

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET A

SEPTEMBER 2019

CLASS IX

Marking Scheme – SCIENCE[CHEMISTRY][THEORY]

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	A	1
6.	A	1
7.	A	1
8.	D	1
9.	BIO- MCQ	
10.	BIO- MCQ	
11.	BIO- VSA (BASED ON PRACTICAL)	
12.	BIO- VSA (BASED ON PRACTICAL)	
13.	BIO- VSA	
14.	BIO- ASSERTION/REASONING TYPE	
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	Temperature at which a solid changes to liquid at atmospheric pressure. Melting point decreases	1/2x2=1
19.	Amount of heat needed to change 1Kg of a liquid into vapour or gas under atmospheric pressure.	1
20.	Ice removes extra heat for melting in the form of latent heat of fusion.	1
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	a)i)Process of conversion of vapour/gas into liquid at constant temperature ii) Process of conversion of a liquid into vapour/gas at its boiling point under atmospheric pressure. b)Diffusion , Intermixing of different particles of matter on their own OR Solution: homogeneous/cannot be filtered/Cannot show Tyndall effect Suspension: Heterogeneous/Can be filtered/Can show Tyndall effect when stirred	1+1+1/2x2=3 OR 1+1+1=3

25.	a)i)Mercury ii)Bromine iii)Silicon/(any) b)Compound is a pure substance constituted by two or more elements which are combined chemically in a fixed ratio by mass. Example : water , sugar , salt/ (any)	$1/2 \times 3 + 1$ for defn & $\frac{1}{2}$ for example=3
26.	a)The amount of solute contained in a given amount(mass/volume) of solution. b) Mass of solute(sugar)=20g Mass of water=140g Mass of solution=20+140=160g %mass=20/160x100=12.5%(by mass) OR a)A solution that cannot dissolve anymore amount of solute at that temperature is said to saturated solution. When heated it becomes unsaturated b)CO ₂ c)Sublimation	$1+2$ for sum=3 OR $1+1+1=3$
27.	BIO OR	
28.	BIO	
29.	BIO	
30.	BIO	
31.	PHY OR	
32.	PHY	
33.	a) Evaporation: Surface phenomenon/slow/occurs below b.p. Boiling: Bulk phenomenon/Fast/Occurs at bp. b) increase in surface area/increase in temperature/ decrease in humidity/presence of wind. c)i)Gas ii)Solid iii)Gas OR a)particles keep space between them/They are constantly moving(KE)/ They attract each other b) i)In liquids the attraction is just sufficient to hold them together & not to keep them into close packing. Hence , liquids have fixed volume but no fixed shape. ii)In gases the particles have the maximum KE c) Solid CO ₂ / It undergoes sublimation when exposed to air.	$1/2 \times 3 = 1 \frac{1}{2}$ $\frac{1}{2} \times 4 = 2$ $1/2 \times 3 = 1 \frac{1}{2}$ Total=5 OR $1/2 \times 3 = 1 \frac{1}{2}$ $1+1=2$ $1+1/2 = 1 \frac{1}{2}$ =5(Total)
34.	i) Centrifugation ii) Centrifuging machine iii)When rotated at high speed; the heavier particles of the liquid settle down while lighter particles move up. Application: In diagnostic lab for blood or urine test/ In washing machine to squeeze out water from wet clothes. Metals: Malleable/Ductile/Lustrous Non-metals: Non-malleable/Non-ductile/Non lustrous	$1 + 1 + 1 \frac{1}{2}$ (principle) $\frac{1}{2} \times 3 = 1 \frac{1}{2}$
35.	BIO OR	
36.	BIO	

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET B

SEPTEMBER 2019

CLASS IX

Marking Scheme – SCIENCE[CHEMISTRY][THEORY]

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	B	1
6.	A	1
7.	A	1
8.	A	1
9.	BIO- MCQ	
10.	BIO- MCQ	
11.	BIO- VSA (BASED ON PRACTICAL)	
12.	BIO- VSA (BASED ON PRACTICAL)	
13.	BIO- VSA	
14.	BIO- ASSERTION/REASONING TYPE	
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	Temperature at which a liquid changes to gas/vapour under atmospheric pressure is called boiling point BP increases when impurity is added.	$\frac{1}{2} + \frac{1}{2} = 1$
19.	A pure substance that cannot be broken down into simpler substances & is made up of only one type of particles are called elements.	1
20.	Cotton is a good absorber of water (sweat) & exposes it to air for evaporation.	1
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	a) Inter-mixing of particles of different substances on their own. b) In gases the particles move with more kinetic energy than in liquids. c) Particles of gases move at random , hitting each other & also with the walls of the container. They exert force on the walls & force on unit area is called pressure. OR Separating funnel. Drawing : Principle: When an immiscible	1x3=3

	liquid mixture is poured into a container, they separate out in layers depending on their densities.	
25.	a)i) Mercury ii)Bromine iii) Silicon / Germanium/ (any) b) A pure substance constituted by two or more elements which are combined chemically in a fixed ratio by mass. Water /Sugar	$\frac{1}{2} \times 3 = 1\frac{1}{2}$ 1(compound defn)+ $\frac{1}{2} = 3$
26.	The amount of solute contained in a given amount (mass/volume) of solution. b) Mass of solute(sugar)=20g Mass of water=140g Mass of solution=20+140=160g %mass=20/160x100=12.5% (by mass) OR a) A solution that cannot dissolve anymore amount of solute at that temperature is said to saturated solution. When heated it becomes unsaturated b) CO ₂ . When exposed it undergoes sublimation & changes to CO ₂ gas c)Sublimation	1+2 for sum=3 OR 1+1+1=3
27.	BIO OR	
28.	BIO	
29.	BIO	
30.	BIO	
31.	PHY OR	
32.	PHY	
33.	Evaporation: Surface phenomenon/slow/occurs below b.p. Boiling: Bulk phenomenon/Fast/Occurs at bp. b) increase in surface area/increase in temperature/ decrease in humidity/presence of wind. c) i)Gas ii)Solid iii)Gas OR a) particles keep space between them/They are constantly moving(KE)/ They attract each other b) i)In liquids the attraction is just sufficient to hold them together & not to keep them into close packing. Hence , liquids have fixed volume but no fixed shape. ii)In gases the particles have the maximum KE c) Solid CO ₂ / It undergoes sublimation when exposed to air.	1 $\frac{1}{2}$ 2 1 $\frac{1}{2}$ =5 OR 1 $\frac{1}{2}$ 1 1 1 $\frac{1}{2}$ =5
34.	a)Particles have size between 1nm to 100 nm/ Can show Tyndall effect b) i) Brass/Bronze ii) alcohol & water/ Vinegar c) Liquefied petroleum gas and Compressed natural gas.	2+1+1+1=5
35.	BIO OR	
36.	BIO	

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET C

SEPTEMBER 2019

CLASS IX

Marking Scheme – SCIENCE[CHEMISTRY][THEORY]

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	C	1
6.	C	1
7.	C	1
8.	C	1
9.	BIO- MCQ	
10.	BIO- MCQ	
11.	BIO- VSA (BASED ON PRACTICAL)	
12.	BIO- VSA (BASED ON PRACTICAL)	
13.	BIO- VSA	
14.	BIO- ASSERTION/REASONING TYPE	
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	Temperature at which a solid changes to liquid at atmospheric pressure. Melting point decreases	$\frac{1}{2} \times 2 = 1$
19.	A pure substance constituted by two or more elements which are chemically combined in a fixed ratio by mass. Water/Sugar/Salt	1
20.	When the vapour escapes the liquid loses latent heat of vaporization. To make up for the loss, it absorbs the heat from the surrounding & that leads to cooling.	1
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	a) The component of a solution in lesser amount is solute & the component in larger amount is solvent. b) True solution: Particles have size less than 1nm, It cannot show Tyndall effect/ It cannot be filtered OR a) Elements & compounds b) Gases have no fixed shape of volume. They can be very easily compressed (any two)	$\frac{1}{1} \times 2 = 1$ $2 \times 1 = 2$ OR $\frac{1}{2} \times 2 = 1$ $2 \times 1 = 2$

25.	Separating funnel: Diagram When a mixture consisting of immiscible liquids is poured into a container they separate out into layers depending on their densities.	1. 1 1
26.	The amount of solute contained in a given amount (mass/volume) of solution. b) Mass of solute(sugar)=20g Mass of water=140g Mass of solution=20+140=160g %mass=20/160x100=12.5%(by mass) OR a) A solution that cannot dissolve anymore amount of solute at that temperature is said to saturated solution. When heated it becomes unsaturated. b)CO ₂ c) sublimation	1 Sum=2 OR 1+ ½ ½ +1
27.	BIO OR	
28.	BIO	
29.	BIO	
30.	BIO	
31.	PHY OR	
32.	PHY	
33.	a)Evaporation: Surface phenomenon/slow/occurs below b.p. Boiling: Bulk phenomenon/Fast/Occurs at bp. b) surface area/ temperature/ humidity/presence of wind. c)i)Gas ii)Solid iii)Gas OR a)particles keep space between them/They are constantly moving(KE)/ They attract each other b) i)In liquids the attraction is just sufficient to hold them together & not to keep them into close packing. Hence , liquids have fixed volume but no fixed shape. ii)In gases the particles have the maximum KE c) Solid CO ₂ / It undergoes sublimation when exposed to air.	1/2x3=1 ½ ½ x4=2 1/2x3=1 ½ Total=5 OR 1/2x3=1 ½ 1+1=2 1+1/2 =1 ½ =5(Total)
34.	a) Dispersed phase and dispersion medium. Properties: Heterogeneous / can show Tyndall effect (any 2) b)Silicon/Germanium ii) Bromine c)Element: Mercury Compound: salt and sugar Mixture: Butter	Components=1 Properties=1 Examples=1 Classification=2
35.	BIO OR	
36.	BIO	

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET A

SEPTEMBER 2019

CLASS IX

Marking Scheme – BIOLOGY

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	CHE-MCQ	
6.	CHE-MCQ	
7.	CHE-MCQ	
8.	CHE-MCQ (BASED ON PRACTICAL)	
9.	Vacuole	1mark
10.	Thallophyta	1mark
11.	Any two precautions	$\frac{1}{2} + \frac{1}{2} = 1$ mark
12.	Cells with cytoplasm, prominent nucleus. (any two other observations)	$\frac{1}{2} + \frac{1}{2} = 1$ mark
13.	Exchange of substances	1mark
14.	Option: a (both assertion and reason are correct, and reason is the correct explanation of the assertion)	1mark
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	CHE- VSA (BASED ON PRACTICAL)	
19.	CHE- VSA	
20.	CHE- ASSERTION/REASONING TYPE	
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	CHE OR	
25.	CHE	
26.	CHE OR	
27.	Plasma membrane (1/2 mark) With the presence of cell wall, Description(2mark) Diffusion(1/2mark) OR	3 marks

	<p>It plays an important role in cellular reproduction It also determines the way the cell will develop (any other two points)(2marks) Nucleoid, prokaryotic cell ($\frac{1}{2} + \frac{1}{2}=1$ mark)</p>	
28.	<p>Yeast- Fungi Amoeba-Protista ($\frac{1}{2} + \frac{1}{2}=1$ mark) Specific character: Amoeba Pseudopodia present for locomotion(1mark) Yeast Having cell wall (any other character) (1mark)</p>	1+1+1=3marks
29.	Specific functions	1+1+1=3marks
30.	<p>Cryptogams- naked embryos , hidden reproductive organ($\frac{1}{2} + \frac{1}{2}=1$ mark) Thallophyta, Bryophyta & Pteridophyta(mentioning anyone=1/2 mark) Phanerogams- differentiated reproductive tissue, seeds are the result of reproductive process($\frac{1}{2} + \frac{1}{2}=1$ mark) Gymnosperms and angiosperms (mentioning anyone=1/2 mark)</p>	1+1+1=3marks
31.	PHY OR	
32.	PHY	
33.	CHE OR	
34.	CHE	
35.	<p>Diagram- 2 marks Labelling- 4 X $\frac{1}{2}=2$marks Any two functions $\frac{1}{2} \times 2 =1$mark</p>	5 marks
36.	<p>Diagram- 2 marks Labelling- 4 X $\frac{1}{2}=2$marks Mitochondria and chloroplast ($\frac{1}{2} \times 2 =1$mark)</p>	5 marks

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET B

SEPTEMBER 2019

CLASS IX

Marking Scheme – BIOLOGY

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	CHE-MCQ	
6.	CHE-MCQ	
7.	CHE-MCQ	
8.	CHE-MCQ (BASED ON PRACTICAL)	
9.	Vacuole	1mark
10.	Protein and sugar	1 mark
11.	Cells with cytoplasm, prominent nucleus (or any other two)	$\frac{1}{2} + \frac{1}{2} = 1$ mark
12.	Cheeks should be scrapped gently. Spread the material to form a thin uniform layer (Or any other two precautions)	$\frac{1}{2} + \frac{1}{2} = 1$ mark
13.	Monerans are prokaryotic but organisms under Protista are eukaryotic	1mark
14.	Option: a (both assertion and reason are correct, and reason is the correct explanation of the assertion)	1mark
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	CHE- VSA (BASED ON PRACTICAL)	
19.	CHE- VSA	
20.	CHE- ASSERTION/REASONING TYPE	
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	CHE OR	
25.	CHE	
26.	CHE OR	
27.	Hypertonic solution-shrinkage of cell away from cell wall -	1+1+1=3marks

	<p>plasmolysis. (1mark)</p> <p>Hypotonic solution-cell swells ,builds pressure against the cell wall (1mark)</p> <p>Fungi, Bacteria ($\frac{1}{2} + \frac{1}{2}=1$ mark)</p> <p>OR</p> <p>It plays an important role in cellular reproduction</p> <p>It also determines the way the cell will develop (any other two points)(2marks)</p> <p>Nucleoid, prokaryotic cell ($\frac{1}{2} + \frac{1}{2}=1$ mark)</p>	2+1=3 marks
28.	<p>Yeast- Fungi</p> <p>Amoeba-Protista ($\frac{1}{2} + \frac{1}{2}=1$ mark)</p> <p>Specific character:</p> <p>Amoeba</p> <p>Pseudopodia present for locomotion(1mark)</p> <p>Yeast</p> <p>Having cell wall (any other character) (1mark)</p>	1+1+1=3marks
29.	<ol style="list-style-type: none"> Nervous tissue Bone (connective tissue) Stratified epithelium Ciliated columnar epithelium Cardiac tissue Blood 	$\frac{1}{2} \times 6=3$ marks
30.	<ol style="list-style-type: none"> Well differentiated distinct components Have tissues for transporting water and other substances Ability to bear seeds and whether the seeds are enclosed within fruit. 	1+1+1=3marks
31.	PHY OR	
32.	PHY	
33.	CHE OR	
34.	CHE	
35.	<ol style="list-style-type: none"> Lose the ability to divide and take up permanent shape, size and function(1mark) Xylem-conducts water and minerals . Phloem conducts food.($\frac{1}{2} + \frac{1}{2}=1$ mark) One function each of any three (parenchyma ,chlorenchyma, collenchyma, sclerenchyma or aerenchyma)(3marks) <p>OR</p> <ol style="list-style-type: none"> Skeletal muscle – cylindrical with striations and many nuclei, responsible for movement, attached to bones. ($\frac{1}{2} + \frac{1}{2}+ \frac{1}{2}=1 \frac{1}{2}$ marks) Smooth muscle-with pointed ends and single nuclei, movement of involuntary muscles, found in the iris, in uterus. ($\frac{1}{2} + \frac{1}{2}+ \frac{1}{2}=1 \frac{1}{2}$ marks) Smoothens bone surfaces (1mark) 	5marks

	c. Around blood vessels ,around nerves.($\frac{1}{2}$ $\frac{1}{2}$ =1mark)	
36.	Diagram- 2 marks Labelling- 4 X $\frac{1}{2}$ =2marks Any two functions $\frac{1}{2}$ x2 =1mark	5 marks

	<p>With the presence of cell wall, Description(2mark) Diffusion(1/2mark) OR Serve as a channel Providing surface area for some biochemical activities Cytoplasmic framework. Any two functions (2 marks) RER-protein synthesis(1/2mark) SER-manufacture of fats and lipids(or any other function)(1/2 mark)</p>	
28.	<p>Cryptogams- naked embryos , hidden reproductive organ($\frac{1}{2}$ + $\frac{1}{2}$=1 mark) Thallophyta, Bryophyta & Pteridophyta(mentioning anyone=1/2 mark) Phanerogams- differentiated reproductive tissue, seeds are the result of reproductive process($\frac{1}{2}$ + $\frac{1}{2}$=1 mark) Gymnosperms and angiosperms (mentioning anyone=1/2 mark)</p>	3 marks
29.	Specific function and character of epidermis in leaf, root and in desert plants($\frac{1}{2}$ x 6)	3 marks
30.	<p>Well differentiated distinct components Have tissues for transporting water and other substances Ability to bear seeds and whether the seeds are enclosed within fruit.</p>	1+1+1=3marks
31.	PHY OR	
32.	PHY	
33.	CHE OR	
34.	CHE	
35.	<p>Specific characters (any two) (2 marks) Function, composition and location of any two-connective tissue($\frac{1}{2}$ x 6=3marks) OR a. Skeletal muscle – cylindrical with striations and many nuclei, responsible for movement, attached to bones. ($\frac{1}{2}$ + $\frac{1}{2}$+ $\frac{1}{2}$=1 $\frac{1}{2}$ marks) Smooth muscle-with pointed ends and single nuclei, movement of involuntary muscles, found in the iris, in uterus. ($\frac{1}{2}$ + $\frac{1}{2}$+ $\frac{1}{2}$=1 $\frac{1}{2}$ marks) b. smoothens bone surfaces (1mark) c. Around blood vessels ,around nerves.($\frac{1}{2}$ $\frac{1}{2}$=1mark)</p>	5marks
36.	<p>Diagram- 2 marks Labelling- 4 X $\frac{1}{2}$=2marks Mitochondria and chloroplast ($\frac{1}{2}$ x2 =1mark)</p>	5 marks

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION

SET C

SEPTEMBER 2019

CLASS IX

Marking Scheme – BIOLOGY

Q.NO.	Answers	Marks (with split up)
1.	PHY- MCQ	
2.	PHY- MCQ	
3.	PHY- MCQ	
4.	PHY- MCQ (BASED ON PRACTICAL)	
5.	CHE-MCQ	
6.	CHE-MCQ	
7.	CHE-MCQ	
8.	CHE-MCQ (BASED ON PRACTICAL)	
9.	Detoxifying poisons	1mark
10.	Thallophyta	1mark
11.	Cheeks should be scrapped gently. Spread the material to form a thin uniform layer (Or any other two precautions)	$\frac{1}{2} + \frac{1}{2} = 1$ mark
12.	Cells with cytoplasm, prominent nucleus (any two other observations)	$\frac{1}{2} + \frac{1}{2} = 1$ mark
13.	Muscular and nervous tissue	$\frac{1}{2} + \frac{1}{2} = 1$ mark
14.	Option: a (both assertion and reason are correct, and reason is the correct explanation of the assertion)	
15.	PHY- VSA (BASED ON PRACTICAL)	
16.	PHY- VSA	
17.	PHY- ASSERTION/REASONING TYPE	
18.	CHE- VSA (BASED ON PRACTICAL)	
19.	CHE- VSA	
20.	CHE- ASSERTION/REASONING TYPE	
21.	PHY OR	
22.	PHY	
23.	PHY OR	
24.	CHE OR	
25.	CHE	
26.	CHE OR	
27.	Plasma membrane (1/2 mark)	3 marks

	<p>With the presence of cell wall, Description(2mark) Diffusion(1/2mark) OR Serve as a channel Providing surface area for some biochemical activities Cytoplasmic framework. Any two functions (2 marks) RER-protein synthesis(1/2mark) SER-manufacture of fats and lipids(or any other function)(1/2 mark)</p>	
28.	<p>Cryptogams- naked embryos , hidden reproductive organ($\frac{1}{2}$ + $\frac{1}{2}$=1 mark) Thallophyta, Bryophyta & Pteridophyta(mentioning anyone=1/2 mark) Phanerogams- differentiated reproductive tissue, seeds are the result of reproductive process($\frac{1}{2}$ + $\frac{1}{2}$=1 mark) Gymnosperms and angiosperms (mentioning anyone=1/2 mark)</p>	3 marks
29.	Specific function and character of epidermis in leaf, root and in desert plants($\frac{1}{2}$ x 6)	3 marks
30.	<p>Well differentiated distinct components Have tissues for transporting water and other substances Ability to bear seeds and whether the seeds are enclosed within fruit.</p>	1+1+1=3marks
31.	PHY OR	
32.	PHY	
33.	CHE OR	
34.	CHE	
35.	<p>Specific characters (any two) (2 marks) Function, composition and location of any two-connective tissue($\frac{1}{2}$ x6=3marks) OR a. Skeletal muscle – cylindrical with striations and many nuclei, responsible for movement, attached to bones. ($\frac{1}{2}$ + $\frac{1}{2}$+ $\frac{1}{2}$=1 $\frac{1}{2}$ marks) Smooth muscle-with pointed ends and single nuclei, movement of involuntary muscles, found in the iris, in uterus. ($\frac{1}{2}$ + $\frac{1}{2}$+ $\frac{1}{2}$=1 $\frac{1}{2}$ marks) b. smoothens bone surfaces (1mark) c. Around blood vessels ,around nerves.($\frac{1}{2}$ $\frac{1}{2}$=1mark)</p>	5marks
36.	<p>Diagram- 2 marks Labelling- 4 X $\frac{1}{2}$=2marks Mitochondria and chloroplast ($\frac{1}{2}$ x2 =1mark)</p>	5 marks