THE SIPRO PRE-PLE SET 1 INTEGRATED SCIENCE MARKING GUIDE -2023

NO	CLASS LEVEL	CORRECT ANSWER	WRONG ANSWER	MARKING POINT	TECHNICAL ADVICE/ COMMENT
1.	P.5	Nitrogen fixing bacteria	Spherical bacteria	Types of bacteria that fix Nitrogen in the soil	Go through useful and harmful bacteria.
2.	P.6	To let in inhaled air/To create space for inhaled air.	To get space	Creation of space	Revise the behaviour of respiratory organs practically.
3.	P.7	Plane mirrors form virtual images while pin hole cameras form real images.Plane mirrors form erect images while pinhole cameras form inverted images.	Plane mirrors' images are real while pinhole cameras' images are not real	Images in cameras and plane mirrors	Discuss the characteristics of images formed in plane mirrors and cameras.
4.	P.6	Conifers /coniferous plants	Spore produce /cones	Structure of a conifer and use of a cone	Break down the groups of non-flowering plants with their examples.
5.	P.6	Stores seeds	Stores food	Seed storage	
6.	P.6	By feeding its calf on colostrum /milk produced by its mammary glands /By allowing the calf to suckle.	By licking it with its tongue	Importance of colostrum	Go through uses of colostrum to a calf.
7.	P.5	Both store their food in swollen roots /Both are root tubers.	Both reproduce by means of seeds	Food storage in root tubers	Discuss propagation of root tubers and stem tubers.
8.	P.5	Centrifuging method /Floating the wax method / pressing the honey method.	Use of fire cutting method	Methods of extracting honey from a comb.	Use clear demonstrations to show methods of honey extraction.
9.	P.6	Amphibia /Amphibian class/Amphibians	Fish/Reptiles	Characteristics of amphibians	Discuss the five classes of vertebrates with examples and characteristics.
10.	P.3	Soil erosion leads to soil exhaustion (infertility)	Washes away top soil	Dangers of erosion	Go through control of poultry vices.
11.	P.4	Tapeworm	Hook worm	Worms got through eating under cooked meat	Take learners through the structures of intestinal worms.
12.	P.4	Ringworm /Eczema /Athlete's foot/swimmer's itch	Candidiasis	Fungal skin diseases	Review through dangers and uses of fungi to humans.

13.	P.5	Poultry provide eggs which are a source of proteins when eaten /provide meat eaten to get proteins.	Poultry kill germs	Importance of poultry in nutrition	Discuss the poultry diseases, parasites and vice.
14.	P.2	It reduces hiding places for dangerous insects and animals /Removes habitats for mosquitoes.	It removes tall grass which can injure people	Role of slashing tall grass	Go through the relevance of each activity involved in promoting sanitation.
15.	P.7	Glowworms/Fireflies	The sun/moon	Living things which emit light.	Discuss uses of light.
16.	P.5	M =48g volume = 12cc D = Mass /D = 48g/ D =4g/cc Volume 12cc	D=MXV = 48 x 12cc =576kg/cc	Calculating Density when mass and volume are given	Engage the learners into calculations on mass, density and volume.
17.	P.1	Soap contains chemicals that damage the tongue/ chemicals in soap damage the tongue.	Soap kills germs	Dangers of soap in the mouth	Demonstrate how a dental floss is used and promotion of oral hygiene.
18.	P.4	By hardening off /gradual removal of shed	By watering crops	Removal of shed	Practically discuss the crop growing practices.
19.	P.7	Biogas conserves wood fuel /Bio gas prevents air pollution.	Biogas is quick	Advantages of using biogas	Energy resources /resources that conserve the environment.
20.	P.5	Perches keep birds busy/Enable birds to make exercises hence controlling boredom.	Perches improve feeding in birds	Importance of hanging perches	Show the difference between hanging perches and greens and their relevance.
21.	P.7	Static electricity	current electricity	Types of electricity	Go through each type of electricity.
22.	P.4	The pupil reduces in size.	The pupil enlarges	Behaviour of the pupil in much light	Discuss the process of accommodation in the eyes.
23.	P.5	Container **Q**	Container **P**	Factors that allow heat loss	Provide a variety of experiments on heat gain and heat loss.
24.	P.5	Container Q has a wider surface area for heat loss.	It has less hot water	allow heat loss	Train children on proper question interpretation.
25.	P.7	Because of refraction	Wrong perception	Effects of refraction	Review parts and law of reflection.
26.	P.4	Chalk dust is a non-magnetic material (substace) /chalk dust can't be attracted by a magnet.	Chalk dust is not a magnet	Definitions of non-magnetic materials	Discuss the examples of magnetic objects.
27.	P.4	Wind helps in pollination /seed dispersal	Wind helps in winnowing	Uses of wind to plants	Go through ways living things benefit from non-living things.

28.	P.6	Crustaceans	molluscs	Groups of arthropods	Discuss the classification table of invertebrates
29.	P.4	Flowers are usually hermaphrodites / Their stamens usually grow taller than the styles (pistils) /some flowers remain closed until pollination has occurred /pistils and stamens usually mature at the same time.	They have bright petals	Features that enable flowers pollinate themselves.	Use real flowers Explain concepts on pollination types.
30.	P.6	Some plant seedlings are sold to get money/Some plants are sources of food / Some plants are sources of timber / Some plants are sources of raw-materials for making paper /clothes /boats	Plants help rain formation	Economic importance of plants	Discuss the dangers of some plants
31.	P.5	Queen bee	Drone bee / worker bee	Types of bees	Use well and clearly drawn structures of bees.
32.	P.6	Eating while talking leads to choking	It causes cough	Bad eating habits	Discuss bad eating habits and their dangers
33.	P.6	Sorting	Soaking	Steps in cleaning clothes.	Go through the importance of each activity
34.	P.6	Regular dipping kills ticks /Acaricides kill ticks on cattle.	Kills germs	Importance of dipping cattle.	Go through cattle pests and control.
35.	P.4	Mercury measures the highest temperatures while alcohol measures the lowest temperatures in a place.	Mercury is sensitive to heat while alcohol is not	How a six's thermometer operates.	Discuss the structure of each weather instrument and how it operates
36.	P.6	A spur is used for protection	For scratching soil	Use of a spur to fowls.	Discuss parts of a chicken.
37.	P.6	fruits	Nectar	Classification of birds	Go through the various groups of birds.
38.	P.6	Perching birds	Fruit eaters		
39.	P.2/P.4	Heat dehydrates fish /drains moisture which would enable bacteria to multiply / It creates a tough layer of smoke which does not allow bacteria to multiply.	Heat kills some bacteria	Role of smoking in fish preservation	Discuss the different methods of food preservation and how they operate.

40.	P.7	Both are spread through having unprotected sex with an infected person /through sex deviations with infected ones /Both are STDs	Both spread through sharing clothes.	Spread of venereal diseases among people.	Cite out the signs and symptoms of STDs and their control measure.
			SECTION B		
41.	P.1	a)proteins /grow foods ii)vitamins/mineral salts /glow food	i) carbohydrates ii) Lipids	Importance of classes of food Causes of poor feeding and control of poor feeding.	Use several simple common foods to help the candidate master foodstuffs and classes of food to which they belong.
		b)Strong wind /floods/ drought / storms /lightning	-Ignorance /poverty		
		c)Educating parents on nutrition /using irrigation farming /using mechanized agriculture to grow enough food crops /Government should provide poor people with foodstuffs.	Buying food		
42.	P.5	a)i)M-Budding (ii)N-cell division / Binary fission.	i)cell division ii)Budding	Reproduction in bacteria and fungi. Dangers of bacteria	Help candidates categorize the unicellular kingdoms of living things.
		b)Yeast	bacteria		
		c)They cause diseases /food poisoning /make food go bad.	They spread diseases.		
43.	P.4	a) Reduces competition /pests / spread of disease among perennial crops	It removes some branches.	Advantages of pruning and tools used.	Demonstrate crop growing and their importance using a school garden.
		b) Pruner /secateur	prunner		
		c)Crop rotation /pruning infected parts /planting diseases resistant crops /uprooting infected crops	Spraying		
44.	P.5	a)i) conduction ii) convection	i)Convection ii)radiation	Use of methods of heat transfer	Demonstrate the methods of heat transfer and their importance in daily life.
		b)Heat loss causes condensation of water vapour /makes water vapour change to liquid state.	It makes it evaporate	Effects of heat loss on vapour.	
		c)Hot cooking oil causes scalds while hot charcoal causes burns on the skin	Both cause burns.		

45.	P.7	a)Dry cell	Direct current	Simple circuit and energy changes	Encourage the candidate to make experiments and use of each component of a circuit.
		b)Electrical to heat /Heat to light	Heat/Electricity /Light		
		c) 		Flow of current	
46.	P.4	a)Swollen belly /diarrhoea / vomiting of worms/stool with worms /loss of weight /anaemia	Stomach pain fever	Intestinal	Use animated pictures of intestinal worms and state their effects in detail.
		b)Malnutrition /stunted growth	Loss of weight/itching	Effects of worms	
47.	P.6	a)i) It causes body poisoning	It makes one take more drugs	Dangers of drug misuse and buying drugs from shops.	Go through drug abuse and misuse in a detailed way.
		b)It leads to taking of wrong medicine /overdose /under dose /body poisoning	Shops are so expensive		
		c) Shopkeeper may sell fake drugs /give wrong prescriptions /sell expired drugs /sell spoilt drugs /have poor drug storage.			
48.	P.4 a)	a)To keep delicate weather instruments	For decoration	Structure of a Stevenson screen and how it operates.	Revise through weather instruments in a detailed way.
		b) i)It is white /It is painted white ii) It has holes (Louvers)	i)Has louvres ii)painted white		
		c) Enables a farmer to plan for harvesting and planting activities	Helps to know weather changes in future.		
49.	P.7	a)i) skin (ii) kidney	Liver	Importance of excretion and organs	Go through excretory organs and how they operate
		b)Reduces poison levels /Removes harmful wastes before they become toxic /keeps the internal environment constant	Removes wastes		
		c) Kidney failure /kidney stones	Bilharzia		
	P.1	a) i) For scrubbing the skin	For bathing	Use of sponge.	Demonstrate the use of each component used to promote personal hygiene.
		ii) Kills germs /Removes dirt on the body	Mopping the house	Use of items that promote personal hygiene.	
		b) Combing hair/ ironing clothes / Trimming hair /Trimming finger nails			

51.		a)i) Oxygen (ii) carbon dioxide b) Organism K gets food /organism K gets herbal medicine	Gets food Get oxygen	Interdependence between plants and animals	Go through components of a food chain.
52		a)Changes in weather /changes in seasons /placement changes /changes in growth /changes in the sky / adolescence changes	Drought /floods /thunder	Natural changes	Drought /flood/lightning and earthquakes are natural causes of changes but not natural changes.
		b)By conserving swamps /By constructing proper drainage systems /By controlling swamp pollution /By dredging water channels/constructing large water channels	By planting trees	Control measures for floods in the environment	
53.	P.7	a)i)Inclined planes /slopes ii) pulleys	i)ladder ii) single fixed pulley	Group of simple machines	Discuss the groups of simple machines in a detailed way.
		b)Machine **M**	Machine **L**	Simple machine that changes the direction of force	
		c)Machine **M** changes the direction of force	Machine **M** uses less effort	Change in the direction	
54.		a) Use of stem cuttings / marcotting / budding /layering / grafting	Suckers /bulbs	Artificial vegetative propagation method	Carry out several practices on the artificial methods of vegetative propagation
		b)i)There is quick maturity in plants/ Desirable and good characteristics are easily maintained/The young plant obtains water and mineral salts from the parent plant/A single parent plant is used in propagation.	Plants can colonise new areas easily.		
55.	P.	i)produce sperms ii) produce ova iii) it's where fertilization takes place iv) stores manufactured sperms.	Produce ova Produce sperm stores sperms It's where fertilization takes place	Uses of parts of the reproductive system.	Go through parts of the reproductive system and their importance in the process of reproduction.