AMU BOARD PREPARETORY EXAM - 2012

CLASS IX (SCIENCE)

M.M.-66   **Time:- 1:30 hr.**

NOTE:

1)   Question Paper is divided into two sections (Physics & Chemistry)

2)   Each section is of 33 marks

3)   Q.1 to Q.5 of each section carries 01 mark for each question

4)   Q.6 to Q.9 of each section carries 02 mark for each question

5)   Q.10 to Q.14 of each section carries 03 mark for each question

6)   Q.15 of each section carries 05 marks

SECTION ñ PHYSICS (33 MARKS)

Q.1.   What will be the distance and displacement covered by Tanisha if she moves 1m towards the north and then through 2 m towards east.

Q.2.   What do we call the gravitational force between the earth and an object?

Q.3.   Why a fan continues to move for sometime even after it has been switched off?

Q.4.   When a person uses deodorant spray, the other person standing at a distance would hear the sound of spraying first and the fragrance of spray would reach him later. Why so?

Q.5.   A cat and a mouse are running with the same speed. If the weight of the cat is 20 times that of mouse, what is the ratio of their kinetic energy?

Q.6.   What is the difference between density and relative density?

Q.7.   State and explain the Universal Law of Gravitation.

Q.8.   Cannon of mass 1000 kg launches a cannonball of mass 10 kg at a velocity of 100 m/s. At what speed do the cannon recoil?

Q.9.   Two forces F= 15N and F'= 20N are acting on a body in opposite direction. Find the net force acting on the body. What will be the direction of the net force acting on the body?

Q.10.   Ram uses a 100 watt bulb for 10 hrs, a 150 watt fan for 10 hrs and 200 watt computer for 4 hours. Calculate his monthly usage of electricity. If per unit charge is Rs 5, what would be his monthly electricity bill?

Q.11.   A particular transmitter of DD Sports broadcast at 420.5 m wavelength. Calculate the frequency at which the radio-station broadcast its programmes. Given the speed of radio waves is 3×10^8 m/s.

Q.12.   Draw a diagram depicting low pitched sound and high pitched sound and write main difference between the two?

Q.13.   In a submarine equipped with sonar, the time between transmission of ultrasonic signal and the reception of the echo after reflection from an enemy submarine is found to be 70s. What is the distance of enemy submarine? Pressure speed of the sound in water is 1550 m/s.

Q.14.   The graph shows the position of a body at different times.

Calculate the speed of the body as it moves from
(i) A to B (ii) B to C   (iii) C to D

Q.15.   A ball thrown up vertically returns to the thrower after 6 s. Find

      i.   the velocity with which it was thrown up,

      ii.   the maximum height it reaches, and

      iii.   its position after 4 s.

SECTION ñ CHEMISTRY (33 MARKS)

Q.1.   How many electrons can be accommodated in the outermost orbit

Q.2.   Why water drops from outside a Coke can soon after it has been taken out of a fridge and placed in a warm room?

Q.3.   Classify the following as physical or chemical change:
Cutting of vegetables, rusting of almirah, melting of ice and Spoiling of food

Q.4. If electrons are to be accommodated in K and L shell respectively, in which shell will the electrons enter first?

Q.5. What do you understand by latent heat of vaporization?

Q.6. Classify the following into homogeneous or heterogeneous mixtures.
protoplasm, Vinegar, chocolate, petrol

Q.7. Classify the following into element, compound and mixture:
Salad, burger, Baking soda, water, Carbon, Copper

Q.8. Name the elements present in the following compounds.
Carbon dioxide, LPG, Sugar, Water

Q.9. What is sublimation? Name the common substances which undergo sublimation.

Q.10. What is the chemical name of dry ice? Why it is called dry ice?

Q.11. Calculate the mass of the following:

(i) 0.5 mole of phosphorus atoms (Atomic mass of P = 31u)

(ii) 0.25 mole of Cl_2 molecules (Atomic mass of Cl = 35.55u)

(iii) 1.5 x 10^{23} molecules of iodine. (Atomic mass of iodine = 127u)

Q.12. Oxygen always makes up 8/9 of the mass of pure sample of water. This corresponds to which law? What is the combining ratio of Hydrogen by mass in water?

Q.13. What is the ratio of nitrogen and hydrogen in ammonia obtained from putrefaction of nitrogenous animal and plant matter and in the ammonia obtained from ammonium salts. Do both bear the same ratio?

Q.14. What do you understand by combining capacity of the atoms? Explain with examples.

Q.15. What was the ?-particle scattering experiment of Rutherford? Also write the observations and their respective conclusions with diagram.