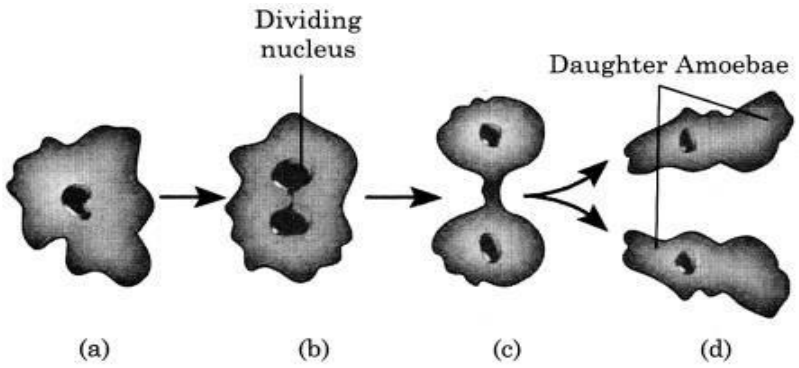
INDIAN SCHOOL AL WADI AL KABIR

FINAL EXAMINATION (2024-25)

CLASS: VIII **Sub: SCIENCE** **MAX.MARKS: 80**

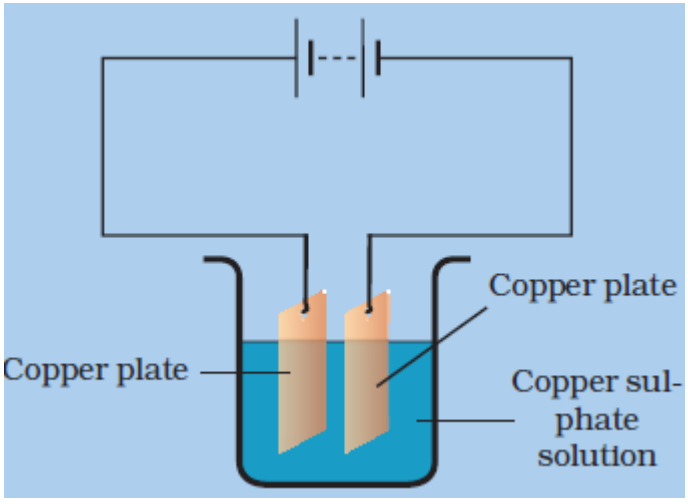
DATE: 13/03/25 **Set -II- MARKING SCHEME** **TIME: 3 HOURS**

	SECTION A	
Q NO	**VALUE POINTS**	**MARKS**
1	b) The grains were not dried properly before storage.	1
2	a) LPG > CNG > Diesel > Coal	1
3	d) The angle of incidence is equal to the angle of reflection.	1
4	a) Wheat – Rabi, Maize – Kharif	1
5	b) Apply grease to the moving parts.	1
6	c) Retina with a high concentration of rods.	1
7	a) Malaria	1
8	c) Rolling friction	1
9	d) Zygote	1
10	c) High blood sugar levels.	1
11	a) One in a month	1
12	b) The mother passed one X chromosome, and the father passed one Y chromosome.	1
13	c) The amplitude of the sound waves is different	1
14	d) Salt solution	1
15	b) It requires less current to glow.	1
16	d) Flute	1

17	iii) A is true but R is false.	1
18	i) Both A and R are true and R is the correct explanation of the assertion.	1
19	iii) A is true but R is false.	1
20	iv) A is false but R is true	1
	SECTION B	
21	a) Illuminated objects are those that do not produce their own light but can be seen because **they reflect light from other sources**. Examples include the moon and other objects that shine in the light of the sun or other light sources. Luminous objects, on the other hand, are those that **emit their own light**. Examples include the Sun, a candle flame, and electric lamps. b) The number of images formed by two plane mirrors inclined at an angle θ is given by the formula: $$n = \frac{360^\circ}{\theta} - 1$$ For $\theta = 45^\circ$: $$n = \frac{360^\circ}{45^\circ} - 1 = 8 - 1 = 7$$ So, **7 images** will be formed by the mirrors.	½ +½=1 ½ +½=1(Formula +answer)
22	 *Binary fission in Amoeba*	2 (1-Diagram+ 1-Label)

23	The characters that help in distinguishing the males from the females are called secondary sexual characters. Secondary Sexual Characters in Boys: Facial hair/ deep voice/and hair on the chest. Secondary Sexual Characters in Girls: high-pitched voice / growth of body hair.	½ X 4 = 2
24	a. The time period (T) is the time taken for one complete oscillation. Given: • Number of oscillations = 30 • Total time = 60 s $$T = \frac{\text{Total time}}{\text{Number of oscillations}} = \frac{60\,\text{s}}{30} = 2\,\text{s}$$ b. Frequency (f) is the number of oscillations per second. It is the reciprocal of the time period. $$f = \frac{1}{T} = \frac{1}{2\,\text{s}} = 0.5\,\text{Hz}$$ So, the **frequency** is **0.5 Hz**.	2 (Formula-½+ Ans-½+½+ Unit-½)
25	a) The electrolysis of water is a process in which an electric current is passed through water causing the water to decompose into its constituent gases, hydrogen and oxygen. b) At the positive terminal (anode), oxygen (O_2) gas is formed. At the negative terminal (cathode), hydrogen (H_2) gas is formed.	1 ½+½=1
26	a) The liquid may not be a good conductor of electricity. /The circuit may not be properly connected. /The bulb may be faulty. /The liquid may lack enough ions to conduct electricity. / The battery may not have enough charge to power the circuit. b) When a cut potato is part of an electric circuit for a considerable time, a greenish-blue spot forms around the positive electrode due to the chemical effects of electric current	1 ½+½=1

	SECTION C	
27	a) Weeds are unwanted plants that grow along with the main crop. Weed removal is necessary because weeds compete with crops for water, nutrients, and other fundamental requirements, causing crop development to be limited and yields to be low. b) The ploughed field may have big pieces of soil called crumbs. The process of breaking the big lumps of soil with a plank (leveller) is called levelling. The field is levelled for sowing as well as for irrigation purposes.	1+1=2 ½+½=1
28	a) The medicines kill or stop the growth of the disease-causing microorganisms. Such medicines are called antibiotics. Streptomycin, tetracycline and erythromycin. b) When a small amount of pre-made curd is added to warm milk, then the lactobacillus bacterium present in curd multiplies in milk and converts it into curd. During this process, the lactobacillus bacterium acts on the lactose sugar present in milk and converts it into lactic acid. This lactic acid then converts milk into curd	1+1=2 ½+½=1
29	a) Kerosene oil - Vapourises, Coal - Does not vapourise b) A heap of green leaves contains a lot of moisture in it, hence its ignition temperature is high. Therefore, it does not catch fire easily. But dry leaves have no moisture content in them, hence its ignition temperature is low. Therefore, it catches fire easily. c) In Case A, the flame continues to burn because the glass chimney allows sufficient oxygen to reach the flame, enabling it to continue burning. In Case B, when the glass plate is placed over the chimney, it restricts the supply of oxygen, causing the flame to go out because oxygen is essential for combustion. Without oxygen, the flame cannot sustain itself.	(Any one)1 1 ½+½=1
30	a) The frictional force exerted by fluids is called drag. Factors affecting friction are speed, shape, size of the object and nature of the fluid. b) The soles of shoes and tyres of vehicles are grooved to provide better friction. The grooves enhance grip and prevents slipping.	1+1=2 1
31	a) Frogs produce a large number of gametes because there are always chances of getting eaten by fish present in the water or getting washed out by wind currents and rainfall. In order to increase the chances of fertilisation, frogs lay a greater number of eggs.	1

	b) i) A – Head, B- Tail ii) Tail helps sperm need to be motile to reach a non-motile egg in the ovary of a female for fertilisation.	½+½=1 1
32	a) Ball bearings are used between the hubs and axles of a bicycle or ceiling fan to reduce friction. They provide smooth movement by allowing the parts to roll over each other, reducing the wear and tear of the components, and making the movement easier and more efficient. b) One disadvantage of friction is that it causes wear and tear on surfaces, leading to the damage or reduction in lifespan of objects, such as machinery or tyres/ Friction produces heat c) The 50 kg block would require a larger force to move it from the rest position.The force of friction arises because of the interlocking of irregularities on the two surfaces in contact. When a heavy object is placed on the floor, the interlocking of irregularities on the surfaces of the box and floor becomes strong. This is because the two surfaces in contact are pressed harder. Hence, more force is required to overcome the interlocking.	1 1(Any 1 point) 1
33	a) i) Copper strip - anode ii) Iron ring- Cathode b) To prevent rusting of iron/ corrosion. c) 	½+½=1 1 1(Diagram)
	SECTION D	
34	a) This sows the seeds uniformly at equal distance and depth. It ensures that seeds get covered by the soil after sowing. This protects seeds from	1

	being eaten by birds. Sowing by using a seed drill saves time and labour. b) c) It is a boon in regions where availability of water is poor. / Sandy soil/ uneven land. d) A- Harvesting B- Ploughing/ tilling/ weeding/ Addition of manure	½X 4 =2 1 ½+½=1
35	a) i) vaccines are preparations made from weakened or killed pathogens (or parts of them) that are introduced into the body to stimulate the immune system to produce immunity against specific diseases. ii) Small pox/ chicken pox/ polio (Any 1) b) In Pot A (plant waste), the material will decompose due to the action of microorganisms, turning it into humus. In Pot B (polythene, glass, and plastic items), the materials will remain mostly unchanged, as these are non-biodegradable and do not decompose easily. c)The process used to kill harmful microbes in milk is called pasteurization. It involves heating the milk to a temperature of about 70°C for a short duration of time (15-30 seconds) and then rapidly	1+1=2 ½+½=1 1+1=2

S. No.	Fertiliser	Manure
1.	Fertiliser is a man-made inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung and plant residues.
2.	Fertiliser is prepared in factories.	Manure can be prepared in the fields.
3.	Fertiliser does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
4.	Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

<table>
<tr><td></td><td>cooling it. This process kills harmful microbes and makes the milk safe for consumption while retaining its nutritional value.</td><td></td></tr>
<tr><td>36</td><td>a) Sound is produced by the larynx located at the upper end of the windpipe. Two vocal cords are stretched across the larynx leaving a narrow slit between them for the passage of air. When the lungs force air through the slit, the vocal cords vibrate, producing sound.

b) [Hint: Audible sound- The sound that can be heard. The range of audible sound is from 20 Hz to 20,000 Hz.

Inaudible sound - The sound that cannot be heard. Human beings cannot hear sounds having frequencies less than 20 Hz and more than 20,000 Hz.]

c) The presence of excessive noise in the surroundings may cause many health-related problems. Lack of sleep, hypertension (high blood pressure), anxiety, and many more health disorders may be caused by noise pollution. A person who is exposed to a loud sound continuously may get temporary or even permanent impairment of hearing.</td><td>2

1+1=2

½+½ =1</td></tr>
<tr><td></td><td>SECTION E</td><td></td></tr>
<tr><td>37</td><td>i) When LPG burns rapidly near a gas stove, it produces heat and light.

ii) The type of combustion that occurs when fireworks burst into flames is called explosive combustion, where a large amount of energy is released suddenly in the form of heat, light, and sound.

<table><tr><th>Feature</th><th>Rapid Combustion</th><th>Spontaneous Combustion</th></tr><tr><td>Definition</td><td>Combustion that occurs at a fast rate with the release of heat and light.</td><td>Combustion that happens without any external heat source, often due to internal reactions.</td></tr><tr><td>Example</td><td>Burning of LPG in a gas stove or fireworks bursting.</td><td>Phosphorus catching fire on its own, or coal piles spontaneously combusting due to heat buildup.</td></tr><tr><td>External Heat Source</td><td>Requires an external heat source to start the combustion.</td><td>No external heat source is required. Combustion occurs on its own.</td></tr></table></td><td>1

1

1+1= 2</td></tr>
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38	i) If dust particles get in the eyes, one should not rub them but wash the eyes with clean water, and if there's no improvement, visit a doctor. ii) Too little or too much light can harm the eyes, causing eyestrain or retinal damage. It is advised not to look directly at the Sun or powerful lights to prevent eye damage. iii) Cataract is a condition where the lens of the eye becomes opaque, leading to severe vision loss. It can be treated by removing the cloudy lens and replacing it with a new artificial one.	1 1 1+1= 2
39	i) No, girls typically experience a faster growth rate in the early years compared to boys. ii) By the age of 18, both boys and girls generally reach their maximum height. iii) The growth hormone is responsible for normal growth, and it is secreted by the pituitary gland	1 1 1+1=2
	TOTAL MARKS	80