

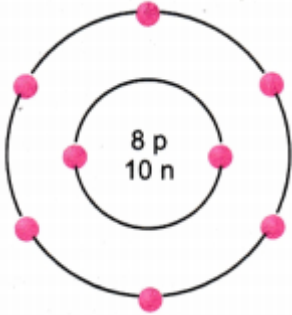


Time: . 1 hr 10 min.

M.M. : 30

General Instructions:-

I. All questions are compulsory.

Q.No.	Section A(physics /chemistry)	Marks
1	J.Chadwick discovered a subatomic particle which has no charge and has mass nearly equal to that of a proton. Name the particle and give its location in the atom.	1
2	Helium, Neon and Argon have zero valency. Give reason.	1
3	When an electric bulb is switched on, what energy transformation takes place?	1
4	Derive an expression for kinetic energy of an object.	2
5	Write the features of Bohr's atomic model of atom.	2
6	Four men lift a 250 kg box to a height of 1 m and hold it without raising or lowering it. (a) How much work is done by the men in lifting the box? (b) How much work do they do in just holding it? Take $g = 10\text{m/s}^2$	2
7	When will you say that work done on an object is positive. Give one example	2
8	The given figure depicts the atomic structure of an atom of an element 'X'. Write the following information about the element 'X'.  a) Atomic number of 'X'. b) Atomic mass of 'X' c) Valence electrons. d) Valency of 'X'	3
9	What are isotopes? Give an example and write it's two medical applications.	3
10	a)State two conditions which needs to be satisfied for work to be done on an object. b)Give the mathematical formula for work done and define it's SI units.	3
Section B (Biology)		
1	Which food items primarily supply proteins?	1
2	What are Genetically Modified crops? How are they produced?	2
3	How is culture of Pomphret and Mackerel different from that of Catla and Rohu?	2
4	Give reason a) Cross breeding is done in cattles. b) Beekeeping should be done in good pasturage.	2
5	Why are improved poultry breeds developed? Describe the desirable traits for which new varieties are developed.	3

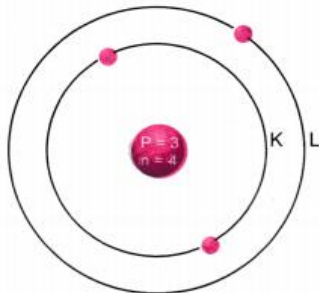


Time: . 1 hr. 10 min

M.M. : 30

General Instructions:-

I. All questions are compulsory.

Q.No.	Section A(physics /chemistry)	Marks
1	J.J.Thomson discovered a subatomic particle which has one unit negative charge and has negligible mass. Name the particle and give its location in the atom.	1
2	Helium, Neon and Argon do not combine with any other element. Give reason.	1
3	In solar heater ,what energy transformation takes place?	1
4	Derive an expression for potential energy of an object.	2
5	Write the observations of Rutherford's alpha particles scattering experiment.	2
6	Four men lift a 100 kg box to a height of 2 m and hold it without raising or lowering it. (a) How much work is done by the men in lifting the box? (b) How much work do they do in just holding it? Take $g = 10\text{m/s}^2$	2
7	When will you say that work done on an object is negative. Give one example.	2
8	The given figure depicts the atomic structure of an atom of an element 'X'. Write the following information about the element 'X'.  a) Atomic number of 'X'. b) Atomic mass of 'X' c) Valence electrons. d) Valency of 'X'	3
9	a)What are isobars? Give an example. b)Write two applications of isotopes.	3
10	a)State two conditions which needs to be satisfied for work to be done on an object. b)Give the mathematical formula for work done and define it's SI units.	3
Section B (Biology)		
1	Which food items primarily supply vitamins and minerals?	1
2	An Italian bee variety A. mellifera has been introduced in India for honey production. Write about its merits over other varieties.	2
3	How is culture of Pomphret and Bombay duck different from that of Mrigals and Rohu?	2
4	Give reason: a)Cross breeding is done in cattles. b)Weeds should be removed from crop fields.	2
5	a)What are the differences between broilers and layers and in their management? b)Give two examples of improved poultry birds.	3



Q.No.	Section A(physics /chemistry)	Marks
1	Neutron In the nucleus	1
2	Because Helium, Neon and Argon have fullfilled outermost shell electronic configuration.	1
3	Electrical energy -----> Heat and light energy	1
4	Consider an object of mass m moving with initial velocity u. Let force f is applied on the object and object get accelerated by acceleration a and it's final velocity becomes v. $W = F \times s$ $= ma \times \frac{v^2 - u^2}{2a}$ $W = \frac{1}{2} m (v^2 - u^2)$ If u = 0, (object starts at rest) $W = \frac{1}{2} mv^2$ Work done = Change in kinetic energy $\therefore E_k = \frac{1}{2} mv^2.$	2
5	1.Only certain special orbits known as discrete orbits are allowed inside the atom. 2. While revolving in discrete orbits, electrons do not radiate energy.	2
6	a)P.E. = mgh =250.10.1 =2500J b) Zero work done	2
7	Work is said to be positive when force is acting on the object and object get displaced in the direction of force . Example: In the game of tug of war the winning team do the positive work done.	2
8	a) Atomic number of 'X' = 8 b) Atomic mass of 'X' = 18 c) Valence electrons= 6 d) Valency of 'X' =2	3
9	Isotopes are the atoms of same element having same atomic number but different mass number. Example: Protium , Deutirium , Tritium Applications : 1.Isotope of cobalt is used in the treatment of cancer. 2.Isotope of iodine is used in the treatment of goitre.	3
10	a) 1.Force should be acted on object. 2.Displacement should occur. b)W = F *S 1Joule= When force of one newton is acting on the object and object get displaced by 1 m then work done will be one Joule.	3
Section B (Biology)		
1	pulses , fish	1
2	The crops which are produced by inserting desired genes in particular seed called genetic manipulation method.	2

3	1.marine water fishes / Fresh water fishes 2.Cultured by mariculture/ cultured by aquaculture	2
4	a. To increase lactation period and to get disease resistance cattles. b. To improve taste , quality and amount of honey	2
5	<p>Poultry farming involves large-scale rearing of poultry birds. Poultry farming is undertaken to meet an increased demand of eggs and chicken . It deals with the management of domestic fowl in order to improve the quality and productivity of egg and chicken.</p> <p>Improvement in poultry variety is achieved through the process of hybridization or cross breeding. Hybridization between an Indian breed like Aseel and a foreign breed like Leghorn has been done to bring about desirable traits in the improved variety. Some desirable traits for which the improvement of poultry is done are:</p> <ul style="list-style-type: none"> ● Quality and size of eggs ● Low maintenance breeds ● High resistance to diseases ● Tolerance to high temperature ● Quality and quantity of chicks ● Ability to utilize cheaper diets produced from agricultural wastes ● Dwarf boilers for egg production(so that they consume lesser nutrition for body growth) 	3



OSDAV Public School, Kaithal

Class : IX
Subject : Science

Time: .
Set B

M.M. : 30

Q.No.	Section A(physics /chemistry)	Marks
1	Electron, around the nucleus	1
2	Helium, Neon and Argon do not combine with any other element because they have fullfilled outermost shell electronic configuration.	1
3	Solar energy ----> Heat energy	1
4	Consider an object of mass m raised to the height h above the ground. Let W is the work done and force f is applied. $W = F. S$ $=mgh$	2
5	1. Most of the Alpha particles pass straight through the gold foil. 2. Very few Alpha particles are deflected by small angle. 3. One out of 12000 alpha particles is found to be repounded back.	2
6	a)P.E. = mgh $=100.10.1$ $=1000J$ b) Zero work done	2
7	Work is said to be negative , when force is acting on the object and object get displaced in the direction opposite to the direction of force . Example: In the game of tug of war the loosing team do the negative work done.	2
8	a) Atomic number of 'X' = 3 b) Atomic mass of 'X' = 7 c) Valence electrons= 1 d) Valency of 'X' =1	3
9	a) isobars are the atoms of different element with different atomic number but same mass number. Example = Argon and Calcium Applications of isotopes : 1..Isotope of cobalt is used in the treatment of cancer. 2.Isotope of iodine is used in the treatment of goitre.	3
10	a) 1.Force should be acted on object. 2.Displacement should occur. b) $W = F *S$ 1Joule= When force of one newton is acting on the object and object get displaced by 1 m then work done will be one Joule.	3
Section B (Biology)		
1	Fruits and vegetables	1
2	1. high honey production 2. Stay for long time on single beehive 3. Small sting 4. Good breeding	2
3	1. Marine fishes and fresh water fishes 2. Mariculture is done and aquaculture is done	2
4	a) To increase lactation period and to produce disease resistance cattle's. b) Weeds are unwanted plants which compete for light, nutrients and space with main crop. Hence decreases the yield of main crop.	2
5	a) Broilers : meat production, give fat rich food b) Layers: egg production, provided with proteins and calcium rich food	3

	c) Two improved breeds of poultry : asset and leghorn	
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