



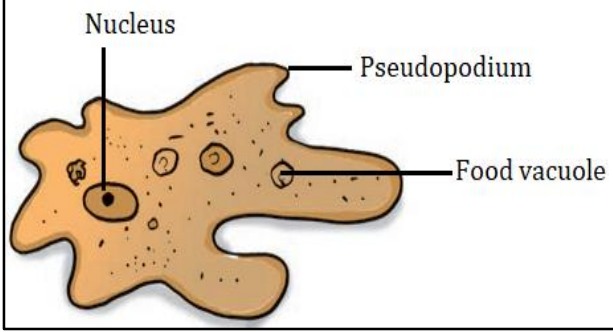
INDIAN SCHOOL AL WADI AL KABIR



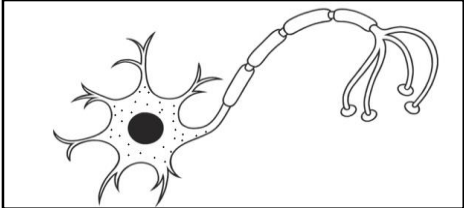
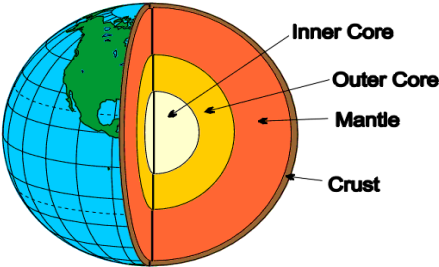
CLASS: VIII	DEPARTMENT: SCIENCE	DATE: 25/9/2022
MARKS :80	MIDTERM ANSWER KEY	DURATION: 2 ½ HOURS

MCQ(1X16)		
1	b) plough	
2	b) amber	
3	c) It absorbs all the heat.	
4.	a) 10 N to the left	
5.	a) it brings the cart to rest	
6.	a) an apple falling from a tree	
7	b) gene	
8	d) Reusing newspaper in compost adds nutrient to the soil and contributes to afforestation.	
9	b) Petroleum Conservation Research Association	
10.	a) high temperature and high pressure	
11.	a) Stone	
12.	d) Ice skating	
13.	b) the surface is pressed harder by block Y because of greater mass, so greater is the friction	
14.	d) 40 N/m ²	
15	a) like charges on the balloons	
16	d) Aluminum repel each other foils	
Case study A		
17.	i) a) 1, 2, and 3 ii) Oil is lighter than water and heavier than gas. iii) The process of separating crude oil into usable components.	1x3
Case study B		
18.	i) number of vacuoles is more in animal cell ii) Robert Hook ,while examining the cork under the self-designed microscope. iii) Stains are those agents that colour the cell structures like cell wall, nucleus and cell membrane and make it visible. methylene blue iv) ANY TWO DIFFERENCE	1 1 1 2
Case study C		
19.	i) Electric pole	1

	<p>ii) The process of transfer of charges from a charged object to the earth is called earthing. It is provided in buildings to protect from electrical shocks due to any leakage of electrical current</p> <p>iii) Umbrellas mostly contain metal parts which are good conductors of electricity. The electric charge from thunderstorm can move into the umbrella and cause harm to the person carrying it.</p> <p>iv) A Lightning conductor is a device used to protect buildings from the damaging effects of lightning. A lightning conductor is a metallic rod, taller than the building, installed in the walls of the building during its construction. The lightning conductor is made of a metallic rod so it provides an easy route for the transfer of electric charges to the ground. The electric discharge occurs through the conductor without harming the building.</p>	<p>1</p> <p>1</p> <p>2</p>
SECTION C Source based		
20.	<p>i) The roots of the trees hold the top layer of the soil firmly.</p> <p>ii) decrease in the number of wildlife</p> <p>iii) Droughts, desertification</p>	<p>1</p> <p>1</p> <p>1</p>
SECTION D 3X6		
21.	<p>i) sickle- Harvesting</p> <p>ii) Sprinkler System: This system is more useful on uneven land where sufficient water is not available.</p> <p>iii) Seed drill-This tool sows the seeds uniformly at proper distances and depths ,ensures that seeds get covered by soil ,prevents time and labour(any one)</p>	<p>1</p> <p>1</p> <p>1</p>
22.	<p>i) If freshly harvested grains are stored without drying they may spoil or get attacked by microorganisms, losing their germination capacity. Hence, before storing them the grains are properly dried in the sun to reduce moisture in them. This prevents the attack by insects, pests, bacteria, and fungi.</p> <p>ii) The method of growing crops alternatively on the same land is known as crop rotation. E.g.-Legumes (pea, beans, grams, and pulses) are grown in the first season and wheat should be grown next to it. It is helpful because- the land gets utilised in a better way, soil fertility is maintained, and the farmer has a variety of crops for selling.</p>	<p>1 ½</p> <p>1 ½</p>
23.	<p>i) Pressure applied by the woman = 300N/m^2</p> <p>Area, on which force is applied = 0.02m^2</p> <p>Pressure = Force/Area</p> <p>Therefore, Force = Pressure x Area</p> <p>$F = 300 \times 0.02 = 6\text{N}$</p> <p>So, the force applied is 6N.</p> <p>ii) Pressure exerted by water at the bottom of the container depends upon the height of its column.</p>	<p>2</p> <p>1</p>
24.	i) diagram	

	 <p>Nucleus</p> <p>Pseudopodium</p> <p>Food vacuole</p>	1
	<p>ii) Amoeba are usually capable of producing pseudopodia, which are used as locomotor and food-acquiring organelles.</p> <p>iii) Similarity-: both of them have indefinite shape or both can change shape .</p>	1 1
25.	<p>i) Coal when processed in the industry gives coke, coal tar and coal gas. Coke is used in the manufacture of steel and the extraction of many metals. Coal tar is used as starting manufacturing various substances such as synthetic dyes, drugs, explosives, perfumes, paints etc. Coal gas is used as fuel.(any two)</p> <p>ii) It is considered to be a better fuel because it burns with a smokeless flame and causes no air pollution. It also does not produce any poisonous gases on burning.</p>	2 1
26.	<p>i) Drag is the friction which is caused by a fluid. The fluid friction or drag can be reduced are minimised by giving special shape called streamlined shape to the objects which Move through fluids like air or water .</p> <p>ii) Friction comes into play when irregularities present in the surfaces of two objects in contact get interlocked with each other. In sliding, the time given for interlocking is very small. Hence, interlocking is not strong. Therefore, less force is required to overcome this interlocking. Because of this reason, sliding friction is less than static friction</p>	1 ½ 1 ½
SECTION E (5X6)		
27	<p>a) i)The bristles of a toothbrush are made up of very soft nylon fibres to protect our gums from any harm so they are long, elastic, light weight, lustrous and easy to use while handle is made up of strong, hard and durable plastic to give firm grip to toothbrush.</p> <p>ii) umbrellas are made of synthetic fibres because synthetic fibres do not absorb water and dry fast</p> <p>iii) Plastic bottles are commonly used to store chemicals in a chemical laboratory because plastics are non-reactive.</p> <p>b) i) Thermoplastic</p> <p>ii) thermosetting plastic (any one difference)</p>	1 1 1 2
28.	<p>a) An electrostatic force is responsible for the attraction between the ball and the wall. When we rub the balloon with a synthetic cloth, it gets charged and when the balloon is taken near the wall, it will get attracted to the uncharged wall because of the electrostatic force.</p>	1 ½

	<p>b) When you press the sucker, most of the air between its cup and the surface escapes out. The sucker sticks to the surface because the pressure of atmosphere acts on it. To pull the sucker off the surface, the applied force should be large enough to overcome the atmospheric pressure.</p> <p>c) The truck has wider tyres with respect to the property that "more the area ,less the pressure." As the area is more the pressure will decrease , so there will be less need for applying more pressure to handle the vehicle. The vehicle will move smoothly.</p> <p>d) A force may make an object move from rest, may change the speed of an object if it is moving, may change the direction of motion of an object, may bring about a change in the shape of an object, may cause some or all of these effects.(any two)</p>	<p>1 ½</p> <p>1</p> <p>1</p>
29	<p>a) Petroleum was formed from organisms living in the sea. As these organisms died, their bodies settled at the bottom of the sea and got covered with layers of sand and clay. Over millions of years, the absence of air, high temperature and high pressure transformed the dead organisms into petroleum and natural gas.</p> <p>b) Exhaustible resources- These resources are present in limited quantities in nature, and they can be exhausted by human activities. Examples: Forests, coal, petroleum. minerals, wildlife, natural gas, etc. Inexhaustible resources-These resources are present in unlimited quantity in nature and are not likely to be exhausted by human activities. Examples: Sunlight, air, etc.</p> <p>c) Drive at a constant and moderate speed as far as possible, switch off the engine at traffic lights or at a place where you have to wait, ensure correct tyre pressure, Ensure regular maintenance of the vehicle(any two)</p>	<p>2</p> <p>2</p> <p>1</p>
30	<p>a) grass lawn, as it is rougher in comparison to marble floor. A rough surface will have more friction because on the rough surface there will be more irregularities. They will cause interlocking which in turn creates more frictional force. For a smooth surface, irregularities and interlocking is less and hence has very less friction.</p> <p>b) It minimizes the area of contact and reduces friction. It also converts sliding friction to rolling friction. It is used between hubs and axles of ceiling fans and bicycles.</p> <p>c) Friction is a necessary evil because it has both harmful and beneficial effects. Examples: (i) We can walk easily because the ground offers friction. With less friction, the walking situation becomes almost impossible. Therefore, friction is necessary even for a simple task like walking. (ii) It is a difficult task to move on a wet muddy track, or wet marble floor. This is because these surfaces offer very small friction to the surface of a person's feet. (iii) Soles of shoes have grooves on them. Grooved soles give more friction to the ground which gives better grip when we walk. Shoes with worn out soles can be slippery.</p>	<p>2</p> <p>1</p> <p>2</p>

	<p>(iv) Tyres of vehicles have treads for better grip over the road. It provides friction to the surface of the road. When treads are worn out, the tyres need to be replaced with a new one.(any two points with example)</p>	
<p>31</p>	<p>a) Nerve cell receives and transfer messages, thereby helping to control and coordinate the working of different parts of the body.</p>  <p>b) The size of the cell in an organism is related to the function it performs. For example, the nerve cells in both, the elephant and the rat are long and branched. They perform the same function, that of transferring messages.</p> <p>c) : Prokaryotic - Cells without well organised nucleus i.e. lacking nuclear membrane are called prokaryotes. <u>e.g.</u> Bacteria and Bluegreen algae.</p> <p>Eukaryotes -The cells with well organised nucleus with nuclear membrane are eukaryotic cells. <u>e.g.</u> Onion cells, Cheek cells etc.</p>	<p>2</p> <p>1</p> <p>2</p>
<p>32.</p>	 <p>a)</p> <p>b) b) An earthquake is a sudden shaking or trembling of the earth lasting for a very short time. It is caused by a disturbance deep inside the earth's crust. The outermost layer of the earth is not in one piece. It is fragmented. Each fragment is called a plate These plates are in continual motion. When they brush past one another, or a plate goes under another due to collision, they cause disturbance in the earth's crust. It is this disturbance that shows up as an earthquake on the surface of the earth.</p> <p>c) The tremors produce waves on the surface of the earth. These are called seismic waves. These waves are recorded by an instrument called the seismograph.</p>	<p>2</p> <p>2</p> <p>1</p>