

බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව மேல் மாகாணக் கல்வித் திணைக்களம் Department of Education - Western Province							
වර්ෂ අවසාන ඇගයීම ஆணாயுறதி மதிப்பீடு - 2016 Year End Evaluation							
පෙළපා Grade	10	විෂය Subject	Science	පත්‍ර Paper	I	කාලය Time	01 hour

Note :

(i) Answer all questions
(ii) Select the most suitable answer and mark (x) in the respective box in the answer paper.

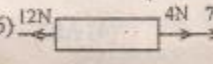
(01) The planetary model of the atom was presented by,
(1) Ernest Rutherford (2) J. J. Thompson
(3) Demitri Mendaleev (4) James Chadwick

(02) A monosaccharide without a sweet taste is,
(1) Glucose (2) Fructose (3) Galactose (4) Maltose

(03) When acceleration of a body occurs,
(1) velocity is increased (2) Displacement does not change.
(3) Mass is increased (4) The speed is increased

(04) Which of the following phenomena is not a chemical reaction?
(1) Rusting of Iron (2) Burning of firewood
(3) Melting of wax (4) Solidifying of lime plaster

(05) The only living characteristic shown by virus is,
(1) Reproduction (2) Respiration
(3) Growth (4) Movement

(06)  The resultant force shown by the object shown in the figure is,
(1) $\vec{11N}$ (2) $\vec{1N}$ (3) $\vec{17N}$ (4) $\vec{1N}$

(07) The atomic mass unit used at present is,
(1) Atomic mass of ${}^1_6\text{C}$ isotope
(2) Atomic mass of ${}^{12}_6\text{C}$ isotope
(3) $\frac{1}{12}$ of atomic mass of ${}^{12}_6\text{C}$ isotope
(4) Atomic mass of ${}^1_6\text{C}$ $\frac{1}{12}$ of atomic mass ${}^{16}_8\text{O}$ isotope

(08) What is the minerals responsible for chlorosis in leaf veins and the regions near veins the?
 (1) N (2) P (3) S (4) Ca

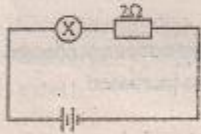
(09) In a certain body in motion has a kinetic energy of 18J. If the velocity of it is 3ms^{-1} , the mass of the object is,
 (1) 4kg (2) 6kg (3) 8kg (4) 12kg

(10) The double membranous organelle acting as a powerhouse in a cell is,
 (1) Chloroplast (2) Golgibodies (3) Nucleus (4) Mitochondria

(11) Select the isotope elements mentioned below. Given symbols are not standard symbols
 ${}_{8}^{17}\text{A}$ ${}_{9}^{17}\text{B}$ ${}_{8}^{18}\text{C}$ ${}_{10}^{17}\text{D}$ ${}_{7}^{18}\text{E}$
 (1) A and B (2) A and C (3) C and E (4) A and D

(12) Select the answer in which the botanical name of the mango plant is denoted correctly
 (1) Mangifera indica (2) mangifera Indica
 (3) Mangifera indica (4) Mangifera Indica

(13) In which of the instances below, can the glow of the bulb in this circuit be increased?



- (1) When one more 2Ω resistor is used in series to the 2Ω resistor.
 (2) When one more 2Ω resistor is used in parallel to the 2Ω resistor
 (3) When one more bulb is used in series to the bulb in the circuit
 (4) When the overall equivalent resistance of the circuit is increased.

(14) Not a characteristic of coconut plant
 (1) having a fibrous root system (2) having a flowers of multiples of three
 (3) showing a secondary growth (4) having a parallel venation

(15) Select the response in which the chemical formula of Aluminium oxide is correctly written.
 (1) AlO (2) Al_2O_2 (3) Al_2O_3 (4) AlO_2

(16) The disease sexually transmitted and infected by Human Immuno deficiency Virus, (HIV) is
 (1) Gonorrhoea (2) Syphilis (3) Herpes (4) AIDS

(17) Which is the most accurate statement among the statements given below?
 (1) Atmospheric pressure can lift a maximum water column of 76cm.
 (2) Atmospheric pressure takes a higher value in the mountain.
 (3) The value of mercury barometer near the coastal region is 760mm.
 (4) Altitude has no effect on atmospheric pressure.

(18) Similar pieces of Mg strips are put into three test tubes, at once. In which of the following shows the effect of rate of reaction?



- (1) the effect of the surface area of the reactants
- (2) the effect the temperature at which the reaction occurs.
- (3) the effect of the concentration of the reactants.
- (4) the effect of catalysts.

(19) When a certain object is vertically tossed from the ground in a certain velocity reaches maximum height in 5 seconds. What will be the initial velocity of the object? (Gravitational acceleration = 10ms^{-2})

- (1) 20ms^{-1}
- (2) 30ms^{-1}
- (3) 40ms^{-1}
- (4) 50ms^{-1}

(20) Select the answer relevant to relative atomic mass of the molecule H_2SO_4 .

(H=1 S=32 O=16)

- (1) 7g
- (2) 98g
- (3) 128g
- (4) 196g

(21) The fertilized egg is known as

- (1) Blastula
- (2) Morula
- (3) Zygote
- (4) Foetus

(22) Single displacement reaction is,

- (1) $\text{Zn} + \text{CuO} \rightarrow \text{ZnSO}_4 + \text{Cu}$
- (2) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
- (3) $\text{CaCl}_2 + \text{Na}_2\text{CO}_3 \rightarrow \text{CaCO}_3 + 2\text{NaCl}$
- (4) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$

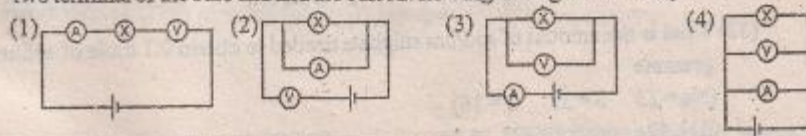
(23) A requirement for an object to be in balance against three parallel forces is

- (1) The three forces being collinear
- (2) The three forces being coplanar
- (3) The three forces being equal in magnitude
- (4) The three forces being perpendicular to one another.

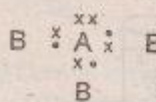
(24) What is the Vitamin contained in 'Ransahal', which is produced using gene technology?

- (1) Vitamin C
- (2) Vitamin A
- (3) Vitamin D
- (4) Vitamin B

(25) Which of the circuits given below arranged to measure, potential difference between the two terminal of the bulb and the current flowing through it correctly?

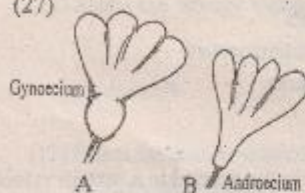


(26) Shown here is a dot cross diagram of a covalent bond formed by combination of two atoms of element. Select the answer denoting A and B respectively.



- (1) Nitrogen and hydrogen
- (2) Hydrogen and nitrogen
- (3) Carbon and Oxygen
- (4) Oxygen and Carbon

(27)



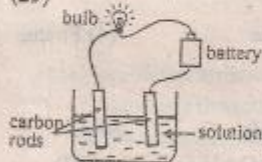
Shown in the figure are two flowers of a pumpkin plant. Accordingly the adaptation shown by that plant in order, for the pollination could be.

- (1) having self sterility
- (2) having unisexual flowers.
- (3) Dichogamy
- (4) Hercogamy

(28) Of the instances given below, what is the instance acted in order to increase the friction?

- (a) In writing, the position held by hand is roughed
 - (b) Cutting grooves in foot wears and vehicle tyres
 - (c) Using bearings for places that turn in machines
 - (d) Putting talc powder on the surface of the carrom board.
- (1) a and b (2) b and c (3) c and d (4) a and d

(29)



If the bulb of the above set up is to be lighted up, which group of solution can be used as the solution?

- (1) Sodium chloride or glucose solution
- (2) Sugar solution or Sodium chloride solution
- (3) Sodium chloride or copper sulphate solution
- (4) Copper sulphate solution or glucose solution

(30) • Eukaryotic

- ♦ Live in moistured environments
- ♦ Autotrophic as well as heterotrophic forms, are found

The group of organism having all the above characteristics is,

- (1) Fungi (2) Bacteria (3) Viruses (4) Protistants

(31) Which of the following is an instance where static electricity is seen?

- (a) In ironing silk cloth
 - (b) Near a CRT television screen
 - (c) In seperating new polythene membranes
 - (d) When rubbing a metal strongly
- (1) a, b, c (2) b, c, d (3) a, c, d (4) a, b, d

(32) What is the amount of sodium sulphate needed to obtain 0.1 mole of sodium sulphate in gramme

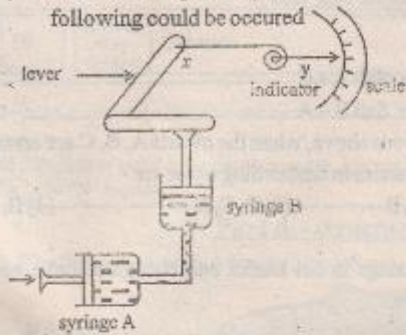
(Na = 23 S = 32 O = 16)

- (1) 1.42g (2) 14.2g (3) 142g (4) 1420g

(33) The dominant gene responsible for haemophilia is H while the recessive gene is h. The haemophilia carrier is,

- (1) x^Hx^H (2) x^Hx^h (3) x^Hy (4) x^hY

(34) After the setup arranged as in the figure, when the syringe A is pressed, which of the following could be occurred



- (1) The piston of syringe B going down
 (2) The lever X moving to right
 (3) The indicator y deflecting downwards
 (4) The indicator y deflecting upwards

(35) A. Statement and a reason relevant to production and collection of hydrogen gas in the laboratory are given below.

Statement - The gas is collected by downward displacement

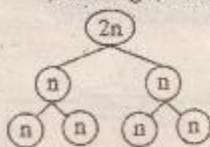
Reason - Hydrogen is denser than ordinary air.

- (1) Statement is correct Reason is incorrect
 (2) Statement is incorrect. Reason is correct
 (3) Statement and reason are correct
 (4) Statement and reason are incorrect

(36) Mass of two objects named A and B are m and $2m$ respectively. What is the correct statement given below about their velocities, if the objects maintain equal momentum,?

- (1) Velocity of B is higher than that of A
 (2) Velocity of A is higher than that of B
 (3) Velocities of A and B are equal
 (4) Data given are not adequate to express about velocity.

(37) Out of the cells given below, Which type of cells can have the method of cell division according to the figure.



- (a) Epithelial cells in mouth cavity
 (b) Ovum mother cells
 (c) Sperm mother cells
 (d) Smooth muscle cells

- (1) a and b (2) c and d (3) b and c (4) a and d

(38) Consider the statements about Newton's laws.

- (a) Until unbalanced forces are exerted, the objects at rest stay at rest.
 (b) Force acted on an object is directly proportional to the acceleration created on it.

(c) The mass of an object is inversely proportional to the acceleration created in it.

(d) Actions and the reaction are equal in magnitude and in direction.

Correct statements are

(1) a and b only

(2) b and c only

(3) c and d only.

(4) a and d only.

(39) A, B, C are 3 metals.

Salt solution of A + C \longrightarrow Salt A + C

Salt solution of B + A \longrightarrow Salt B + A

According to nature of reactions above, when the metals A, B, C are arranged according to the position in the reactivity series in descending order are

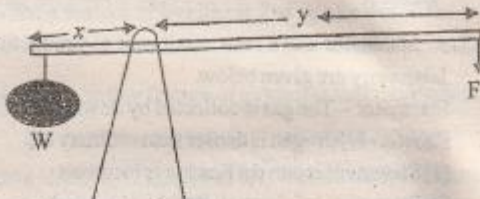
(1) A, B, C

(2) C, A, B

(3) B, C, A

(4) B, A, C

(40) In some of the railway crossings in Sri Lanka bamboo gates have been installed. The diagram of it is denoted below.



Which of the statements given below is mostly correct, with regard to the operation of the gate?

(1) The increase of the weight W does not help in lifting the gate

(2) When length of y is less than that of x, the force F can be made to decrease.

(3) When the length of X is more than that of X, the force F can be made to decrease.

(4) The relation between the weight W and the magnitude of the force F is $W < F$.

Channa Asela