Marking Scheme Summative Assessment - 1 (2014-15)

Science(Set -A)

Date: **Class: VII**

Time:3 hrs **M. M: 90**

General Instructions:

1. *There are two sections in this paper. Section A contains Q 1-24 & section B containsQ25-36.*
2. *Marks are indicated against each question.*
3. *Read all questions carefully.*
4. *All questions are compulsory.*

Section A

1	How is carbon dioxide from air taken into the plant for photosynthesis? **By the help of stomata**	1
2	When is world water day celebrated? Why is it celebrated? **22 March, to make people aware and to educate people about conservation of water**	½+½
3	What is the normal body temperature in Fahrenheit scale? **98.4 ^{0}F (½ mark for value, ½ mark for unit)**	1
4	What are pseudopodia? How do they help the amoeba? **Finger like structure 1** **Keep changing shape for locomotion 0.5** **By engulfing the food 0.5**	2
5	Given below are some examples of physical change. Identify the property which gets changed in each of them. Physical Change | Property which gets changed E.g. Breaking Glass | Shape (i) Cloud forming in the sky | **state** (ii) Heating of iron nail till it is red hot | **color**	2(1+1)
6	Name the following : 1/2 * 4 = 2 a. The device on the dash board of the car that shows the distance moved by car. **Odometer** b. Standard unit of time. - **second** **c.** Scientist who discovered the simple pendulum.-**Galileo Galile** d. Number of oscillations per second of a simple pendulum.- **Frequency**	2
7	Discuss the role of the following in the process of digestion a. Hydrochloric acid in stomach **kill germs, makes the medium acidic ½ + ½** b. Saliva in the mouth. **Makes the food soft and sticky, starch into simple sugars ½ + ½** c. Bile juice in the intestine **Digestion of fats 1**	3
8	An element A used to make railway lines and grills reacts with air to get a brown flaky coating easily. a. Name the element A **iron** b. Write the reaction of A with air because of which it gets the flaky coating. **Iron +air gives us rusted iron** c. Write any two ways in which rusting can be prevented. **Painting ,galvanizing 0.5 + 0.5**	3(1+1+1)
9	Write any three points of difference between clinical thermometer and laboratory thermometer. any 3 1+1+1	3
10	Give an appropriate term for the following: a. A saprotrophic plant. **Fungi ,yeast ,mushroom (any one) 1** b. Pigment found in the green parts of the plants.	3

	Chlorophyll 1 c. Bacterium found in the root nodules of leguminous plant. **Rhizobium 1** d. An edible fungus. **Mushroom 1** e. Substance used to test the presence of starch in leaves. **Iodine 1** f. Slimy green patches found in ponds or stagnant water. **Algae 1**	
11	"Planting of trees helps to cool Earth" Justify this statement giving three reasons. **Rain, hold the soil, atmosphere cool due to increase in transpiration**	3(1+1+1)
12	A car travels with a speed of 30km/hr for 30 minutes and then with the speed of 50km/hr for another 30 minutes. Calculate the following: a. Total distance travelled by the car b. Average speed of the car **speed = dist / time ½** **30min = ½ hr ½** **d1= 30*1/2 = 15 km ½** **d2= 50* 1/2= 25 km ½** **Total dist= d1+d2 =40 km ½** **avg speed = total dist/ total time** **=40/1, 40km/hr ½**	3
13	With reference to the organism Lichens answer the following: a. Name the two partners of this association. **Algae and fungi 0.5+0.5** b. Name the association found between them. **Symbiosis or mutualism 1** c. How do the two partners benefit each other? **Algae makes food and fungi provides shelter and water 0.5+0.5**	3
14	a. Give one method in which rain water is harvested in a traditional way. **Bawris** b. Suggest any two methods that can help to save water in modern age. **Rain water harvesting, drip irrigation**	3(1+2)
15	Explain the formation of sea breeze with the help of a well labeled diagram. **Unequal heating and cooling of water ½** **During daytime ½ , warm air above land rises ½ , cool air moves from the sea towards land ½** **Diag 1**	3
16	Give reason for the following: a. An athlete breathes faster and deeper after finishing the race. **Take in more oxygen and break down of lactic acid 0.5+0.5** b. The skin of earth worm is moist and slimy. **It breathes by skin 1** c. We should cover our mouth and nose during sneezing. **Foreign particles and dust may not be inhaled by others 1**	3
17	There are many stages in the life cycle of a silk moth. Draw and explain briefly the life cycle of a silk moth. **Eggs, larva , cocoon, adult ½ mk for writing about each stage** **1 mk for Diagram**	3(2+1)
18	What would be the nature of motion of a vehicle whose distance time graph is: a. If the graph is a straight line- **uniform motion** b. If the graph is a curved line.- **non uniform motion** c. If the graph is a straight line parallel to time axis- **no motion/ vehicle is at rest**	3
19	a)Write one similarity and one dissimilarity between aerobic and anaerobic respiration. **Both use glucose as raw mat ./ both give energy 1** **O_2 used / in absence of O_2 or high energy vs low energy output 1**	5(2+3)

b)With reference to the human respiratory system complete the following table- ½ * 6

Sl.no.	Changes	Inhalation	Exhalation
1	Movement of ribs	**Outward/upward**	**Inward / downwards**
2	Movement of diaphragm	**Downward**	**Upward/back to original position**
3	Size of lungs/chest cavity	**Expand/enlarged**	**Contract/ relax/reduces in size**

20 — 5

a. Answer the following questions : 1 mark each

i. Female silk moth is kept in separate bags.
Disinfectant is sprayed

ii. Raw silk is twisted before dyeing.
Makes the fiber stronger and more tensile

iii. Working in wool industry is hazardous to health.
Causes skin diseases

b. Write any two physical properties of wool.
It is resistance to stress and durable

21 — 5

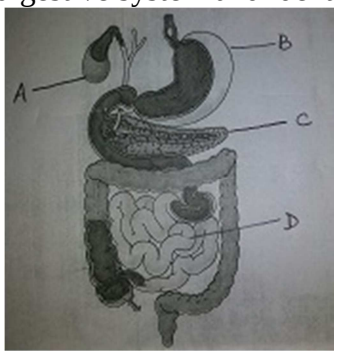
A car starts its journey from Delhi at 9:00am. It reaches its destination at 11:00 am. The distance covered by the car at various time intervals are as follows:

Distance (Km)	0	50	100	150	200
Time (am)	9:00	9:30	10:00	10:30	11:00

a. Draw a distance- time graph for the given data.- **1 ½ mk for proper straight line graph**
b. Mention the scale for distance & time taken by you. **½ for time scale ½ for dist scale**
c. From the graph find out the distance covered by the bus at 10:15a.m **- 125 km (from graph) 1mk**
d. Calculate the average speed of the bus in km/hr. **– av sp=total dist /total time =200/2 =50 km/hr ½ formula ,60km/hr ½**
e-Comment upon the nature of motion exhibited by the bus. –**uniform motion ½**

22 — 5(2+3)

a. Observe the given diagram of digestive system and identify the parts A, B, C , D



A=gall bladder,B=stomach ,C=Pancreas ,D=small intestine ½ each

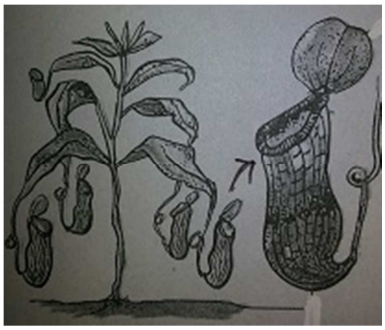
b. Write the suitable term for the following:

1. Condition of passing watery stools frequently. **Diarrhoea**
2. No. of milk teeth in a child-**20**
3. Teeth meant for tearing the food **–canines**
4. Largest gland of the body-**liver**
5. Removal of undigested food (feacal matter) from the body.-**egestion**
6. Part of elementary canal where food is temporarily stored in ruminants-**caecum**

23 — 5

An element ‘X’ on heating in air burns with a dazzling bright light to form a substance ‘Y’.Y is then mixed with water to obtain ‘Z’.Z is now tested with red litmus that turns blue.
i-Identify X and Y.

	Mg ,MgO ½ +1/2 ii-is conversion of X to Y is a physical or a chemical change. Give reason. **Chemical change,new products were formed 0.5+0.5** iii-Write the equation for the conversion of X to. Y **Magnesium + Oxygen -------→ Magnesium Oxide 1.5** iv-Why do you understand about the nature of substance Z after the litmus test? **Base 0.5** v- Write any other two examples of the same type of change. **Rusting of iron, digestion of food, burning of paper (any two) ½ each**	
24	Convert 104^0 F into Celsius. **C/5 = F – 32 / 9 ½ formula** **C/5 = 104 – 32 /9 ½** **Calculation ½** **40^0 C ans ½** a. Give reason for the following- 1 mk each (i) We should always jerk the thermometer before using it- **to bring the mercury level down** (ii) Polar bears have thick fur on their body. **air is trapped in fur , air is a bad conductor of heat.** (ii) A wooden spoon dipped in a cup of ice cream does not become cold-**wood is bad conductor**	5
	Section B	
25	Take three test tubes. Fill ¾ of each with water. Label them A, B, C. Keep a snail in A, a water plant in B and in C keep both snail and plant. Which test tube will have higher concentration of CO_2 and why? **A ½ , CO_2 given out by snail accumutales 0.5**	1
26	Rita was standing near a place where people were digging for three days to get ground water. What lead to depletion of water? **Water level had gone down due to overconsumption , No water harvesting**	1
27	Now days digital thermometers that do not use mercury are getting popular. What could be the reason? **Mercury is difficult to dispose**	1
28	Name the opening present on the body of insects like cockroaches, ants and mosquitoes that help them in exchange of gases **spiracles**	1
29	Sneha saw and stopped her younger sister Snigdha throwing the waste packet of chips into the lake water.List two values exhibited by Sneha? **She is protecting river water from pollution/ Love for nature, environment** **Scientific attitude** **Conscious citizen (any two relevant)**	1
30	Name the thermometer used for measuring the temperature of a particular day reported in weather report. **Maxm- min thermometer**	1
31	Why do food and pickles get spoiled very fast by fungi during monsoon? **Fungal spores in the air ,moist and warm weather ideal for growth of fungi**	1
32	Ravi went to a factory to buy shawls made by wool. How can he find out that the shawl he is buying is of good quality? **By burning it if plastic smell then of poor quality**	1
33	Stainless steel pans are usually provided with copper bottoms. What could be the reason for this? **Copper is a better conductor of heat than steel , so the food cooks faster**	1
34	Observe the given picture. It shows the green plant that performs photosynthesis normally but	2

	its leaves are modified to trap insects. Identify the plant. Why does this plant feed on insects if it is green?  **-Insectivorous plant/ pitcher plant 1** **grow in Nitrogen deficient soil ,N2 is essential for making protein and fats that are not prepared by photosynthesis ½+½**	
35	List two varieties of silk found in India. Also name the states from where they are obtained. **Muga/eri/tassar and state of each ½ X 4**	2
36	A simple pendulum takes 38 seconds to complete 20 oscillations. Calculate the time period of this pendulum. **T= Time taken /no.of oscillations ½** **= 38/20 ½** **= 1.9 sec ½ value ½ unit**	2