New SLOs based Guess Paper for SSC Annual-II Examination 2023

As per a by the Controller of Examinations Khyber Pakhtwonwa, the forthcoming SSC Annual-I (9th Class) Exam 2023 will be based on these SLOs-based papers.

PHYSICS

UNIT NO. 1 PHYSICAL QUANTITIES AND MEASUREMENT.

KNOWLEDGE BASED QUESTIONS. 30%

1. Describe four crucial roles of Physics in daily life.
2. Define atomic physics and nuclear physics.
3. Define mechanics and Geo Physics.
4. What is meant by base units? Give two examples.
5. Differentiate between Positive zero error and negative zero error.
6. Define zero error and zero correction.
7. What is meant by vernier constant?

UNDERSTANDING BASED QUESTIONS. 50%

1. When the zero error of a screw gauge will be positive?
2. Why a screw gauge measures more accurately than vernier calipers?
3. What is meant by scientific notation? What is its rule and explain with example.
4. How technology is shaped by physics.
5. Why are measurements important?
6. Why in physics we need to write in scientific notation?
7. What is least count? How least count for vernier caliper and screw gauge are defined?

APPLICATION BASED QUESTIONS. 20%

1. Why 20 ^{o}C is written on measuring cylinders?
2. If we go to Lahore by aero-plane, the distance shortens to 376 km, why?
3. Are there quantities which we cannot measure?

NO LONG QUESTIONS ACCORDING TO KHYBER PAKHTTON KHAWA SCHEME.2023

UNIT NO. 2 KINEMATICS.

KNOWELDGE BASED QUESTIONS. 30%

1. Define scalars. Give their example.
2. Define vectors. Give their example.
3. Define rotatory and vibratory motion.
4. Differentiate between uniform and variable velocity.
5. Difference between circular motion and rotatory motion.

UNDERSTANDING BASED QUESTIONS. 50%

1. Differentiae scalars and vectors with suitable examples.
2. Is it possible that displacement is zero but not the distance? Under what condition displacement will be equal to distance.
3. Does a speedometer measure a car's speed or velocity?
4. A ball is thrown upward with an initial speed of 5 m/s. What will be its speed when it return to starting point?
5. Difference between distance and displacement.
6. What do you mean about scalar and vector quantities?
7. What do you know about graph?
8. When a body is thrown vertically upward, its velocity at the highest point is zero. Why?
9. How do riders in a Ferris wheel possess translator motion but not circular motion?

LONG QUESTIOS.

1. Define Translatory motion and its types.
2. Explain Distance-time Graph.
3. Derive the equation of motion for uniformly accelerated rectilinear motion.

NUMERICLA PROBLEMS: 2.8 , 1.9, 2.10

UNIT NO. 3 DYNAMICS

KNOWLEDGE BASED QUESTIONS. 30%

1. Define Inertia
2. State Newton's First law of motion.
3. State Newton's Second law of motion.
4. What do you know about Momentum?
5. Write down the advantages and disadvantages of friction.
6. Write down the methods of reduce friction.
7. Define and explain centrifugal force. Is it a reaction of centripetal force?
8. Difference between Mass and Weight.
9. Define momentum along with its mathematical form and unit. Also write at least two factors on which it depends.

UNDERSTANDING BASED QUESTIONS. 50%

1. Why the rolling friction is is less than sliding friction?
2. Moon revolves around the earth, from where it gets necessary centripetal force?
3. When a gun is fired, it recoils. Why?
4. How does oiling the moving parts of a machine lower friction.
5. Why a balloon filed with air move forward, when its air is released?
6. Describe ways to reduce friction.
7. A horse pushes the cart. If the action and reaction are equal and opposite then how does the cart move?
8. Action and reaction are always equal and opposite than how does a body move?

NO LONG QUESTIONS ACCORDING TO KHYBER PAKHTTON KHAWA SCHEME.2023

UNIT NO. 4 TURNING EFFECT OF FORCE.

KNOWLEDGE BASED QUESTIONS. 30%

1. Define Like and unlike parallel forces.
2. Define couple and give example.
3. State conditions of equilibrium.
4. Define neutral equilibrium.
5. Define rigid body and axis of rotation.
6. What is meant by principle of moments?

UNDERSTANDING BASED QUESTION. 50%

1. How stability of a body is related with the Position of centre of mass?
2. How can we increase torque by keeping the force constant?
3. Can a body be in equilibrium if it is revolving clockwise under the action of a single force?
4. What should be the length of the spanner to loosen the same nut with , 60 N force?
5. Can a small child play with a fat child on the see-saw? Explain how?
6. How can a force be resolved into its rectangular components?
7. Explain what is meant by stable, unstable, and neutral equilibrium. Give one example in each case.

APPLICATION BASED QUESTIONS. 20%

1. Will it make any difference if you, fist draw Fs and then Fx to find the resultant
2. Is vector addition of more than two forces possible, by head to tail rule.

LONG QUSTIONS.

1. Define and explain turning effect of force by relating it to everyday life.
2. Explain torque or moment of a force.
3. What is equilibrium? State and explain the conditions of equilibrium.
4. Define and explain the three states of equilibrium.

NUMERICAL PROBLEM: 4.2 , 4.5, 4.6, 4.8, 4.9

UNIT NO. 5 GRAVITATION.

KNOWLEDGE BASE QUESTIONS. 30%

1. What is Gravitational Field Strength?
2. What do you know about Global positioning System?
3. What do you know about geostationary satellites?
4. What is effect of the following on the gravitational acceleration?
   i. Mass of freely falling body ii. Distance of freely falling body from the center of earth.
5. What is meant by force of gravitation?
6. What are artificial satellites?

UNDERSTANDING BASED QUESTIONS. 50%

1. Why communication satellites are stationed at geostationary orbits?
2. Can you determine the mass of our moon? If yes, then what you need to know?
3. If we go on top of the mountain, will our weight increase or decrease.
4. What will happen if Earth suddenly stops revolving around the Sun?

LONG QUESTIONS.

1. State and explain Newton's law of gravitation.
2. Explain the variation of 'g' with altitude.
3. What are artificial satellites? Define orbital velocities and what do you know about communication satellites?

NUMERICAL PROBLEMS: 5.3, 5.5, 5.8

UNIT NO. 6 WORK AND ENERGY

KNOWLEDGE BASED QUESTION. 30%

1. Define Energy and write down its units.
2. Difference between Kinetic and Potential Energy.
3. Define Efficiency.
4. Define Power. Write down its unit and define it.
5. Define Kinetic energy and derive its mathematical formula.
6. Define gravitational potential energy and derive its mathematical formula.
7. Explain difference forms of energy.
8. Explain Mass-Energy Equation.

UNDERSTANDING BASED QUESTIONS. 50%

1. Can a centripetal force ever do work on an object? Explain.
2. Why do roads leading to the top of a mountain wind back and forth?
3. How is energy converted from one form to another? Explain
4. Which form of energy is most preferred and why?
5. Draw the flow diagram of an energy converter.
6. Explain Inter Conversion of Energy.
7. How much work is done when a body moves with uniform velocity?

APPLICATION BASED QUESTIONS. 20%

1. A 60.0 bullet is fired from a gun with 3150 J of kinetic energy. Find its velocity.
2. If a car of mass 800 kg is having same kinetic energy what will be its speed?
3. What is the energy released, when 50 kg person is converted completely into energy?

UNIT NO. 7 PROPERTIES OF MATTER.

KNOWLEDGE BASED QUESTIONS. 30%

1. What is Kinetic molecular theory? Write down its postulates.
2. What is Plasma?
3. Define Pressure and write down its unit.
4. State Pascal's law.
5. State Archimedes principle.
6. Difference between Stress and Strain.
7. State Hooke's law.
8. Define Young's Modulus.
9. Write any three applications of the Pascal's law in our daily life.

UNDERSTANDING BASED QUESTIONS. 50%

1. What do you know atmospheric pressure?
2. Why mercury is used in barometer instead of water?
3. What is Elasticity?
4. How property of elasticity is used in our body.
5. Prove that the SI unit of Young's modulus is Pascal or Nm-2
6. Under what condition the object floats in water?
7. Prove that P = mgh
8. When an inflated balloon is heated it bursis.Why?
9. Under what condition the object sinks in water?

LONG QUESTIONS.

1. State Pascal's principle and explain with example?
2. What is meant by buoyant force or up thrust in fluids?
3. State and explain Archimedes Principle.
4. State and explain Hooke's Law.
5. Define and explain, Stress, Strain and Young's modulus.

NUMERICAL PROBLEMS: 7.2, 7.3, 7.7, 7.9, 7.11, 7.12

UNIT NO. 8 THERMAL PROPERTIES OF MATTER.

KNOWELDEGE BASED QUESTIONS. 30%

1. Difference between thermometry and temperature.
2. Define internal energy.
3. Define latent heat of vaporization.
4. What do you know bimetallic strip.
5. Difference between Specific heat and Latent heat.
6. Difference between Evaporation and Vaporization.

UNDERSTANDING BASED QUESTIONS. 50%

1. Why does heat flow from hot body to cold body?
2. How does heating affect the motion of molecules of a gas?
3. Why are small gaps left behind the girders mounted in walls?
4. Why is ice at 0^o Ca better coolant of soft drink than water at 0 ^oC?
5. Why we feel cool after perspiration.
6. While constructing bridges, one end of the beam is placed on rollers, explain why?
7. Why temperature of a substance does not change while it is changing is state from solid to liquid.

LONG QUESTIONS.

1. Describe the thermal expansion of solid.
2. What is specific heat? Explain with examples and derive its mathematical formula.
3. Define latent heat of fusion and write down its mathematical formula.
4. Define evaporation. On what factor speed of evaporation depend? Explain.

NUMERICLA PROBLEMS: 8.1 , 8.5, 8.6, 8.7

UNIT NO. 9 TRANSFER OF HEAT.

KNOWLEDGE BASED QUESTIONS. 30%

1. What is Conduction? Explain the process and write down it usage in our daily life.
2. Write down some uses of conductors and non-conductors.
3. What do you know about convection currents in Air? Write down some uses.
4. Explain the impact of green-house effect in global warming.

UNDERSTANDING BASED QUESTIONS. 50%

1. How many method of transmission of heat are used?
2. How land and sea breezes are produced.
3. Why tea a cup becomes cold earlier as compared to a teapot?
4. Why metals are good conductors of electricity?
5. Why Land and breeze blows from land towards sea?
6. Why double walled glass vessel is used in thermos flask?
7. Why conduction of heat does not take place in gases?
8. Why transfer of heat in fluids takes place by convection?
9. What is meant by convection current?
10. How does heat reach us from the sun?
11. How various surface can be compared by Leslie cube?