

**ITL Public School**  
**SUMMATIVE ASSESSMET -(2014-15)**  
**SCIENCE (Set -A)**

**Date:**

**Class: VIII**

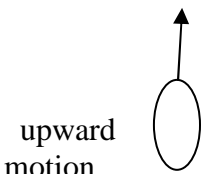
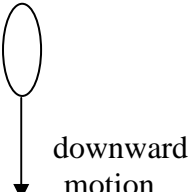
**Time:3Hrs**

**M. M: 90**

*General Instructions:*

1. Read the questions carefully.
2. Attempt the answers in legible handwriting .
3. All the questions are compulsory.

**Section A**

1	Why is a bacterial cell regarded as a prokaryotic cell? <b>The nucleus is not defined with a nuclear memb., only one chromosome</b>	1
2	Suggest a method that we can use to prevent the depletion of Exhaustible Resources. <b>Economic use</b>	1
3	Give the direction of force of friction in the following cases  <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>Ff=downward</b> <math>\frac{1}{2}</math> (a)</p> </div> <div style="text-align: center;">  <p><b>Ff=upward</b> <math>\frac{1}{2}</math> (b)</p> </div> </div>	1
4	Give the scientific term for the following:- $\frac{1}{2} * 4$ i) A male hormone- <b>testosterone</b> ii) Female gamete in human beings- <b>egg/ovum</b> iii)Cell produced after fertilization of gametes- <b>zygote</b> iv)Part of the female reproductive system where fertilization takes place – <b>fallopian tube/oviduct</b>	2
5	Amit wishes to buy a shirt.The shopkeeper shows him one shirt each of Cotton and Rayon.He decides to buy the cotton shirt.What are the two properties of cotton shirt that he prefers over Rayon? <b>Soft, passage of air, absorbs sweat any two 1+1</b>	2
6	Explain what happens to the meteors when they enter the Earth’s atmosphere. <b>Due to friction between air and meteor heat is generated 1</b> <b>It increases and catches fire which die off when they fall 1</b>	2
7	Discuss the various shapes of cells found in human body and give one example of each. (any 3 shapes). $\frac{1}{2} * 6$ <b>Oval/spherical- /RBC/egg</b> <b>Elongated and branched - nerve cell</b> <b>Amoeboid- WBC</b> <b>Spindle – muscle cell</b>	3
8	Explain the process of Budding in Hydra with the help of a well labeled diagram. <b>Bud formed on body of adult hydra <math>\frac{1}{2}</math> ,bud grows <math>\frac{1}{2}</math> ,mouth and tentacles develop <math>\frac{1}{2}</math></b> <b>,</b> <b>New individual detaches from parent and leads an independent life <math>\frac{1}{2}</math></b> <b>1 mk for diagram</b>	3
9	How does the development of adult frog takes place from the eggs? <b>External fertlism occurs by fusion of eggs with sperms in water 1</b> <b>Jelly keeps them together <math>\frac{1}{2}</math> ,tadpole comes out /larval stage <math>\frac{1}{2}</math></b> <b>Metamorphosis of larva into adult frog 1</b>	3
10	List any three changes that take place in males during adolescence.	3

	<b>Pubic and chest armpit hair/ voice cracks 1(any 3)</b> <b>Beard &amp; moustache 1</b> <b>Development of testis/enlargement ,produce sperms 1</b>	
11	a) What are sex chromosomes? <b>23<sup>rd</sup> pair of chrms responsible for deciding the sex of human 1</b> b) How is sex determined in human beings? Draw a flow chart to explain it. <b>X Y chr ½</b> <b>Gametes X type eggs , X and Y type sperm ½</b> <b>Male XY ½ female XX ½</b>	3(1+2)
12	Distinguish between Thermoplastics and Thermosetting Plastics on the basis of a) Effect of heat <b>Thermoplastic melt quickly whereas thermosetting plastic melt at high temp. 1</b> b) Nature <b>Thermoplastic are soft whereas thermosetting plastic are hard. 1</b> c) Toughness <b>Thermoplastic are less tough whereas thermosetting plastic are tougher with high tensile strength 1</b>	3
13	a)Write the principle involved in the process shown in the given figure. <b>Separating substances by difference in their boiling point 1</b> b)Label the parts A,B,C,D ½ each A= petroleum GAS , B=Naptha/Petrol ,C= Diesel/Lubricating Oil , D= Crude Oil/Petroleum	3(1+2)
14	“Ancient monuments get damaged due to acid rain every year”. With regard to the given statement answer the following- a)What is acid rain? <b>When the pollutants in the air combine with the rain water and fall down on the earth in the form of an acid 1</b> b)Name any two pollutants that lead to acid rain. <b>Carbondi oxide ,nitrogen di oxide, sulphur dioxide 1</b> c)Mention any other damage caused by acid rain apart from the one given above. <b>Destroying small plants and animals 1</b>	3
15	a)What are fossil fuels? Write the two conditions needed for formation of fossil fuels. <b>Made by dead organic matter deep inside the earth, 1</b> <b>high temperature and high pressure 0.5+0.5</b> b)Name the following- ½ each i- Variety of Coal that has highest Carbon content.- <b>anthracite/Coke</b> ii-Petroleum product used for leveling the roads.- <b>Bitumen</b>	3
16	With the help of a diagram, explain the causes of friction. <b>Diag showing interlocking 1</b> <b>Rough surface due to irregularities 1</b> <b>Hills and valleys lock and resist movement 1</b>	3
17	Give reason for the following- a)The handles of a motorcycle are covered with towel material or a rubber sheet with spikes- <b>better grip as more friction 1</b> b)The kabaddi players rub their hands with sand before playing <b>-to increase friction so that the players can have good grip on the rival player 1</b> c)The shape of the aircrafts is streamlined – <b>streamlined bodies reduces fluid/air friction 1</b>	3
18	An object makes 20 vibrations in 4 seconds. Calculate the following for the vibration of the object: i) Frequency	3

	<p><b>F=20/4 = 5 Hz 1</b>  ii) Time period  <b>T=1/F= 1/5 =0.2 sec 1</b>  iii) Will the sound produced by this object be audible to human ears? Give a reason for your answer.  <b>Not audible ½ , audible range is 20Hz- 20 KHz ½</b></p>																	
19	<p>a)What is noise pollution?  <b>Define -1,</b>  b)Name any two sources of noise pollution.  <b>any two sources(loud speakers, festivals, elections, aeroplanes) 1 +1 ,</b>  c) Suggest two methods of controlling noise pollution.  <b>Plant more trees, make laws, placing factories far from cities</b>  <b>(any two methods ) 1,1</b></p>	5																
20	<p>a)Differentiate between a plant cell and an animal cell on the basis of  i-Presence of cell wall- <b>plant cell has cell wall 1</b>  ii-Size of Vacuole –<b>prominent vacuole in plant cell ,small insignificant in animal cell 1</b>  iii-Presence of Plastids-<b>plastids found in plant cell absent in animal cell 1</b>  b)Label the parts A,B,C,D in the given diagram.   <b>A=nucl memb,B=nucleoplasm,C=chromatin, D=nuclear pore ½ each</b></p>	5(3+2)																
21	<p>Observe the diagram of female reproductive system and answer the following-  i-Label parts A,B,C,D   <b>A=ovary,B=oviduct/fallopian tube,C=Uterus,D=vagina ½ * 4= 2</b>  ii-Write the function of parts C,D  <b>C= helps in attachment of embryo and giving nourishment for growth 1</b>  <b>D= entry of sperms into the reproductive tract 1</b>  iii-What is the role of the hormone secreted by part A.  <b>Stimulates release of ova / sec sexual characters 1</b></p>	5(2+2+1)																
22	<p>a)Complete the table- ½ each * 6= 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sl. No.</th> <th style="width: 30%;">Gland</th> <th style="width: 30%;">Hormone</th> <th style="width: 30%;">Effect</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><b>Thyroid</b></td> <td>Thyroxine</td> <td><b>Metabolism</b></td> </tr> <tr> <td>2</td> <td>Adrenal</td> <td><b>Arenaline</b></td> <td><b>Prepares body for emergency situations</b></td> </tr> <tr> <td>3</td> <td><b>Pancreas</b></td> <td>Insulin</td> <td><b>Lowers blood glucose level</b></td> </tr> </tbody> </table> <p>b)Give reasons for the following:-  i- Females can reproduce only during some years of their life span-<b>reproductive life is limited between Menarche and Menopause.</b>  ii- Pituitary Gland is regarded as the master gland of the body- <b>controls other glands, secretes growth hormone 1</b></p>	Sl. No.	Gland	Hormone	Effect	1	<b>Thyroid</b>	Thyroxine	<b>Metabolism</b>	2	Adrenal	<b>Arenaline</b>	<b>Prepares body for emergency situations</b>	3	<b>Pancreas</b>	Insulin	<b>Lowers blood glucose level</b>	5(3+2)
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23	<p>Justify the following statements- <b>1 mark each</b>  i-Plastic containers are best suited for storing dry fruits-<b>dry ,safe to store food</b>  ii-Wastes like fruit and vegetable peelings should be thrown into green bins.-can be <b>used as a fertiliser</b>  iii-Nylon clothes dry faster – <b>absorb less water</b>  iv-Petroleum is regarded as ‘Black Gold’-<b>sold at very high price</b>  v-We should not sleep near the fire place in a closed room during winters. –carbon <b>monoxide poisoning</b></p>	5																
24	<p>Observe the given diagram of human ear .Label the parts A,B,C,D,E and write the role played by each part in the process of hearing. ½ * 10= 5</p>	5																

	<p><b>A- Ear pinna ,catches sound waves</b>  <b>B- Auditory canal ,passes sound waves to middle ear</b>  <b>C- Ear drum/ tympanum,vibrates to produce sound</b>  <b>D- Cochlea , receives amplified vibrations</b>  <b>E- Auditory nerve,transfers impulse to brain</b></p>	
	<b>Section B</b>	
25	Name the commonly used stain/dye used for staining to observe the cells under a microscope. <b>Methylene blue/ safrannin 1</b>	1
26	Justify the statement “we should take iodized salt in our diet”. <b>Iodine imp for proper functioning of thyroid gland / reduced level may lead to goitre 1</b>	1
27	Identify the part shown in the picture. <b>Adam’s apple/Larynx/Voice box 1</b>	1
28	Write any two ways by which AIDS virus HIV is transmitted from an infected person to a healthy person. <b>Mother to child, breast feeding, infected needles and syringes ,blood transfusion any two 1+1</b>	2
29	Why are CNG cars are becoming very popular over the diesel cars? <b>ecofriendly</b>	1
30	We often read in newspapers about the oil spills occurring in various oceans. Write any one harm caused to environment by such oil spills. <b>Aquatic life is affected badly</b>	1
31	A box is lying on the table. When a force of 25 N is applied on it ,the box just starts to slide on the table. What is the magnitude and direction of the static friction Magnitude = force appl 25N $\frac{1}{2}$ ,direction= opposite to force applied $\frac{1}{2}$	1
32	Two wave forms are shown here .In which case will the sound be louder? <b>1<sup>st</sup> case as More amplitude more loudness <math>\frac{1}{2}</math> <math>\frac{1}{2}</math></b>	1
33	The same sound produced by a source is heard through water and air by two people Ram and Shyam. Who will hear this sound first and why? <b>Ram, speed of sound is more in water. <math>\frac{1}{2}</math> , <math>\frac{1}{2}</math></b>	1
34	Water is filled in two glasses tumblers up to different levels. Each of them is struck with a metal spoon. In which case the sound will be shriller and why? <b>2nd diag as the pitch is more if water level is high 1</b> <b>More pitch shriller is the sound 1</b>	2
35	Anu read a poster depicting the “Use of 4-Rs of conservation”. Suggest two ways by which she can use them in her daily life. <b>Explain any two 1 +1</b>	2
36	Kamla is a maid who works in Ravi’s house. She is planning to marry her daughter who is just 15 years of age. Ravi warns her that what is doing is legally and ethically wrong as her daughter is not physically and mentally mature for getting married .What is the legal age of marriage for boys and girls in our country? Which value of Ravi is highlighted by his act. <b>18 for girls,21 for boys <math>\frac{1}{2}</math> , <math>\frac{1}{2}</math></b> <b>Aware of legal matters, concern towards health of young girl, any one 1</b>	2