


# THE SIPRO PRE-PLE SET VI INTEGRATED SCIENCE MARKING GUIDE-2024

NO	CLASS LEVEL	CORRECT RESPONSE	WRONG RESPONSE	MARKING POINT	TECHNICAL ADVICE
1	P.5	Diphtheria	Covid 19/Pneumonia. Whooping cough/ Tuberculosis	Childhood immunisable disease that causes fever, sore throat and swelling around the neck.	Discuss about childhood immunisable diseases, their vaccines and the mode of administering their vaccines.
2	P.5	For crushing/ grinding food in the gizzard.	For cutting/For tearing food	Use of small stones in poultry feeds.	Discuss about the types of feeds given to different types of chicken.
3	P.6	Choking	Constipation/ Indigestion	Problem that results from eating while talking	Help pupils to understand the dangers of eating with open mouth, eating while standing and good eating habits.
4	P.5	Alcohol sticks on the walls of the thermometer/ Alcohol wets the glass./Alcohol cannot be seen easily./Alcohol does not expand faster and evenly./ Has a low boiling point.	Alcohol is expensive.	Reason why alcohol is not used in a clinical thermometer.	Help pupils to know the parts of a clinical thermometer and their uses.
5	P.7	They increase on the flexibility of joints/ Make the joints flexible/ Keep muscles in proper functioning.	They prevent diseases/ Strengthens bones	Importance of having physical exercises to the human skeleton.	In a summarized way, revise about joints, bones and ways of maintaining proper working of muscular and skeletal system.
6	P.5	It has an ovipositor for laying eggs in the hive.	A queen bee has a sting for protecting the hive.	Adaptations of a queen bee to its function.	Discuss more about the types of bees and their duties in the hive.
7	P.4	Oxygen	Carbon dioxide	Component of air that increases in the atmosphere during photosynthesis.	Discuss about the components of air and their percentages./Help pupils to know the processes supported by different components of air.
8	P.7	Opaque objects	Translucent objects/ Transparent objects	Correct type of an object with correct spelling./ Objects that obstruct soundwaves.	Revise about the translucent, transparent and opaque objects with relevant examples and illustrations.
9	P.6	To protect them and their un born babies from getting tetanus during delivery/ To strengthen their immune system against tetanus.	To prevent them from diseases./To immunize them.	Why pregnant mothers are encouraged to receive tetanus vaccine.	In a summary way, revise about immunization table showing the disease, vaccine, age, site and mode of administering the vaccine.
10	P.6	A centipede feeds on small soil organisms while a millipede feeds on vegetation./ A centipede is a carnivorous animal while a millipede is a herbivorous animal. - A centipede feeds on flesh while a millipede feeds on vegetables.	A centipede feeds on flesh unlike a millipede/ A millipede feeds on flesh while a centipede feeds on vegetables.	Difference between centipede and a millipede in terms of feeding/ A complete comparison.	Discuss about the classification of animals in a summary way using a flow chart./Emphasize the correct way of approaching comparison questions.
11	P.7	Fractional distillation	Using a separating funnel./ Evaporation method.	Method used to obtain petroleum products from petroleum.	Revise about different methods of separating mixtures practically.

12	P.6	To lengthen the next lactation period./To enable an in calf to prepare and produce enough colostrum./To increase milk production during next lactation.	To prevent in calf from drying up./To prevent the cow from dying.	Why drying off is done shortly before calving.	Help pupils to know the following terms: ➤ In calf, ➤ Drying off ➤ Steaming up ➤ Lactation period.
13	P.4	An Irish potato stores its food in swollen underground stem while root tubers store their food in swollen underground roots.	Irish potatoes are not root tubers./Root tubers store their foods in swollen underground roots unlike Irish potatoes.	Why Irish potatoes are not grouped under root tubers.	-Revise about tuber crops.
14	P.4	- It has spaced particles. - It has big spaces between the molecules or particles/ It has large inter- particle spaces	It has fine particles/It is sticky when wet and hard when dry.	Characteristics that makes sand soil to lose water easily.	Discuss more about the types of soil and their uses
15	P.6	They clean the environment by feeding on carrions/ leftover flesh	-They are eaten as food. -They provide manure. -They feed on rotten matter.	-How maraboustorks and vultures are important in the environment. -Not all rotting matter has flesh.	Revise about the groups of birds with relevant examples./Help pupils to understand their adaptations to survive in the environment.
16	P.7	Boot X	Boot Y	Correct response.	Help pupils to know how spikes on sports boots increase friction./Discuss about the ways of increasing and reducing friction.
17	P.7	It has spikes on its sole for increasing friction	It is good/It looks nice/It is cheap	Correct reason	More guidelines to the learners about friction. Help them to know different ways how friction is useful in our daily life.
18	P.6	To produce more breast milk/To increase the amount of breast milk produced for the baby.	To prevent dehydration/ To replace the lost body fluids.	Importance of feeding lactating mothers on plenty of fluids.	Discuss about breast feeding and bottle feeding with their advantages and disadvantages.
19	P.5	Both feed saprophytically/Both absorb food nutrients from decaying matter.	Both reproduce by means of spores.	Similarity between a mushroom and a mould in terms of feeding.	Discuss about the structures of a mushroom and uses of its parts.
20	P.6	It flattens to increase the space for the lungs to expand. /It flattens to increase the volume in the chest cavity for the lungs to expand easily.	It flattens/It moves downwards	Importance of a diaphragm in the process of breathing in.	Help pupils to know the behaviour of the lungs, ribcage and the diaphragm during breathing in and out.
21	P.4	Presence of root hairs./They have root hairs.	They absorb water and mineral salts from the soil	Adaptation of roots to absorbing water from the soil.	Revise more about the root systems with illustrations i.e. tap root system and fibrous root system.
22	P.6	Blood clots in milk/ Pus in milk	Using a strip cup.	Signs of mastitis.	Help pupils to know more about a strip cup. Discuss about an adaptation for a strip cup to detect mastitis.
23	P.6	The voices sweeten and attractive./Widening of hips/The face becomes smooth and good looking./Pimples appear on the face/ Growth	They experience menstruation periods. Sweat glands become more active./Ovulation starts.	Secondary characteristics to adolescent girls only.	Revise about the body changes in adolescents.

		of breasts.	Development of the uterus.		
24	P.7	Lightning conductor/arrestor	lightning	Correct name	Describe how a lightning arrestor works.
25	P.5	When an egg has double yolks. When an egg shell has cracks/ broken egg shell./-When an egg has meat spots in it.	- When an egg is boiled. - When an egg is big.	Reason why some poultry eggs may fail to hatch.	Revise about an incubator. Advantages of using artificial incubation over natural.
26	P.3/P.4	Air exerts pressure	Air occupies space Air can be compressed	Correct property.	Discuss and experiment the properties of air.
27	P.4	Simple leaf	Compound leaf/ Compound palmate	Type of leaf of a cassava plant.	Help pupils to know the two main types of leaves and their types e.g. types of simple leaves and types of compound leaves
28	P.4	Network leaf venation	Parallel leaf venation	Correct type of venation	Discuss about the types of leaf venation with diagrams.
29	P.4	Improve on crop yields/ Promotes proper use of land./ Helps a farmer to keep the right plant numbers in the garden.	Controls soil erosion./ Improves on soil fertility. Controls pests in the garden	Advantages of carrying out gap filling.	Discuss about why farmers carry out gap filling, thinning, pruning, manuring and weeding.
30	P.5	Salt is soluble	Salt is a solute./ Salt melts in water.	Reason why salt disappears when mixed in water.	Discuss about soluble and insoluble substances.
31	P.4	In areas with sloping land, water flows very fast. /due to fast flowing water that causes gulley erosion	Mulching cannot control soil erosion in sloping areas. /Due to gravitational force	Why gulley erosion is common in areas with sloping land	Discuss about the types of soil erosion.
32	P.6	Castration/ Feeding cows separately from bulls.	Culling/Cross breeding /Deworming/Spraying and dipping animals.	Correct practice	Discuss about the advantages and disadvantages of castration. Examples of farming practices that cause harm to domestic animals.
33	P.7	Solar electricity discourages deforestation for wood fuel while cooking with firewood encourages deforestation for firewood./Solar electricity doesn't pollute the air while cooking with firewood causes pollution to the air.	Solar electricity is cheaper than using firewood./ Solar electricity uses the sun unlike firewood.	Advantages of using solar electricity for cooking over firewood	Help pupils to understand how to handle questions that require comparative answers.
34	P.7	To cater for contraction of electric wires during cold days/ To leave room for contraction of electric wires during cold days.	To cater for expansion of wires during hot days.	Correct reason	Help pupils to know why electric wires are fixed loosely or made longer than the distance between poles./ Help them to know why gaps are left in railway lines.
35	P.5	Water is a poor conductor of heat	Water conducts heat.	Correct name of an experiment.	Carry out an experiment for the pupils to prove that water is a poor conductor of heat./Carry out other experiment like that of oxygen supporting burning.
36	P.5	For ice cubes to sink in water.	To prevent ice from melting./To prevent ice from floating	A reason for ice cubes wrapped in a wire gauze	Help pupils to avoid giving negative answers. Train pupils on how to give specific answers but not a teacher thinking for them a correct response.

37	P.6	Memory loss/Loss of body balance/ Insanity/ Madness/ Forgetfulness/ Insomnia/ Lack of sleep.	Self-neglect/Poverty Death/Peptic ulcers /Vomiting	Sign of brain damage in an alcoholic.	Help pupils to know how alcoholism affects individuals, families and communities. Discuss about effects of alcoholism on different body organs.
38	P.7	Lions would starve and die/ Lions would reduce in number.	Lions would increase in number/Lions would eat grass/Lions would look for other goats.	Effect of not having a goat in a food chain to a lion.	Discuss more about the food chain./Help pupils to understand well the feeding relationship among organisms in the environment.
39	P.6	Prevents overcrowding of plants/Crops/It enables plants to colonize new areas./It reduces competition for plant nutrients, water and sunlight/It prevents extinction of plant species/ Keeps crop species in existence.	It helps plants to make their own food./Seed dispersal helps to absorb water from the soil. It helps in cooling of plants	Ways how seeds benefit from seed dispersal	Discuss more about the types of seed dispersal and the agents of seed dispersal. Adaptations of seeds to their modes of dispersal.
40	P4	They are sharp and pointed for entering the human flesh once bitten. / Are sharp and pointed for easy biting.	They have canine teeth/ They are used for tearing flesh	How teeth of the dog are adapted to spreading rabies	Discuss more about common vectors and their adaptations that enable them to spread disease causing germs.
<b>SECTION B</b>					
41	P.5	a) Tepid sponging.  b) Jane's New body temperature in °C is = 37°C+3°C = 40°C  $^{\circ}\text{F} = \left( \frac{^{\circ}\text{C} \times 9}{5} \right) + 32$ $^{\circ}\text{F} = \left( \frac{40 \times 9}{5} \right) + 32$ $^{\circ}\text{F} = (8 \times 9) + 32$ $^{\circ}\text{F} = 72 + 32$ <b><u>°F=104</u></b> ∴ Jane's new temperature in Fahrenheit scale is 104°F	Tebid sponging  Jane's new body temperature = 37°C+3°C = 40°C. ∴ Jane's new temperature is <u>40°C</u>	First aid for fever/Correct spelling.  Jane's new body temperature in Fahrenheit scale. / Correct steps in the calculation about temperature scales.	-Help candidates to master the spelling of tepid sponging. Discuss more about calculations concerning temperature scales.  -Help candidates to understand the formulae used when changing from one temperature scale to another.
42	P.4	a) Soap kills germs on our bodies.  b) Sponge/ clean water/ razor blade/ comb/ nail cutter/ pumice stone/ toothbrush/ tooth paste/ flossings. Etc.  c) Health parade/Health assembly.	Soap removes germs from the body.  Basin/ bucket/ stick/ broom/ mop/ soap  Health survey	Use of soap in promoting personal hygiene.  Items used to clean human body.  An assembly held at school to ensure proper personal hygiene.	-Help candidates to know the roles played by different items in promoting personal hygiene. -Guide candidates to know about the activities carried out during health parade and health survey.
43	P.7	a) Levers.  b) It is used for cutting./ Has sharp cutting edges.	Second class of levers.  Panga	Correct group of machine.  Correct use of a panga as a wedge.	Help pupils to understand more groups of machines and classes

		c) 	Any part apart from the one shown as a correct position. -Reject one with arrow head.	Proper positioning of the load. /Arrow without a head.	of levers with their examples./Discuss more about the different ways of increasing the efficiency of different machines.
		d) Sharpening it.	Painting it.	Correct way of increasing the efficiency of a panga.	
44	P.6	a) Blood is dark red in colour./ Blood is deoxygenated./Blood is under low pressure.	Blood is red in colour./ Blood is oxygenated.	Characteristics of blood carried by the vena cava.	-Help pupils to know the different types of blood carried by different blood vessels of the heart. -Discuss more about the habits that affect different body systems. -Help pupils on how to state the similarity between the valves of the heart and the kink of a clinical thermometer.
		b) Smoking.	Alcoholism.	Correct habit that causes narrowing of blood vessels.	
		c) Both prevent back flow of the substance.	Both prevent back flow of blood.	Correct similarity between a kink of a clinical thermometer and valves in the heart.	
45	P.5	a) For babies to get other food values that are not in breast milk./For babies to get used to other foodstuffs besides breast milk./ To supplement breast milk/ For the baby to get iron.	To get food./To grow fat.	Correct reason.	-Help pupils to know the reasons why babies are considered as vulnerable. -Help pupils to know the recommended age for weaning in babies. -Let pupils know the proper reasons for giving weaning babies soft foods.
		b) At 6 months.	At 6weeks/ at 6years.	Recommended age for weaning in babies	
		c) Babies have no teeth for chewing hard food./For easy digestion./ To prevent choking	To make them happy. To prevent choking.	Reasons for giving weaning babies soft foodstuffs.	
46	P.6	a) Ventilated improved pit latrine.	Toilet./ Pit latrine.	Correct name of the latrine.	-Discuss more about types of latrines. -Ways of maintaining a VIP latrine. -Help pupils to know the proper reason why smoking and a lid in a VIP latrine are not necessary. -Draw a well labeled structure of a VIP latrine for pupils to master the parts. -Visit a nearby place with types of latrines with pupils for them to know more.
		b) (i) It traps flies from getting out to spread germs/ traps flies until death. (ii) Lets out bad smell from the pit.	Let's out bad smell out of the pit./It traps flies until death.	Correct uses of parts S and T.	
		c) It has a vent pipe that directs flies to the screen where flies are trapped until death./The latrine doesn't produce much smell./ To allow entry of fresh air that drives out the bad smell.	A lid prevents flies from coming out of the pit./ A lid prevents bad smell.	Correct reason why a lid is unnecessary in the latrine drawn./Correct spellings.	
47	P.7	a)(i) Incisors/ incisor teeth. (ii) Canines/ canine teeth.	Canines/ canine teeth. Incisors/ incisor teeth.	Correct name and spellings of types of teeth.	Help pupils to know the adaptations of different types of teeth to enable them perform their function./Help candidates to know the dangers of eating plenty of sweets to the teeth.
		b) They have cusps and ridges for grinding food easily./ Have a rough surface / Enamel for easy crushing of food.	They are sharp and pointed for grinding food.	Correct adaptation of molars and premolars with the matching function.	
		c) Causes tooth decay.	Damages the tooth.	Effect of eating too much sweets to the teeth.	
48	P.3	a)(i) Breathing in/ inhalation. (ii) Breathing out/ exhalation.	Breathing out/ exhalation. Breathing in/ inhalation.	Correct breathing process. Correct spellings.	-Discuss with pupils about the percentage of components of air in the atmosphere. -Use a model of lungs to show pupils what happens to the diaphragm and lungs
		b) Oxygen is used by the body during respiration.	The percentage in Q is less than that in P.	Correct reason to support correct answer for Q	

		c) Lungs	Respiration/Kidney/ Air sacs.	Correct matching of the answers with the question.	during breathing in and out.
49	P.6	a)(i) Reduces the weight of the unborn baby. (ii) Causes premature births. (iii) Leads to miscarriages	Causes death of a baby. Causes blindness in unborn babies. Causes lung cancer	How smoking affects the growth of the unborn baby.	-Help pupils to understand the effects of smoking to pregnant mothers. -Let pupils understand how smoking affects the growth of the unborn baby./ -Differentiate life skills and lifestyles for learners to understand them well. -Help candidates to know the diseases caused by smoking and those worsened by smoking.
		b) Lung cancer / coronary thrombosis/ emphysema	Asthma / Tuberculosis bronchitis	Diseases that affect the pregnant mother due to smoking.	
		c) Critical thinking/ self-awareness/ decision making.	Joining church choirs in her free time./Reading the bible in her free time./Avoiding bad peer groups.	Proper life skills that enables a pregnant mother to safeguard against smoking.	
50	P.4	a) Cross pollination	Self-pollination.	Correct type of pollination.	Discuss more about pollinations/ Agents of pollination /Help candidates to understand how maize plants avoid self- pollination. / Draw a diagram of maize plant and show the pupils a stamen part and a pistil./Use a real plant to show the learners a pistil and stamen.
		b) Insects/ bee/ moth	Wind/ flowing water.	Correct agent of pollination.	
		c) They have a pistil and a stamen on separate plants/ their male and female parts appear on separate pawpaw plants.	They are two in number. Reflexology	A way pawpaw plants prevent self pollination.	
		d) Maize plants	Pawpaw plants	Correct name of a plant.	
51	P.6	a) Bow harp/ guitar/ violin/ tube fiddle/ zither/ viola	Shakers/ trumpet/ drum/ xylophone/ thumb piano/ a trumpet/ a whistle/ a bottle/ a horn.	Examples of local musical instruments whose strings can be plucked to produce sound.	Discuss more about the different groups of musical instruments. Help pupils to understand the methods of storing sound and reproducing sound. Discuss more about the following musical terms: -Volume      -frequency   -Pitch - amplitude   -Echo      -vibration
		b) Frequency of sound/ Size of vibrating objects/ Length of strings/ Tension of the strings/ Thickness or thinness of string/ Nature of vibrating object (Surface of the vibrating object.)	Temperature/ wind/ heat/amplitude.	Factors that determine the pitch of sound in string musical instruments.	
52	P.5	a)(i) This is the force that pulls objects to the centre of the earth/ to the ground.	Is the force that makes objects weigh less on the moon.	Correct definition for gravity and mass.	Summarize and revise the topic of measurements.
		(ii) Mass is the amount of matter a body contains.	Mass is the heaviness or lightness of an object.	Correct definition	
		b) Kilogrammes/ kilograms.	Newtons.	Standard units for measuring mass.	
		c) Due to too much upthrust force in water and gravity in air.	Due to upthrust force in water.	Comparison response	
53	P.7	a) Wood seasoning.	Storing timber	Correct method of preserving timber.	Revise on the methods of harvesting trees and methods of preserving wood.
		b)(i) Protecting timber from direct sunshine and rain. (ii) To prevent flowing water from entering the timber./To prevent dampness of timber.	Protecting timber from thieves. To keep them safe.	Correct reason for putting a roof of the shelter./Correct reason for reusing the shade above the ground.	
		c) To prevent it from pest attack./To protect them from wood lice.	To make them hard./To prevent them from rusting.	Reason for oiling timber.	
54	P.3/P.4	a)(i) Condensation (ii) Transpiration	Evaporation/Photosynthesis	Process in water cycle that takes place in clouds and plants.	Describe how rain is formed in the environment. /Help pupils to know the roles played by the sun, plants, lakes and clouds in rain cycle.
		b) Practising afforestation. Conserving swamps./ Controlled bush burning.	Through deforestation. Through swamp drainage.	Activities done to increase rainfall in an area.	
55	P.5	i) Changes that occur in living cells. ii) Changes that occur on their own. iii) Changes that do not form new substance. iv) Changes that are irreversible.	-Changes that are irreversible. -Changes that do not form a new substance. Changes that occur on their own. Changes that occur in living cells.	-Types of changes and characteristics. -Correct matching of changes and their characteristics.	-Practically discuss about physical and chemical changes and well discussed examples for all types of changes.

