

වස්තූන් පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව மேல் மாகாணக் கல்வித் திணைக்களம் Department of Education - Western Province	පළමු වාර් අගයීම 2019 First term Evaluation 2019 පිළිතුරු පත්‍රය Marking Scheme	Department of Education - Western Province Department of Education - Western Province Department of Education - Western Province
පළමු වාර් අගයීම 2019 First term Evaluation 2019		
පිළිතුරු පත්‍රය Marking Scheme		
ශ්‍රේණිය } தரம் } 10 Grade }	විෂය } பாடம் } විද්‍යාව Subject }	පත්‍රය } வினாத்தாள் } I, II Paper }

Part I

1	4	11	2	21	4	31	3
2	4	12	2	22	2	32	4
3	1	13	1	23	1	33	3
4	1	14	1	24	1	34	1
5	2	15	3	25	2	35	1
6	1	16	3	26	2	36	4
7	1	17	4	27	1	37	4
8	2	18	3	28	1	38	2
9	4	19	3	29	3	39	3
10	3	20	3	30	2	40	1

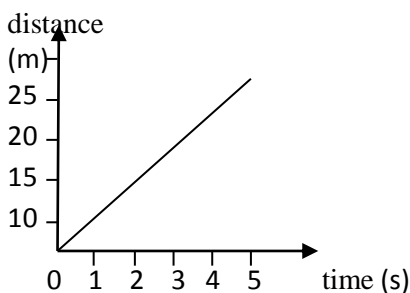
(1x40 = 40)

Part II

Part A

01. A. (i) – Egg curry → Excess NaOH , Few drops of CuSO₄
 Sucrose → Benedict solution + few drops of D.H₂SO₄ (෧:2)
- (ii) a. Ripen banana (෧:1)
 b. Sucrose (෧:1)
- B. (i) 800 m (෧:1)
 (ii) 500m (෧:1)
 (iii) velocity = $\frac{\text{displacement}}{\text{time}} = \frac{500\text{m}}{40\text{s}} = 12.5 \text{ ms}^{-1}$ (෧:2)

- (iv) a. (෧:2)



- b. speed = $\frac{\text{distance}}{\text{time}} = \frac{15 \text{ m}}{3 \text{ s}} = 5 \text{ ms}^{-1}$ (©:1)
- c. (i) mass number of Na = 23 (©:1)
(ii) Na = 2,8,1, (©:2)
(iii) Group -1 period - 3 (©:1)
02. A. (i) C,H,O,N (©:1)
(ii) The special proteins (organic catalyst) that are produced within the organism to increase the rate of bio - chemical reactions. (©:1)
(iii) Maltose (©:1)
(iv) The extract of ground germinating green gram/ mung seedlings (©:1)
(v) a. when there's no colour change of the Iodine solution. (©:2)
Blue → green → yellow green → oranges → Brick red (©:2)
- B. (i) a. a good solvent / solvent property (©:1)
b. Differential expansion in freezing (©:1)
C. High cohesive and adhesive forces (©:1)
- (ii) A- Carohydrate - Monosaccharides (©:1)
B- DNA - Nucleotide (©:1)
(iii) Cellulose (©:1)
(iv) $C_x(H_2O)_y$ (©:1)
03. A. (i) H (©:1)
(ii) F, B (©:2)
(iii) H (©:1)
(iv) A (©:1)
(v) D (©:1)
- B. (i) kJmol^{-1} (©:1)
(ii) S (©:1)
(iii) - T has noble gas electronic configuration and removal of an electron from it is more difficult / T has more protons inside the nucleus with compared to the others (©:2)
- Due strong attraction of the outer most electron to the nucleus
- (iv) $R= 2 \quad H= 1 \quad = H_2R$ (©:2)
(v) S (©:1)
(vi) Burns with a blue flame in air
Has strong smell / pungent odour (©:2)
04. A. (i) The balloon moves in the direction opposite to the direction of air / Size of the balloon gradually decreases (©:2)
(ii) \longrightarrow direction of the motion of balloon (©:2)
 \longleftarrow Direction of air leaving the balloon
(iii) Newton's third law (©:1)
(iv) Use of a straw instead of the tube of a pen (©:2)

- Use of thin metal wire
- (v) Rowing a boat / swimming (©:1)
- (vi) when loosening the thread ,air is leaving the balloon (action)@ then balloon is moving in the opposite direction due to the reaction. (©:2)
- B. (i) 3 kg (©:1)
- (ii) Quantity of matter in the body (©:1)
- (iii) Newton balance (©:1)
- (iv) Acceleration = $\frac{\text{Change in velocity}}{\text{time}}$
- $$10\text{ms}^{-2} = \frac{V-0}{4\text{s}}$$
- $$V = 10 \times 4 = 40\text{ms}^{-1} \quad (\text{©:2})$$

Part II

05. A. (i) a (©:1)
- (ii) Cheek cells (©:1)
- (iii) a - Mitochondria
b - Ribosomes
c - Nucleus (©:3)
- (iv) a- production of energy C - control the cellular activities (©:2)
- (v) cellulose (©:1)
- (vi) The presence of cell wall / chloroplast / large central vacuole in plant cell (©:2)
- (vii) - The structural and the functional unit of the organism is the cell
- All the organisms are made of one or more cells
- New cells are produced from the preexisting cells (©:2)
- B. (i) Lipid (©:1)
- (ii) Fatty acid and glycerol (©:2)
- (iii) Sudan III (©:1)
- (iv) Phospholipid and cholesterol (©:1)
- (v) The colour of cobalt chloride changes from blue to pink (©:2)
- (vi) Dying of tissues at the tip of the leaves (©:1)
06. A. (i) Na, Mg, Al, Si, P, S, Cl, Ar (©:2)
- (ii) most basic – Na_2O most acidic Cl_2O_7 (©:2)
- (iii) Stored in paraffin or kerosene oil (©:1)
- (iv) Si – 2,8,4 (©:2)
- (v) used for making of solar cells / computer equipment / transistors / diodes (©:2)
- B. (i) the piece of sodium floats on water
Reacts vigorously with water producing shu sound (©:2)
- (ii) soft metal that can be cut easily with a knife
- Conductor of electricity
- Conductor of heat
- Has lower density than water (any two) (©:2)

- (iii) Production of sodium cyanide used in the extraction of gold and silver
- Production of street lamps with yellow glow
 - Production of indigo dye
 - Extraction of metals such as titanium and zirconium
 - Making sodium amalgam (any two) (©:2)
- C. (i) coal / charcoal / lamp soot (©:2)
- (ii) production of black colour ink / vulcanizing of rubber (©:1)
- (iii) Diamond – making Jewellery / cutting glass and gems / used as pivots at points in machines that are subjected to wear away, (©:2)
07. A. (i) OA – Uniform acceleration , AB – uniform velocity , BC – Uniform deceleration (©:3)
- (ii) 15ms^{-1} (©:1)
- (iii) rate of the change in velocity = $\frac{\text{change in velocity}}{\text{time}} = \frac{15.0 \text{ ms}^{-1}}{10 \text{ s}} = \underline{1.5 \text{ ms}^{-2}}$ (©:2)
- (iv) displacement from A to B = area of the rectangle (AB)
 $= 1790\text{s} \times 15 \text{ ms}^{-1} = \underline{26850 \text{ m}}$ (©:2)
- B. (i) OA and BC (©:2)
- (ii) - acceleration is directly proportional to unbalanced external force.
 -acceleration is inversely proportional to the mass of the object (©:2)
- (iii) $F = m \times a$
 $F = 1200 \text{ kg} \times 1.5 \text{ ms}^{-2}$
 $\underline{F = 1800 \text{ N}}$ (©:2)
- C. (i) To prevent the passengers falling forward when applying breaks (©:2)
- (ii) momentum = $m \times v$
 $= 1200 \text{ kg} \times 15 \text{ ms}^{-1}$
 $= \underline{18000 \text{ kgms}^{-1}}$ (©:2)
- (iii) weight of the vehicle = $1200 \text{ kg} \times 10 \text{ ms}^{-2}$
 $= \underline{12000 \text{ kgms}^{-1}}$ (©:2)
08. A. (i) process by which new cells are formed by the division of cellular materials (©:2)
- (ii) from mother = 23 chromosomes, From father = 23 chromosomes (©:2)
- (iii) as homologous pair of chromosomes (©:1)
- B. (i) meiosis (©:1)
- (ii) mother cells of the ovaries / production of sperms inside the testis by mother cells/
 Parent sex cells (©:1)
- (iii) mitosis (©:1)
- (iv) Maintenance of the constant number of chromosomes from generation to generation
 Evolution due to the variation occur in chromosomes (©:2)
- (v) stage 1 - meiosis
 stage 2 - mitosis (©:2)

