of the above
10	According to laws of static friction the limiting friction is			
	A.	Inversely proportional to normal reaction	B.	Directly proportional to normal reaction
	C.	Equal to normal reaction	D.	None of the above
11	The tangent of angle of friction is _____.			
	A.	Angle of repose	B.	Angle of friction
	C.	Limiting friction	D.	Co-efficient of friction
12	When a body is subjected to force P, and it is at rest, what is the relation between P and F?			
	A.	P<F	B.	P>F
	C.	P=0, F=0	D.	P=2F

13	A box of weight 200N is pulled on rough horizontal plane by a horizontal force 'P'. The coefficient of friction is 0.25 what is the value of force P?			
	A.	125N	B.	50N
	C.	200N	D.	100N
14	If limiting friction (F) is 30N and Normal Reaction (N) is 60N, what is the value of coefficient of friction?			
	A.	1.0	B.	2.0
	C.	0.50	D.	0.25
15	The friction force depends upon what of contact surfaces?			
	A.	Shining	B.	Direction
	C.	Roughness	D.	None of the above
16	Angle of Repose is always equal to what?			
	A.	Angle of Friction	B.	Normal Reaction
	C.	Limiting Friction	D.	Static Friction
17	If co-efficient of friction is 1.0, what is the value of Angle of Friction?			
	A.	30^0	B.	45^0
	C.	60^0	D.	90^0
18	Dynamic friction is always			
	A.	Equal than Static Friction	B.	More than Static Friction
	C.	Less than Static Friction	D.	Zero
19	The friction force acts in which direction of motion?			
	A.	Same	B.	Opposite
	C.	Perpendicular	D.	Inclined
20	The co-efficient of friction (μ) is equal to what?			
	A.	Sin ϕ	B.	Cos ϕ
	C.	Tan ϕ	D.	Cot ϕ
21	What is the ratio of F & N called?			
	A.	Angle of Friction	B.	Angle of Repose
	C.	Co-efficient of Friction	D.	Frictional Force
22	If limiting friction (F) is 80 N and Normal Reaction (N) is 70 N, what is the value of coefficient of friction?			
	A.	1.5	B.	1.14
	C.	0.55	D.	2.0
23	Friction experienced by a body, when it is at rest is called			
	A.	Dynamic Friction	B.	Sliding friction
	C.	Rolling friction	D.	None of the above
24	According to laws of dynamic friction the co-efficient of friction is			
	A.	Inversely proportional to normal reaction	B.	Directly proportional to normal reaction
	C.	Equal to normal reaction	D.	None of the above
25	Friction experienced by a body, when it is in motion is called			

	A.	Dynamic Friction	B.	Sliding friction
	C.	Rolling friction	D.	None of the above
26	If co - efficient of friction is 0.25, what is the value of Angle of Friction?			
	A.	30^0	B.	45^0
	C.	14^0	D.	90^0
27	Angle of Friction is equal to _____.			
	A.	Angle of Repose	B.	Normal Reaction
	C.	Limiting Friction	D.	Static Friction
28	When a body is subjected to force P, and it is in motion, what is the relation between P and F?			
	A.	P < F	B.	P > F
	C.	P = 0, F = 0	D.	P = 2F
29	The angle of inclination of the plane at which the body tends to move down the plane is called			
	A.	Angle of friction	B.	Angle of repose
	C.	Angle of projection	D.	None of these
30	The maximum frictional force which comes into play when a body just begins to slide over the surface of another body is known as			
	A.	Sliding friction	B.	Dynamic friction
	C.	Limiting friction	D.	Rolling friction
31	If the angle of friction is zero, a body will experience			
	A.	Infinite friction	B.	The force of friction will act normal to the plane
	C.	Zero friction	D.	The force of friction will act in the direction of motion
32	The magnitude of the force of friction between two bodies, one lying above the other depends upon the roughness of the			
	A.	Upper body	B.	Lower body
	C.	Both the bodies	D.	Body having more roughness
33	The body will move only when			
	A.	Force of friction = applied force	B.	Force of friction < applied force
	C.	Force of friction > applied force	D.	All of the above
34	The force of friction is maximum when the surface			
	A.	Is on the point of motion	B.	Is at rest
	C.	Is moving	D.	The friction remains same at all points
35	The constant in the equation F = μN is called?			
	A.	Proprietary Constant	B.	Coefficient of dry friction
	C.	Coefficient of static friction	D.	None of above
36	The coefficient of friction is generally determined by _____			
	A.	Written over the Body	B.	Experiments
	C.	Weighing the body	D.	Measuring length of the body

37	We have two types of a coefficient of friction, one is coefficient of static friction and the other one is the coefficient of the kinetic friction.			
	A.	True	B.	False
	C.		D.	
38	The kinetic friction is applied when the body is _____			
	A.	Moving	B.	Stopped
	C.	Just stopped	D.	Just started to move
39	Which of these statements about friction is true?			
	A.	It is a force which pushes things apart	B.	It is a force that only occurs on rough surfaces
	C.	It is a force that occurs when two surfaces slide against each other	D.	None of these
40	If you pour oil onto a metal surface, the friction would			
	A.	Be reduced	B.	Be increased
	C.	Stay the same	D.	None of these
41	Rougher surface have			
	A.	Greater friction	B.	Less friction
	C.	The same friction	D.	None of these
42	When two surfaces rub together, friction causes			
	A.	Them to get colder	B.	Them to spring apart
	C.	Heat to be produced	D.	None of these
43	Friction is useful to			
	A.	Help the train slide along the track	B.	Help the wheels grip the track to drive the train
	C.	Does not help at all	D.	None of these
44	Which of the following statements is true?			
	A.	Friction pulls objects toward the centre of the Earth.	B.	Friction primarily affects objects that contain iron.
	C.	Friction slows down or stops objects in motion	D.	Friction does not affect objects in motion.
45	Coefficient of friction depends upon			
	A.	Area of contact only	B.	Nature of surface only
	C.	Both (A) and (B)	D.	None of these
46	Coefficient of friction is the ratio of the limiting friction to the normal reaction between the two bodies.			
	A.	Yes	B.	No
	C.		D.	
47	The minimum force required to slide a body of weight W on a rough horizontal plane is			
	A.	W $\sin\theta$	B.	W $\cos\theta$
	C.	W $\tan\theta$	D.	None of these
48	The angle which the normal reaction makes with the resultant reaction is called angle of friction			
	A.	Agree	B.	Disagree

	C.		D.	
49	The ratio of static friction to dynamic friction is always			
	A.	Equal to one	B.	Less than one
	C.	Greater than one	D.	None of these
50	A force acting in the opposite direction to the motion of the body is called force of friction.			
	A.	Agree	B.	Disagree
	C.		D.	

Unit – 6 Simple machine				
1	If efficiency of machine is less than 50% then machine is called what?			
	A.	Reversible Machine	B.	Ideal Machine
	C.	Non-Reversible Machine	D.	None of the above
2	What is the efficiency of an Ideal Machine?			
	A.	0 %	B.	80 %
	C.	50 %	D.	100 %
3	The ratio of load lifted(W) to effort applied(P) is known as			
	A.	Velocity ratio	B.	Efficiency
	C.	Mechanical advantage	D.	None of the above
4	The ratio between the distance travelled by effort (y) and the distance travelled by load (x) is known as			
	A.	Velocity ratio	B.	Efficiency
	C.	Mechanical advantage	D.	None of the above
5	The ratio between the mechanical advantage and velocity ratio is known as			
	A.	Velocity ratio	B.	Efficiency
	C.	Mechanical advantage	D.	None of the above
6	For a reversible machine efficiency is			
	A.	Less than 50%	B.	Equal to 20%
	C.	More than 50%	D.	Equal to 30%
7	Law of machine is expressed in usual notations as			
	A.	P = mW/C	B.	P= mW + C
	C.	P = m/WC	D.	None of the above
8	For the first system of pulleys velocity ratio is equal to (n=number of moving pulleys)			
	A.	2^n	B.	3^n
	C.	4^n	D.	5^n
9	The velocity ratio of simple wheel and differential axle is given by (D= diameter of wheel, d_1 = diameter of bigger axle, d_2= diameter of smaller axle)			
	A.	D/d_1-d_2	B.	d_1-d_2/D
	C.	$2D/d_1-d_2$	D.	None of the above
10	In the first system of lever, the fulcrum is			
	A.	Beyond the load and effort	B.	Between the load and effort
	C.	At load point	D.	None of the above
11	The velocity ratio of simple screw jack is give n by (l= handle length ,p = pitch of screw)			
	A.	$2\pi/lp$	B.	$2\pi lp$
	C.	$p/2\pi l$	D.	$2\pi l/p$
12	For an ideal machine			
	A.	Mechanical advantage is greater than velocity ratio	B.	Mechanical advantage is less than velocity ratio

	C.	Mechanical advantage is equal to velocity ratio	D.	None of the above
13	For a simple wheel and axle machine, diameter of effort wheel is 100 mm and diameter of load axle is 25mm. What is the value of V.R.			
	A.	10	B.	5
	C.	4	D.	20
14	If a law of machine is P=0.2W+4 what is the value of maximum MA?			
	A.	0.2	B.	6.2
	C.	5	D.	6
15	In a lifting machine an effort of 20 N and 40 N can lift a load of 600N and 1000N respectively. What is the value of m?			
	A.	0.02	B.	0.05
	C.	0.025	D.	0.2
16	What is the equation of Mechanical Advantage?			
	A.	W + P	B.	W - P
	C.	W x P	D.	W / P
17	If efficiency of machine is more than 50% then machine is called what?			
	A.	Reversible Machine	B.	Ideal Machine
	C.	Non-Reversible Machine	D.	None of the above
18	For a simple machine, if MA=30 and VR=50 then what is the efficiency?			
	A.	40%	B.	60%
	C.	100%	D.	80 %
19	A law of machine for simple machine is P=0.1 W+6 what is the effort required to lift a load of 100KN?			
	A.	20 KN	B.	21 KN
	C.	40 KN	D.	16 KN
20	For a simple machine if m = 0.20 and V.R = 25, what is the maximum efficiency of machine in %?			
	A.	80%	B.	40%
	C.	50%	D.	20%
21	Maximum M.A = …			
	A.	m	B.	0
	C.	1/m	D.	None of the above
22	Which of the following is not a lifting machine?			
	A.	Simple pulley	B.	Simple screw jack
	C.	lift	D.	bicycle
23	In a lifting machine an effort of 20 N and 30 N can lift a load of 600 N and 1000N respectively. What is the value of m?			
	A.	0.2	B.	0.02
	C.	0.025	D.	0.05
24	For a simple machine if m= 0.10 and V.R =20, what is the maximum efficiency of machine in %?			

	A.	50%	B.	60%
	C.	40%	D.	80%
25	For a simple machine, if MA=35 and VR=50 then what is the efficiency?			
	A.	40%	B.	70%
	C.	100%	D.	80 %
26	Which of the following is a lifting machine?			
	A.	Simple screw jack	B.	Simple pulley
	C.	lift	D.	Above all
27	For an ideal machine, which is incorrect?			
	A.	MA = VR	B.	Output = input
	C.	$\eta = 100\%$	D.	Machine friction is maximum
28	The maximum efficiency of a lifting machine is			
	A.	1/ (m.VR)	B.	m / VR
	C.	1/m	D.	VR / m
29	The VR of a single purchase crab can be increased by			
	A.	Increasing the length of the handle	B.	Increasing the load drum
	C.	Increasing the number of teeth on pinion	D.	All of the above
30	For the first system of pulleys with 4 pulleys, velocity ration is,			
	A.	8	B.	16
	C.	4	D.	32
31	For second system of pulleys, velocity ratio is			
	A.	2n	B.	2n – 1
	C.	n	D.	2n +1
32	If efficiency of lifting machine is kept constant, its velocity ratio is directly proportion to its			
	A.	Mechanical advantages	B.	Machine friction
	C.	Effort applied	D.	All of the above
33	The velocity ratio of a single purchase crab winch can be increased by			
	A.	Increasing the length of the handle	B.	Increasing the radius of the load drum
	C.	Increasing the number of teeth of pinion	D.	All of the above
34	In a law of machine, P = mW + C term C represents,			
	A.	Coefficient of friction	B.	Machine friction
	C.	Input	D.	Output
35	The efficiency of lifting machine is the ratio of			
	A.	Output to input	B.	MA to VR
	C.	Work done by machine to work done on machine	D.	all of above
36	For self lifting machines, the efficiency of machine should be			

	A.	50%	B.	More than 50%
	C.	Less than 50%	D.	None of these
37	On oiling the lifting machine _____ is not affected.			
	A.	Velocity ratio	B.	Mechanical advantage
	C.	Efficiency	D.	Law of machine
38	For simple lifting machine, ideal effort is.			
	A.	W / MA	B.	W / VR
	C.	MA / VR	D.	Output / input
39	An ideal machine is one whose efficiency is			
	A.	Between 60 and 70%	B.	Between 70 and 80%
	C.	Between 80 and 90%	D.	100%
40	The mechanical advantages of a lifting machine is the ratio of			
	A.	Distance moved by effort to the distance moved by load	B.	Load lifted to the effort applied
	C.	Output to the input	D.	All of the above
41	The efficiency of a lifting machine is the ratio of			
	A.	Output to the input	B.	Work done by the machine to the work done on the machine
	C.	Mechanical advantages to the velocity	D.	All of the above
42	If the efficiency of a lifting machine is kept const, its velocity ratio is _____ proportional to its mechanical advantages.			
	A.	Directly	B.	Inversely
	C.	Constant	D.	All of the above
43	In ideal machine, mechanical advantage is _____ velocity ratio.			
	A.	Equal to	B.	Less than
	C.	Greater than	D.	All of the above
44	In actual machine, mechanical advantage is _____ velocity ratio.			
	A.	Equal to	B.	Less than
	C.	Greater than	D.	All of the above
45	A machine which is capable of doing work in the reversed direction, after the effort is removed, is called a non-reversible machine.			
	A.	Yes	B.	No
	C.		D.	
46	A machine which is not capable of doing any work in the reversed direction, after the effort is removed, is called a reversible machine.			
	A.	True	B.	False
	C.		D.	
47	A non-reversible machine is also called a self-locking machine.			
	A.	Agree	B.	Disagree
	C.		D.	

48	A weight of 1000N can be lifted by an effort of 80N. if the velocity ratio is 20, the machine is			
	A.	Reversible	B.	Non reversible
	C.	Ideal	D.	None of these
49	If the number of pulley in a system is equal to its velocity ratio, then it is a _____ system of pulleys.			
	A.	First	B.	Second
	C.	Third	D.	All of the above
50	The velocity ratio of a simple wheel and axle with D and d as the diameter of effort wheel and load axle, is			
	A.	D + d	B.	D - d
	C.	D x d	D.	D / d