KOTHARI INTERNATIONAL SCHOOL, NOIDA
ANNUAL EXAMINATION, SESSION: 2025-26
GRADE: 8 SUBJECT: SCIENCE
SET A SECTION B (SUBJECTIVE)

DAY & DATE: FRIDAY - MARCH 13, 2026 **MAXIMUM MARKS: 60**
TIME ALLOTTED: 2HOURS 30 MINUTES
NAME: _____ **ROLL NO: _____**

GENERAL INSTRUCTIONS:

1. ***This question paper consists of 5 pages and contains 19 questions.***
2. ***Read the question paper carefully***
3. ***All questions are compulsory to attempt.***
4. ***No question to be attempted on the question paper.***

Q1. A scientist is studying ancient bones and wants to find out how old they are using a method based on a form of carbon. **(2)**
In the same study:

- A student finds a substance made of carbon, hydrogen, and oxygen.
- The student also finds another substance that contains about 98% carbon and is commonly used in industries.

a) Name the substance that contains about 98% carbon.
b) State one industrial use of the substance that contains 98% carbon.

Q2. A student observes the following situations: **(2)**

Situation A:
A candle burning in open air

Situation B: A burning candle covered with a glass jar

Situation C: A piece of wood kept in air but not ignited

a) Draw a **labelled Fire Triangle** to represent the conditions required for combustion.
b) From the triangle, identify **which condition is missing in Situations B and C** and justify your answer.

Q3. A gland P is located just below the stomach in the human body. The gland P secretes a hormone X. The deficiency of hormone X in the body causes a disease Y in which the blood sugar level of a person rises too much. The person having high blood sugar is called Q. **(2)**

What is P, X, Y and Q?

Q4. An elephant weighs **20,000 N**. If the area of the sole of one of its feet is **0.1 m²**, Calculate the total pressure it exerts on the ground when standing on all **four feet**. **(2)**

Q5. A student tries to light a bulb using distilled water in an electric circuit, but the bulb does not glow. Explain why this happens. **(2)**

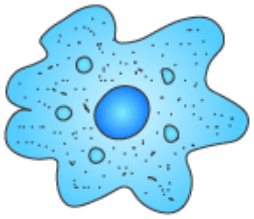
Q6. Chinmay studied about rectilinear propagation of light. **(2)**
He observed a straw and came straight to have better understanding of it.

Name and define the process seen in the picture.

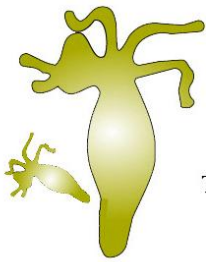
Q7. Some words (underlined) in the following sentences are jumbled up. Write them in their correct form. **(0.5x6 =3)**

a) The force that prevents an object from starting to move even when a small push is applied is **TASITC TIRFCNOI**.
b) Streamlined shapes help aircraft overcome **RAI SERSTANECI** during flight.
c) The friction produced by fluids such as air and water is called **DLIUF TIRFCNOI**.
d) The process of separating crude oil into useful components is known as **NOITCARF LANOLITSID**.
e) **ENATHTEPALN** is a petroleum product used in making plastics and detergents.
f) The most refined and cleanest fossil fuel is **LANUTAR SAG**.

Q8. **Observe the diagrams of Organism A and Organism B below and answer the following questions:** **(3)**



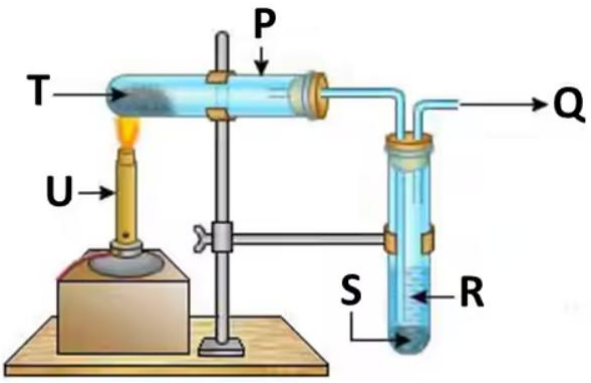
Organism A



Organism B

a) Identify the mode of asexual reproduction shown in **Organism A** and **Organism B**.
b) How does the division of the **nucleus** in Organism A differ from the development of the **bud** in Organism B?

Q9. **a)** Observe the figure of destructive distillation of coal. What are the three fractions P, R and S? **(1.5)**



b) A father and his son were pushing their car because it stopped in the middle of the road. They noticed that: **(1.5)**

- At first, they had to push very hard to make the car start moving.
- After the car started moving, they did not need to push as hard to keep it moving.

Why did this happen? Explain.

Q10. **Give reason:** **(3)**

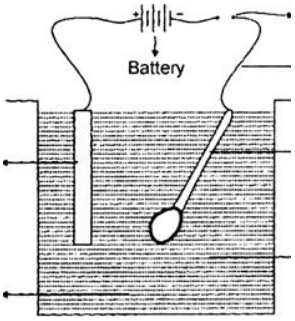
A car fitted with tires designed for dry roads skids when driven on muddy or wet surfaces, as shown in the image, explain why the type of surface and tire tread pattern affects the force of friction between the tire and road, and how this influences the vehicle's ability to stop without skidding.

Q11. Identify the sex of a newborn child if the egg is fertilized by a sperm carrying a Y-chromosome. Explain with the help of sex determination diagram, which parent is biologically responsible for determining the sex of the child. **(3)**

Q12. In an electroplating experiment using copper sulphate solution, an iron spoon and a copper plate are connected to a battery. The circuit is allowed to run for about 15 minutes. **(3)**

Answer the following questions:

a) To which terminal of the battery should the iron spoon be connected?



b) What changes are observed on:
i) the iron spoon
ii) the copper plate?

c) Explain why the bulb does not glow when the copper sulphate solution is replaced with honey or vegetable oil.

Give reasons for all your answers.

Q13. a) What is cloning? Briefly explain. **(1.5)**
b) How are babies produced through the IVF technique, and what are such babies called? **(1.5)**

Q14. At a campsite, Ravi and his friends lit two types of fuel for cooking — **dry wood** and **damp green wood**. They noticed that:

- The dry wood produced a strong flame quickly with little smoke.
- The damp green wood produced a lot of smoke and a weak flame that struggled to stay lit.

a) Which type of combustion — **complete/incomplete** — is taking place with dry wood and damp wood? Give a reason to support your answer. **(2)**
b) Explain why the damp wood produces a lot of smoke and a weak flame. **(1)**
c) If a matchstick were used to light the dry wood, explain why its match head must have a low ignition temperature. **Give a reason.** **(1)**

Q15. Give a suitable word for each of the following statements: **(4)**

a) The hormone secreted by the thyroid gland that helps regulate metabolism and growth.
b) The gland that becomes notably more active during adolescence and triggers growth spurts.
c) In females, the hormone primarily responsible for the development of breasts and the regulation of the reproductive cycle.
d) The condition caused by the deficiency of iodine that leads to swelling of the thyroid gland.

Q16. Observe the picture on the right showing a ship sailing on water.

a) Calculate the net force acting on the ship. **(1)**

b) Explain why the front (bow) of the ship is shaped the way it is as shown in the picture. **(1)**

c) Explain why the ship experiences resistance (friction) from the water, and name the type of friction involved. **(2)**

Q17. Read the following and answer the questions that follow:
Rahul and Meera are classmates studying in Grade 8. Rahul often complains that he cannot see the blackboard clearly from the back of the classroom, but he can read his notebook clearly without any trouble. Meera, on the other hand, can see the blackboard clearly but she finds it difficult to read the small text in her textbook when it is close to her eyes. Their teacher notices this and sends them to an eye specialist.
The specialist examines their eyes and explains that each of them has a *common defect of vision* caused by the way light focuses in the eye.

Answer the following questions based on this case:

a) Identify the defect of vision Rahul and Meera is likely suffering from. **(2)**
b) For each defect (Rahul's and Meera's), suggest a corrective lens that can help them see clearly and briefly explain how it works to correct the vision problem with the help of a diagram. **(3)**

Q18. a) Is vinegar a good or bad electrical conductor? Explain with an activity. **(2)**

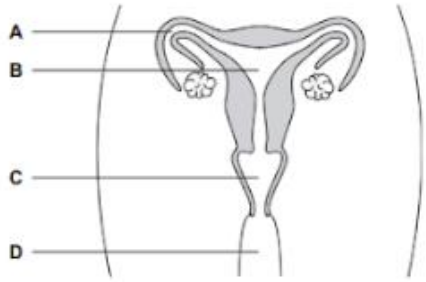
b) What makes LEDs better than other kinds of bulbs? **(1)**

c) When an electric current passes through a sliced potato for an extended period: **(2)**

i) What colour appears on the potato?

ii) Around which electrode does this coloured area develop?

Q19. a) The diagram of a reproductive system is shown below. Analyse the structures and explain how parts A, B, C and D work together during fertilisation. **(2)**



b) Label the given parts of the male reproductive system and mention the function of any one labelled part. **(3)**