

ITL Public School
Summative Assessment 1(2015-16)

Date:24/9/15

Class: VIII

Answer Key SCIENCE (Set -A)

Time:3h

M. M: 90

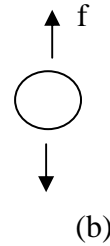
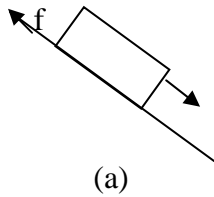
General Instructions:

1. *There are 36 questions in this paper.*
 2. *Marks are indicated against each question.*
 3. *Q 24 to Q 36 are based on practical skills.*
 4. *All questions are compulsory.*
-

- | | | | | | | | | |
|--|--|-------------|---------------|--|---|---------------|-------------------------|---|
| 1 | A female frog produces hundreds of egg but a hen lays single egg at a time. Give reason
To ensure fusion of few of gametes as they undergo external fertilization unlike internal fertilization in hen. | 1 | | | | | | |
| 2 | What is the audible range for human ears?
20Hz to 20000Hz | 1 | | | | | | |
| 3 | Give one point of difference between a zygote and a foetus.
<table border="0" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">Zygote</td><td style="width: 50%; text-align: center;">Foetus</td></tr><tr><td>1 Fertilized egg</td><td>Developed zygote in which body parts can be Identified</td></tr><tr><td>2 unicellular</td><td>multicellular (any one)</td></tr></table> | Zygote | Foetus | 1 Fertilized egg | Developed zygote in which body parts can be Identified | 2 unicellular | multicellular (any one) | 1 |
| Zygote | Foetus | | | | | | | |
| 1 Fertilized egg | Developed zygote in which body parts can be Identified | | | | | | | |
| 2 unicellular | multicellular (any one) | | | | | | | |
| 4 | Identify the agent exerting force and the object on which it acts.State the effect of force also.
A footballer taking a penalty kick
Agent :Footballer and force acts on football.
Effect : ball comes into motion | 2 | | | | | | |
| 5 | Explain the cause of friction with the help of a diagram.
Interlocking of the irregularities on the two surfaces in contact.(1mark)
Diagram (1mark) | 2 | | | | | | |
| 6 | Differentiate between exhaustible and inexhaustible resources and give one example for each.
<table border="0" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">exhaustible</td><td style="width: 50%; text-align: center;">inexhaustible</td></tr><tr><td>available in limited amount and will get exhausted due to human activities
eg. Coal/petroleum/natural gas</td><td>available in limited amount and will not exhausted due to human activities
eg wind/sun/water</td></tr></table> | exhaustible | inexhaustible | available in limited amount and will get exhausted due to human activities
eg. Coal/petroleum/natural gas | available in limited amount and will not exhausted due to human activities
eg wind/sun/water | 2 | | |
| exhaustible | inexhaustible | | | | | | | |
| available in limited amount and will get exhausted due to human activities
eg. Coal/petroleum/natural gas | available in limited amount and will not exhausted due to human activities
eg wind/sun/water | | | | | | | |
| 7 | Name and define the force depicted in the following:
(i) Iron fillings attracted towards a magnet.
Magnetic force:Force between a magnet and another magnet or magnetic substance
(ii) A plastic scale after being rubbed on dry hair, attracts bits of paper.
Electrostatic force:Force between a charged particle and another charged or uncharged | 3 | | | | | | |

particle.

- 8 (i) The direction of applied force is shown in the following situations. What will be the direction of friction in each case? 3



(1/2+1/2)

(ii) Suggest two ways to reduce the frictional force in the above cases.

1. making the surface smooth by lubricating or sprinkling fine powder.
2. decreasing speed/streamlining(1+1)

- 9 Explain with the help of three examples each that friction is a necessary evil. 3

Friend

1. we can walk because of friction.
2. we can hold things because of friction.
3. vehicles move on road because of friction.

Foe

1. wear and tear of sole of shoes
2. wear and tear of machines
3. wear and tear of tyres.

- 10 (i) Draw a well labeled diagram of amoeba. Diagram (2marks) 3

(ii) What advantage does amoeba derive by changing its shape?

Locomotion and trapping food (1/2 each)

- 11 (i) Multicellular organisms are complex and evolved while unicellular organisms are simple in organization. Give reasons 2+1

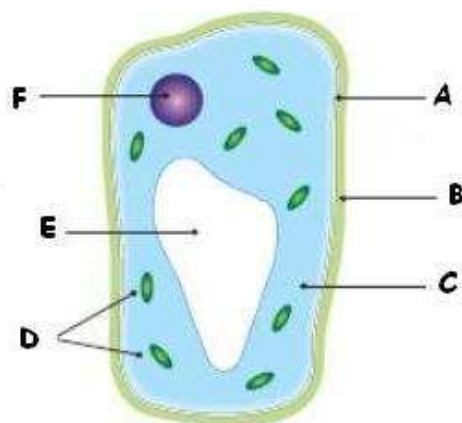
Because multicellular are made of many cells performing different function(1/2 +1/2) whereas unicellular are single celled organism with one cell performing all functions(1/2+1/2).

(ii) Classify the following as unicellular and multicellular organisms/structure:

Hydra (M), Yeast (U) , A hen's egg(U), Paramecium (U) (1/2 mark each)

12 Label the following diagram of a plant cell.

3



A-cell membrane B-cell wall C-cytoplasm D-cell organelles E-vacuole F-nucleus
(1/2 mark each)

13 How does Hydra reproduce? Explain with the help of diagrams.

3

Explanation of diagrams of budding in hydra.

14 Explain the three basic requirements for keeping good health during adolescence.

3

1. Balanced diet-that contains proteins ,carbohydrates,minerals,vitamins in appropriate quantities.
2. hygiene and cleanliness-taking bath daily to avoid bacterial infections
3. Physical excersises-they should take walk and play outdoor games
4. Awareness about infective diseases-e.g. AIDS
5. Drug Awareness. (Any three briefly explained)

15 Explain how sound is produced in humans. Also state how does the quality of sound change?

3

1. Sound is produced by larynx or voice box.
2. Two vocal chords are stretched at rhe mouth of wind pipe leaving a narrow slit.
3. When lungs force air through the slit,cords vibrate producing sound (2 marks)

Quality of sound changes if the vocal chords are thin and tight or thick and loose. (1 mark)

16 What is meant by destructive distillation of coal? What are the products obtained from it? Which of these products is used in extraction of metals?

3

Heating coal strongly in the absence of air. (1mark)

Coke , coal tar, ammoniacal liquor , coal gas (1.5 marks)

Coke (0.5 mark)

17 (i)Differentiate between thermoplastics and thermosetting plastics. Give one example for each.

3

Thermoplastics:They melt on heating and can be remoulded into different shapes
eg.polyethene (1 mark)

Thermosetting :They don't melt on heating and cant be remoulded.eg.bakelite(1 mark)

(ii)Give two reasons why plastic containers are used to store various kinds of materials including many chemicals.

Durable,light weight,non reactive,non corrosive (1 mark)

- 18 Explain with the help of examples, three ways to minimize the use of plastics in our daily lives. 3

1. Using iron steel or wood furniture instead of plastic
2. Metal Containers for food items instead of plastics
3. jute /cloth/paper bags instead of polyethene bags (1 mark each)

- 19 (i) Explain the formation of petroleum 5

(ii) What is petroleum refining?

(iii) Complete the table

<i>S.No</i>	<i>Constituent of petroleum</i>	<i>Any one of its use</i>
1	Diesel	Heavy vehicle fuel
2.	Paraffin wax	Ointments, candles etc.
3	Bitumen	Surfacing roads
4	Kerosene	Aviation fuel

- 20 (i)Draw a well labeled diagram of the male reproductive system. 5

Diagram (2marks)

(ii)Name the male sex hormone. Where is it produced from and what is its function?

Testosterone (1 mark) testis(1mark) development of secondary sexual characters(1mark)

- 21 (i) Explain the chromosomal sex determination in humans with the help of a flow chart. 5

Explanation with diagram (3marks)

(ii) Complete the table

<i>S.No</i>	<i>Endocrine Glands</i>	<i>Hormone secreted</i>	<i>Main function</i>
1	Pituitary	Growth hormone	Controls growth
2	Thyroid	Thyroxine	Controls metabolism

- 22 (i)List any two sources of noise pollution. 5

Horns of vehicles/explosions/home appliances/factories etc. (any two ½ mark each)

(ii)Mention any two health related problems that are caused by noise pollution.

Lack of sleep/anxiety/hypertension(any two ½ mark each)

(iii)Suggest two measures to limit noise pollution.

Growing trees on road sides/Noisy operations to be done away from cities/limiting use of horns (any two ½ mark each)

(iv)An object oscillates 270 times in 3seconds.what will be its time period and frequency?

$$T = \frac{3}{270} = .001s ; f = \frac{270}{3} = 90\text{Hz}$$

- 23 (i) What is the greenhouse effect? Name any two gases responsible for it. 5

The heat energy of the solar radiations is trapped by the earth's atmosphere.Methane ,

carbondioxide.

(ii) Define eutrophication.

The loss in the dissolved oxygen in water bodies due to decomposition of algae.

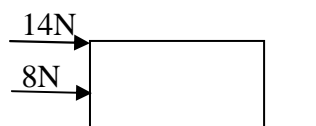
(iii) Enlist any two ways to control water pollution.

Disposing untreated industrial waste into rivers should be banned.

Animal activities such as bathing and excreting in rivers should not be allowed.

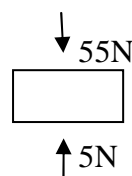
24 (i) What is the resultant force in the following cases

5



(a)

$$F = 14 + 8 = 22\text{N}$$



(b)

$$F = 55 - 5 = 50\text{N} \quad (1 \text{ mark each})$$

(ii) Why skiers use long flat skis to slide over snow?

$P = F/A$; A increases and P decreases. (1 mark)

(iii) A force of 150N acts on an area of 5m^2 . Calculate the pressure exerted by the force.

$$P = F/A ; P = 150/5 \quad (1 \text{ mark}) = 30\text{Pa} \quad (1/2 + 1/2)$$

25 A student observed a slide under microscope and identifies it to be nerve cell. What identifying feature would have been helpful for him? What is the function of nerve cells in human body?

1

Elongated and branched. (1/2) transmission of signals throughout the body (1/2)

26 Why is it advised not to wear synthetic clothes while working in kitchen or in laboratory?

1

They catch fire easily and stick to the body due to melting (1 mark)

27 Give any two uses of plastics in healthcare industry.

1

Packaging of tablets, bottles of medicines, surgery gloves etc (1 mark)

28 What is the Ganga Action Plan and when was it launched?

1

Launched in 1985 to conserve river ganga from water pollution.

29 What is biological magnification?

1

The gradual increase in concentration of pesticides in the body of organisms through the food chain.

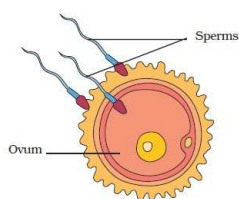
30 Identify the part which vibrates to produce sound in the following instruments

1

(i) Guitar – stretched strings (ii) Trumpet – air column

31 Identify the process shown in the given figure. What is the result of the process?

1



fertilization (1/2) zygote is formed (1/2)

- 32 What is the importance of presence of iodine in water for metamorphosis in frogs? 1
Iodine presence is required for production of growth hormone thyroxine in frogs else tadpoles won't grow into adults. (1 mark)
- 33 What are CFC's? How are they harmful to the environment? 1
Chloro fluoro carbon. They deplete the ozone layer. ($\frac{1}{2} + \frac{1}{2}$)
- 34 List any two factors responsible for pollution of a river and two ways to make water safe for drinking. 2
Disposing remains of dead bodies
Disposing effigies of god/goddesses in rivers ($\frac{1}{2} + \frac{1}{2}$)
Boiling Chlorination ($\frac{1}{2} + \frac{1}{2}$)
- 35 Classify the following substances as biodegradable and non-biodegradable. 2
Pen refill (NB) , Aluminium foil(B) , tissue paper(B) , glass bottle(B). (1/2 each)
- 36 Give reason for the following: 2
(i) Sliding friction is less than static friction.
Irregularities don't get time to interlock while sliding.
(ii) Bodies of bullet trains are streamlined.
To reduce fluid friction (1+1)