03063548328 Sonu Ilyas Mughal

Jan-04-2K21

PHY101 - Physics

Grand Quiz 2020 (Covid-19)

100% Correct Solve (Alhamdulilah)

BY Virtual Assistance Sonu Ilyas Mughal

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https://www.youtube.com/channel/UCjboEX65C_yN7as5di1OuIQ/playlists

03063548328 Sonu Ilyas Mughal

PHY101:Grand Quiz

Question # 1 of 30 (Start time: 11:18:16 AM, 04 January 2021)

A body will be in translational equilibrium if:

Select the correct option

- ○ $\Sigma T = 0$
- ◉ $\Sigma F = 0$
- ○ $\Sigma P = 0$
- ○ $\Sigma W = 0$

PHY101:Grand Quiz

Question # 2 of 30 (Start time: 11:18:40 AM, 04 January 2021)

The fundamental dimensions of angular momentum are

Select the correct option

- ML-2T-2
- MLT-1
- ML2T-1
- ML2T-2

PHY101:Grand Quiz

Quiz Start Time: 11:18 AM, 04 January 2021

Question # 3 of 30 (Start time: 11:19:05 AM, 04 January 2021)

Total Marks: 1

Water flows into a house at a velocity of 15 m/s through a pipe that has a radius of 0.40 m. The water then flows through a smaller pipe at a velocity of 45 m/s. What is the radius of the smaller pipe?

Select the correct option

- ○ 0.53 m
- ● 0.23 m
- ○ 0.17 m
- ○ 0.37 m

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

Question # 4 of 30 (Start time: 11:19:32 AM, 04 January 2021)

The ultimate strength of a sample is the stress at which the sample

Select the correct option

- ○ returns to its original shape when the stress is removed
- ○ remains underwater
- ◉ breaks
- ○ bends 180?

PHY101:Grand Quiz

Quiz Start T

Question # 5 of 30 (Start time: 11:19:52 AM, 04 January 2021)

A stone is thrown up from the surface of earth, the it reaches a maximum height, kinetic energy is equal to:

Select the correct option

- [x] Zero
- [ ] mgh
- [ ] ½ mv
- [ ] 2mgh

Click to Save Answ

PHY101:Grand Quiz

Quiz Start T

Question # 6 of 30 (Start time: 11:20:23 AM, 04 January 2021)

If the speed of sound is 340m/s a plane flying at 400m/s creates a conical shock wave with an apex half angle of:

Select the correct option

- ○ 0 (no shock wave)
- ○ 32?
- ○ 40?
- ◉ 58?

Click to Save Answ

PHY101:Grand Quiz

Question # 7 of 30 (Start time: 11:20:44 AM, 04 January 2021)

The law of inertia was firstly formulated by:

Select the correct option

- ○ Aristotle
- ○ Galileo
- ◉ Newton
- ○ Einstein

PHY101:Grand Quiz

Question # 8 of 30 (Start time: 11:21:09 AM, 04 January 2021)

Bodies which falls freely under gravity provides good example of motion under:

Select the correct option

- (●) Uniform acceleration
- ( ) Non-uniform acceleration
- ( ) Uniform velocity
- ( ) Non-uniform acceleration

PHY101:Grand Quiz

Quiz St

Question # 9 of 30 (Start time: 11:21:31 AM, 04 January 2021)

The value of k in coulomb's law depends upon

Select the correct option

- (●) medium between two charges
- ( ) distance between charges
- ( ) magnitude of charges
- ( ) all of these

Click to Save A

PHY101:Grand Quiz

Qu

Question # 10 of 30 (Start time: 11:21:55 AM, 04 January 2021)

Which of the following statements about floating objects is correct?

Select the correct option

- ○ The object's density is greater than the density of the fluid on which it floats.
- ○ The object's density is equal to the density of the fluid on which it floats.
- ○ The displaced volume of fluid is greater than the volume of the object.
- ◉ The buoyant force equals the object's weight.

Click to Sa

PHY101:Grand Quiz

Quiz Start Time:

Question # 11 of 30 (Start time: 11:22:14 AM, 04 January 2021)

Let F1 be the magnitude of the gravitational force exerted on the Sun by Earth and F2 be the magnitude of the force exerted on Earth by the Sun. Then:

Select the correct option

- ○ F1 is much greater than F2
- ○ F1 is slightly greater than F2
- ◉ F1 is equal to F2
- ○ F1 is slightly less than F2

Click to Save Answer &

PHY101:Grand Quiz

Quiz

Question # 12 of 30 (Start time: 11:22:35 AM, 04 January 2021)

Sound waves are

Select the correct option

- (●) longitudinal
- ( ) transverse
- ( ) partly longitudinal and partly transverse
- ( ) sometimes longitudinal and sometimes transverse

Click to Save

PHY101:Grand Quiz

Question # 13 of 30 (Start time: 11:22:56 AM, 04 January 2021)

The first condition of equilibrium implies that:

Select the correct option

- (●) $\Sigma F = 0$
- ( ) $\Sigma Fx = 0$
- ( ) $\Sigma Fy = 0$
- ( ) $\Sigma Fx = \Sigma Fy$

Click to Sa

PHY101:Grand Quiz

Quiz

Question # 14 of 30 (Start time: 11:23:15 AM, 04 January 2021)

One revolution is the same as:

Select the correct option

- [x] 2π rad
- [ ] π rad
- [ ] 57 rad
- [ ] 1 rad

Click to Save

PHY101:Grand Quiz

Quiz Start Time: 11:18 AM, 04 January 20

Question # 15 of 30 (Start time: 11:23:36 AM, 04 January 2021)

Total Mark

Ali wants to lift a mass of 7.5 kg with constant velocity by a rope that passes through a frictionless pulley which is attached to the ceiling of room. Calculate the tension in the rope by neglecting the mass of the rope.

Select the correct option

- ○ 0.75 N
- ○ 7.5 Kg
- ◉ 75 N
- ○ 75 Kg

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

Question # 16 of 30 (Start time: 11:23:57 AM, 04 January 2021)

The speed of a sound wave is determined by:

Select the correct option

- its amplitude
- its intensity
- the transmitting medium
- number of harmonics present

Click to S

PHY101:Grand Quiz

Question # 17 of 30 (Start time: 11:24:17 AM, 04 January 2021)

A force of 100 N acts upon a body for five seconds. What will be the change in momentum?

Select the correct option

- ○ 200 NS
- ◉ 500 NS
- ○ 20 NS
- ○ 50 NS

PHY101:Grand Quiz

Question # 18 of 30 (Start time: 11:24:36 AM, 04 January 2021)

Which pair will always have the same magnitude to the rate of change of position?

Select the correct option

- ○ Average velocity and instantaneous velocity
- ○ Average speed and instantaneous speed
- ◉ instantaneous speed and instantaneous velocity
- ○ Average speed and average velocity

Click to S

sec(s)

PHY101:Grand Quiz

Quiz Start Time: 11:18 AM, 04 January 202

Question # 19 of 30 (Start time: 11:24:58 AM, 04 January 2021)

Total Marks:

A municipal water supply is provided by a tall water tower. Water from this tower flows to a building. How does the water flow out of a faucet on the ground floor of a building compare with the water flow out of an identical faucet on the second floor of the building?

Select the correct option

- (●) Water flows more rapidly out of the ground-floor faucet.
- ( ) Water flows more rapidly out of the second-floor faucet.
- ( ) Water flows at the same speed out of both faucets.
- ( ) The speed of the water flow cannot be determined unless the height of the water tower is known.

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

Question # 20 of 30 (Start time: 11:25:20 AM, 04 January 2021)

The dot product of vector A with itself is equal to:

Select the correct option

- Zero
- A
- 2A
- A^2

PHY101:Grand Quiz

Quiz Sta

Question # 21 of 30 (Start time: 11:25:39 AM, 04 January 2021)

An elastic collision is one in which:

Select the correct option

- momentum is conserved but kinetic energy is not conserved
- kinetic energy and momentum are both conserved
- total mass is not conserved but momentum is conserved
- momentum is not conserved but kinetic energy is conserved

Click to Save An

PHY101:Grand Quiz

Question # 22 of 30 (Start time: 11:25:59 AM, 04 January 2021)

The center of mass of Earth's atmosphere is:

Select the correct option

○	a little less than halfways between Earth's surface and the outer boundary of the atmosphere
○	near the surface of Earth
○	near the outer boundary of the atmosphere
◉	near the center of Earth

PHY101:Grand Quiz

Question # 23 of 30 (Start time: 11:26:19 AM, 04 January 2021)

For a body to be in equilibrium under the combined action of several forces:

Select the correct option

○	all the forces must be applied at the same point
○	all of the forces form pairs of equal and opposite forces
○	any two of these forces must be balanced by a third force
●	the sum of the torques about any point must equal zero

PHY101:Grand Quiz

Question # 24 of 30 (Start time: 11:26:41 AM, 04 January 2021)

Swimming becomes possible because of:

Select the correct option

○	First law of motion
○	Second law of motion
◉	Third law of motion
○	Law of torque

PHY101:Grand Quiz

Question # 25 of 30 (Start time: 11:27:01 AM, 04 January 2021)

When a wave travels through a medium

Select the correct option

○	particles are transferred from one place to another
○	energy is transferred in a periodic manner
●	energy is transferred at a constant speed
○	none of the above statements is applicable

PHY101:Grand Quiz

Question # 26 of 30 (Start time: 11:27:22 AM, 04 January 2021)

Young's modulus is a proportionality constant that relates the force per unit area applied perpendicularly at the surface of an object to:

Select the correct option

- ○ the shear
- ○ the fractional change in volume
- ◉ the fractional change in length
- ○ the pressure

PHY101:Grand Quiz

Quiz

Question # 27 of 30 (Start time: 11:27:45 AM, 04 January 2021)

Coulomb's law is only true for point charges whose sizes are

Select the correct option

- large
- very small
- very large
- medium

Click to Save

PHY101:Grand Quiz Q

Question # 28 of 30 (Start time: 11:28:05 AM, 04 January 2021)

Which of the following statement is true?

Select the correct option

- (●) Weight is a force, mass is a measure of inertia
- ( ) Mass depends on gravity, weight does not
- ( ) Gravity is necessary to measure both weight and mass
- ( ) Heavier objects weigh more than light objects

PHY101:Grand Quiz

Question # 29 of 30 (Start time: 11:28:25 AM, 04 January 2021)

Possible units of angular momentum are:

Select the correct option

- (●) kg·m2/s
- ( ) kg·m/s2
- ( ) kg·m2/s2
- ( ) kg·m/s

PHY101:Grand Quiz

Question # 30 of 30 (Start time: 11:28:47 AM, 04 January 2021)

If the force acting on a body is doubled then the acceleration becomes:

Select the correct option

- [x] Double
- [ ] Half
- [ ] One fourth
- [ ] Constant

PHY101:Grand Quiz

Quiz S

Question # 1 of 30 (Start time: 11:44:15 AM, 04 January 2021)

The center of mass of Earth's atmosphere is:

Select the correct option

○	a little less than halfways between Earth's surface and the outer boundary of the atmosphere
○	near the surface of Earth
○	near the outer boundary of the atmosphere
◉	near the center of Earth

Click to Save A

PHY101:Grand Quiz

Question # 2 of 30 (Start time: 11:44:40 AM, 04 January 2021)

Momentum may be expressed in:

Select the correct option

- ○ kg/(m·s)
- ◉ N·s
- ○ gram·s
- ○ kg/m

PHY101:Grand Quiz

Quiz Sta

Question # 3 of 30 (Start time: 11:44:59 AM, 04 January 2021)

A man, with his arms at his sides, is spinning on a light frictionless turntable. When he extends his arms:

Select the correct option

○	his angular velocity increases
○	his angular velocity remains the same
○	his rotational inertia decreases
◉	his angular momentum remains the same

Click to Save An

PHY101:Grand Quiz

Question # 4 of 30 (Start time: 11:45:21 AM, 04 January 2021)

The approximate value of g at an altitude above Earth equal to one Earth diameter is:

Select the correct option

- (●) 1.1m/s2
- ( ) 1.9m/s2
- ( ) 2.5m/s2
- ( ) 4.9m/s2

Click to S

PHY101:Grand Quiz

Question # 5 of 30 (Start time: 11:45:47 AM, 04 January 2021)

Young's modulus can be used to calculate the strain for a stress that is:

Select the correct option

○	just below the ultimate strength
○	just above the ultimate strength
◉	well below the yield strength
○	well above the yield strength

PHY101:Grand Quiz

Question # 6 of 30 (Start time: 11:46:10 AM, 04 January 2021)

Unit of distance is:

Select the correct option

- ○ Kilo gram
- ○ Second
- ◉ Light year
- ○ Mole

PHY101:Grand Quiz

Question # 7 of 30 (Start time: 11:46:31 AM, 04 January 2021)

SI Unit of time period is _____.

Select the correct option

- [x] second
- [ ] hour
- [ ] minute
- [ ] nanosecond

PHY101:Grand Quiz

Question # 8 of 30 (Start time: 11:46:51 AM, 04 January 2021)

The rate of change of momentum of a body is equal to:

Select the correct option

- ○ Displacement
- ○ Velocity
- ○ Acceleration
- ◉ Applied force

PHY101:Grand Quiz

Quiz Start Time:

Question # 9 of 30 (Start time: 11:47:13 AM, 04 January 2021)

A rocket ship is coasting toward a planet. Its captain wishes to know the value of g at the surface of the planet. This may be inferred by:

Select the correct option

- ○ measuring the density of the planet
- ◉ observing the ship's acceleration and correcting for the distance from the center of the planet:
- ○ measuring g the diameter of the planet
- ○ measuring the apparent weight of an object of known mass in the ship

PHY101:Grand Quiz

Question # 10 of 30 (Start time: 11:47:34 AM, 04 January 2021)

A 1-kg block is lifted vertically 1m by a boy. The work done by the boy is about:

Select the correct option

- 1 ft · lb
- 1 J
- 10 J
- 0.1J

PHY101:Grand Quiz

Question # 11 of 30 (Start time: 11:47:53 AM, 04 January 2021)

As the wavelength of a wave in a uniform medium increases, its frequency will _____.

Select the correct option

- (●) Decrease
- ( ) Increase
- ( ) Remain the same
- ( ) None of these

PHY101:Grand Quiz

Question # 12 of 30 (Start time: 11:48:12 AM, 04 January 2021)

The fundamental dimensions of angular momentum are

Select the correct option

- ML-2T-2
- MLT-1
- [x] ML2T-1
- ML2T-2

PHY101:Grand Quiz

Question # 13 of 30 (Start time: 11:48:34 AM, 04 January 2021)

Which of the following cases is/are NOT a uniformly accelerated motion?
i.A feather falls from a certain height inside a vacuum tube.
ii.A ball rolls along a frictionless plane at uniform speed.
iii.A coin falls from a certain height in air but air resistance is negligible.

Select the correct option

○	(i) only
◉	(ii) only
○	(i) and (ii) only
○	(ii) and (iii) only

PHY101:Grand Quiz Qui

Question # 14 of 30 (Start time: 11:48:54 AM, 04 January 2021)

As per Coulomb's law, the force of attraction or repulsion between two point charges directly proportional to the

Select the correct option

- ○ cube of the distance
- ◉ product of the magnitude of charges
- ○ sum of the magnitude of charges
- ○ square of the distance between them

Click to Sav

BC190405031: JAMIL KHAN

PHY101:Grand Quiz

Quiz

Question # 15 of 30 (Start time: 11:49:14 AM, 04 January 2021)

Which of the following statements about completely submerged objects resting on the ocean bottom is correct?

Select the correct option

- ○ The buoyant force acting on the object is equal to the object's weight.
- ◉ The apparent weight of the object depends on the object's density.
- ○ The displaced volume of fluid is greater than the volume of the object.
- ○ The weight of the object and the buoyant force are equal and opposite.

Click to Save

PHY101:Grand Quiz

Question # 16 of 30 (Start time: 11:49:33 AM, 04 January 2021)

The momentum of an object at a given instant is independent of its:

Select the correct option

- (●) acceleration
- ( ) velocity
- ( ) speed
- ( ) mass

PHY101:Grand Quiz

Question # 17 of 30 (Start time: 11:49:56 AM, 04 January 2021)

A vector A is added to a vector B. The resultant vector A + B have greatest magnitude when:

Select the correct option

- ○ The magnitude of vector A + B does not depend on the directions of A and B
- ○ When vectors A and B are parallel and in the opposite direction
- ◉ When vectors A and B are parallel and in the same direction
- ○ When vectors A and B are perpendicular

PHY101:Grand Quiz

Quiz Start Time: 11:44 AM, 04 January

Question # 18 of 30 (Start time: 11:50:15 AM, 04 January 2021)

Total M

Two sound waves are traveling through a container of unknown gas. Wave A has a wavelength of 1.2 m. Wave B has a wavelength of 3.6 m. The velocity of wave B must be _____ the velocity of wave A.

Select the correct option

- One-ninth
- One-third
- The same as
- Three times larger than

Click to Save Answer & Move to Next Quest

PHY101:Grand Quiz

Quiz Start Time: 11:44

Question # 19 of 30 (Start time: 11:50:37 AM, 04 January 2021)

Work has dimensions like:

Select the correct option

- (●) Torque
- ( ) Momentum
- ( ) Velocity
- ( ) Power

Click to Save Answer & Move

PHY101:Grand Quiz

Question # 20 of 30 (Start time: 11:51:25 AM, 04 January 2021)

Which statement is not true for acceleration?

Select the correct option

- [x] riding your bike straight down the street at a constant speed
- [ ] slowing your bike ride so you can make it up a hill
- [ ] stopping your bike at an intersection
- [ ] riding your bike faster when you head down a hill

Cli

PHY101:Grand Quiz

Quiz Start Time: 11:44 AM, 04 January 20

Question # 21 of 30 (Start time: 11:51:43 AM, 04 January 2021)

Total Mark

Water flows into a house at a velocity of 15 m/s through a pipe that has a radius of 0.40 m. The water then flows through a smaller pipe at a velocity of 45 m/s. What is the radius of the smaller pipe?

Select the correct option

- ○ 0.53 m
- ◉ 0.23 m
- ○ 0.17 m
- ○ 0.37 m

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

Question # 22 of 30 (Start time: 11:52:03 AM, 04 January 2021)

The unit kg•m2/s can be used for:

Select the correct option

- (●) angular momentum
- ( ) rotational kinetic energy
- ( ) rotational inertia
- ( ) torque

PHY101:Grand Quiz

Quiz Start Time: 11:44 AM, 04 January 2021

Question # 23 of 30 (Start time: 11:52:31 AM, 04 January 2021)

Total Marks: 1

A water tunnel has a circular cross section where the diameter diminishes from 3.6 m to 1.2 m. If the velocity of water flow is 3.0 m/s in the larger part of the tunnel, what is the velocity of flow in the smaller part of the tunnel?

Select the correct option

- ○ 9.0 m/s
- ○ 18 m/s
- ◉ 27 m/s
- ○ 54 m/s

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

Quiz Start Time: 11:44 A

Question # 24 of 30 (Start time: 11:53:11 AM, 04 January 2021)

What is the angle of projection of projectile, for which its maximum height and horizontal range are equal?

Select the correct option

- ○ 30°
- ○ 36°
- ◉ 76°
- ○ 90°

PHY101:Grand Quiz

Quiz Start Time: 11:44 AM, 04 January

Question # 25 of 30 (Start time: 11:53:36 AM, 04 January 2021)

Total M

A mosquito's buzz is often rated with a decibel rating of 40 dB. Normal conversation is often rated at 60 dB. How many times more intense is normal conversation compared to a mosquito's buzz?

Select the correct option

- 2
- 20
- 100
- 400

Click to Save Answer & Move to Next Quest

PHY101:Grand Quiz Qui

Question # 26 of 30 (Start time: 11:54:01 AM, 04 January 2021)

People try to keep the..... over their feet, in order to feel stable.

Select the correct option

- mass
- weight
- centre of gravity
- centre of mass

Click to Sav

PHY101:Grand Quiz

Question # 27 of 30 (Start time: 11:54:22 AM, 04 January 2021)

The goal of all scientific inquiry (or scientific method) is:

Select the correct option

○	world peace
●	predicting natural events based on known patterns
○	to make everyone rich and happy
○	world dominion

PHY101:Grand Quiz

Question # 28 of 30 (Start time: 11:54:43 AM, 04 January 2021)

Before the density of an object can be found, what two measurements are required?

Select the correct option

- [x] mass and volume
- [ ] volume and length
- [ ] mass and length
- [ ] temperature and volume

PHY101:Grand Quiz

Quiz Start Time: 11:44 AM, 04 January 202

Question # 29 of 30 (Start time: 11:55:01 AM, 04 January 2021)

Total Marks

Ali wants to lift a mass of 7.5 kg with constant velocity by a rope that passes through a frictionless pulley which is attached to the ceiling of room. Calculate the tension in the rope by neglecting the mass of the rope.

Select the correct option

- 0.75 N
- 7.5 Kg
- 75 N
- 75 Kg

Click to Save Answer & Move to Next Question

PHY101:Grand Quiz

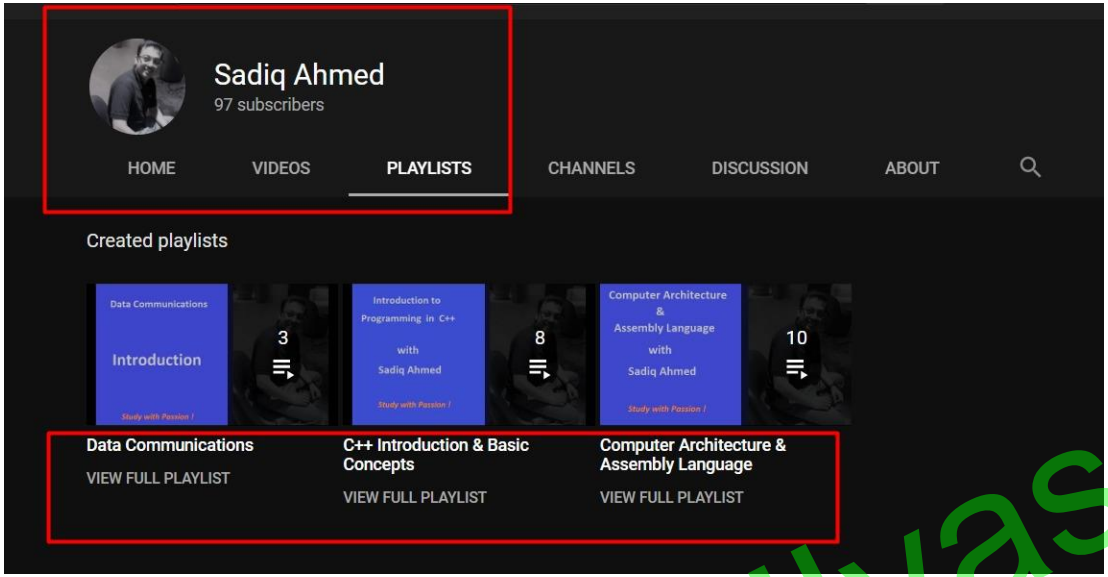
Question # 30 of 30 (Start time: 11:55:23 AM, 04 January 2021)

A ---------- vector is obtained by dividing the vector by its magnitude:

Select the correct option

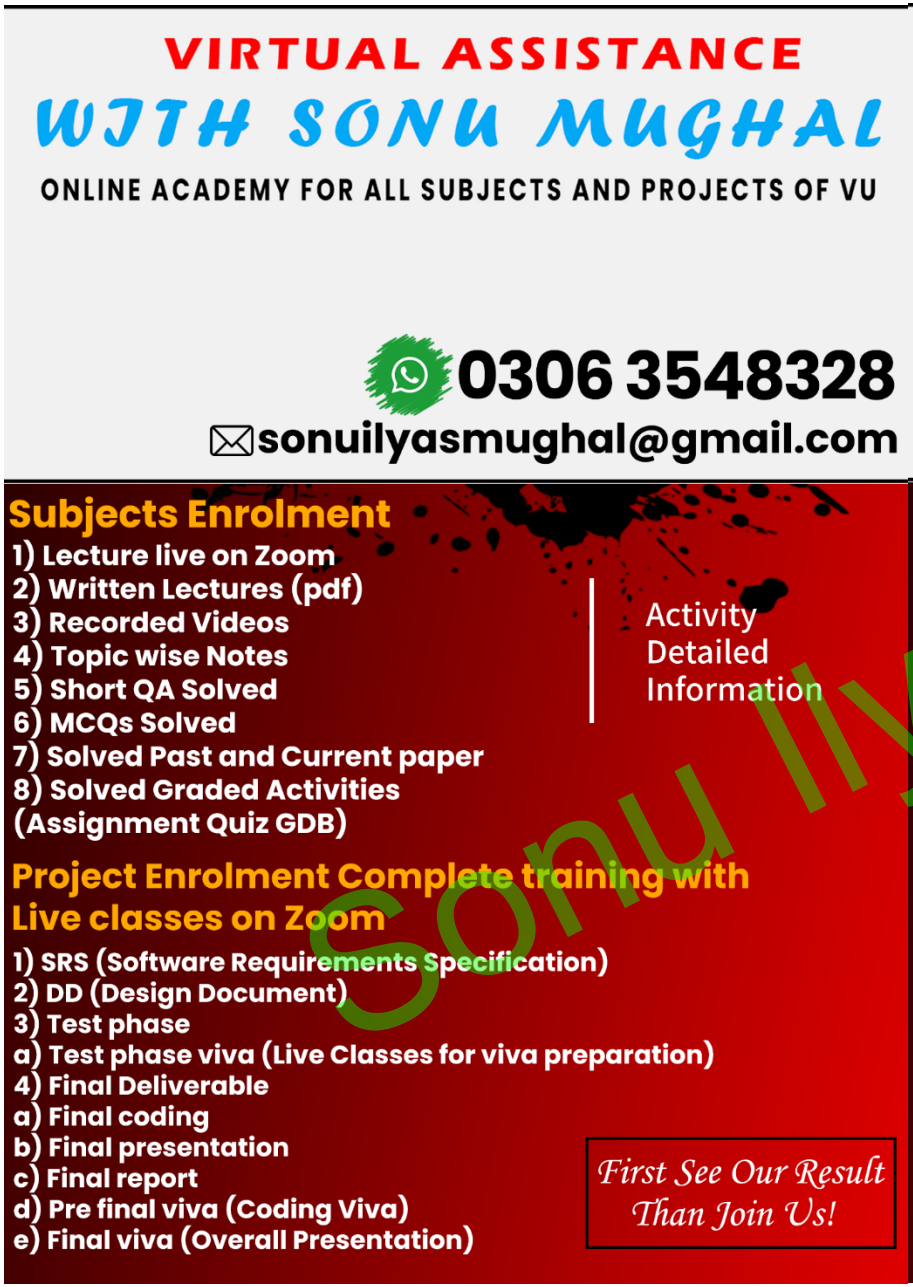
- [x] unit
- [ ] position
- [ ] normal
- [ ] negative

Click to



https://www.youtube.com/channel/UCjboEX65C_yN7as5di1OuIQ/playlists

Best short lectures of CS by Sadiq Ahmed



03063548328 Sonu Ilyas Mughal

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