DAV BORL PUBLIC SCHOOL BINA **CLASS IX** SCIENCE

Time: 3 hrs. M.M.: 90

Instructions:

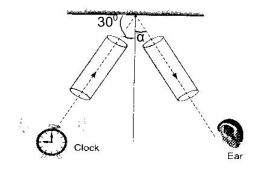
- 1. The question paper comprises of two sections, A and B. You have to attempt both the sections.
- 2. All the questions are compulsory.
- 3. There is no choice in any of the question.
- 4. All the questions of section A and section B are to be attempted separately.
- 5. Question numbers 1 to 3 in section A are one mark questions. These are to be answered in one sentence.
- 6. Question numbers 4 to 7 are two mark questions to be answered in about 30 words each.
- 7. Question numbers 8 to 19 are three mark questions to be answered in about 50 words each.
- 8. Question numbers 20 to 24 are five mark questions to be answered in about 70 words each.
- 9. Question numbers 25 to 42 are multiple choice questions based on practical skills. Each question carries one mark. You have to select one most appropriate option out of the four provided to you.

		SECTION - A				
Q.1	Rewrite the scientific name correctly.					
	i)	panthera tigris ii) periplaneta Americana				
Q.2	State the role of the atmosphere in climate control.					
Q.3	Defin	Define atomic mass unit.				
Q.4	-	Why sound waves are called mechanical waves? Which wave property determines loudness?				
Q.5		What is the work done by the force of gravity on a satellite moving round the earth? Justify your answer.				
Q.6	State any two characteristics of mammalia. Name two egg laying mammals.					
Q.7	What	What is an antibiotic? Give one example.				
Q.8	a)	State the law of conservation of mass.	(3)			
	b)	Which postulateomic of theory supports the the Dalton' law of conservation of mass?				
Q.9	c) A flas a) b)	An element has valency 3. Write the formula of its oxide. sk contains 4.4g of CO_2 gas calculate : How many moles of CO_2 gas does it contain? How many molecules of CO_2 gas are present in the sample?	(3)			
	c)	How many atoms of oxygen are present in the given sample?				
Q.10	a)	An atom of an element has three electrons in the third shell which is the outermost shell? Write electronic configuration.	(3)			
	b)	The average atomic mass of copper is 63.5 u. It exists as two isotopes which are $_{29}{}^{63}Cu$ and $_{29}{}^{65}Cu$. Calculate the percentage of each present in it.				
			(1/6)			

Q.11	What are the advantages of classifying organisms?					(3)		
Q.12	Name the largest group of animals. Write the salient features of this group. (Give two examples.					(½+1½+1=3)		
Q.13	a)	Which disea	se is mo	re harmful-a	acute or ch	ronic disease? Why	/?	(2+1=3)
	b)	Why are we	advised	to take blar	nd and nou	rishing food when v	ve are sick?	
Q.14	How do	How do the following factors contribute in the formation of soil?						(1+1+1=3)
	a)	wind	b)	water	c)	sun		
Q.15	Pooja's school organisedrea. Pooja along visiwithher (2+1/2+1/2=3) classmates visited the chefertilizer and cast iron industries. She found						the chemical,	
	water consu	that almost all the industries were releasing their effluents in the nearby canal water. She noticed that canal water was being polluted and it was unfit for consumption. She wrote a letter to the pollution control board and took the initiative to prevent water pollution.						
	a)	What does very pollution?	vater pol	Ilution mea	n and what	are the various ca	auses of water	
	b)	Which value	s are dis	played by F	Pooja in tak	ing initiative?		
	c)	Suggest son	ne schoo	ol activity to	promote su	uch values in schoo	l students.	
Q.16	a)		U			d the density of the bstance float or sin		(1)
	b)	Why does ar	n object f	float or sink	when plac	ed on the surface o	f water?	(2)
Q.17	poten			• • •		xpression for grav		(3)
Q.18	Cite an experiment to show that sound needs a material medium for its propagation.					(3)		
Q.19	a)	State Archim	nedes pri	nciple.				(3)
	b)	Write any tw	o applica	ations of Ard	chimedes p	rinciple.		
Q.20	Give reasons for the following: (5)							
	a)	Elements ha	ve gene	rally fractior	nal atomic i	nasses.		
	b)	Isobars alwa	ys belon	g to differe	nt elements	S.		
	c)	Noble gas el	ements	do not shov	v any valen	cy.		
	d)	Nucleus of a		-		charged.		
	e)	Atom as a w	hole is e	lectrically n	eutral.			
Q.21	a)	Draw a flow	chart to	show differe	ent division	s of kingdom planta	ie.	(1½)
	b)	Which division	on has th	e simplest	plants?			(1)
	c)	To which div	ision pin	us and cyca	as belong?			(1)
	d)	What is the o		•		ng plants? Classify n the seed.	them on	(1½)

Q.22	a)	What are the consequences of Global Warming?	(1½)		
	b)	Draw a labelled diagram to show water cycle in nature.	(2)		
	c)	Why is water essential to life?	(1½)		
Q.23	a)	Define SI unit of energy.	(1)		
	b)	Derive the relation between SI unit and commercial unit of energy.	(2)		
	c)	The kinetic energy of an object of mass 'm' moving with a velocity of 5m/s is 25 J. What will be its kinetic energy.	(2)		
		(i) When its velocity is doubled.			
		(ii)when its velocity is increased three times.			
Q.24	Draw diagrams to represent -				
	a)	wave shape for a low and high pitched sound	(1)		
	b)	wave shape for a soft and louder sound.	(1)		
	c)	What do you mean by an echo? State two conditions for hearing a distinct echo.	(2)		
	d)	Calcualte the wavelength of a sound wave whose frequency is 220 Hz and speed is 440 m/s in a given medium.	(1)		
		SECTION -B			
Q.25	2.25 The least counts of the spring balance and the measuring cylinder respectively are –				
	a)	1 gwt : 1 mL			
	b)	1 gwt; 2mL			
	c)	2gwt; 1mL			
	d)	1 gwt : 1 mL 1 gwt; 2mL 2gwt; 1mL 2gwt; 2mL 2gwt; 2mL			
		100 1 E 100			
		E Commence of the commence of			
Q.26		asuring the apparent mass of solid inside a liquid, the observations are	(1)		
	taken	by suspending three solids in three different containers as shown in figures.			
	-				
	/				
	<u></u>				
		(i) (ii) (iii)			
	The I	oss of mass is –			
	a)	more in (i) b) more in (ii)			
	b)	less in (iii) d) equal in all three			
Q.27	While s	studying the laws of reflection of sound, the tube facing the clock is	(1) (3/6)		

placed as shown. In order to hear the reflected sound, the second tube should be placed such that α equals.



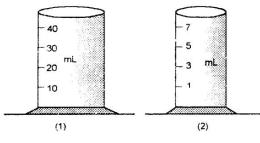
- 30^{0} a)
- b)
- 40^{0}
- 60°
- 90^{0} d)
- Q.28 In an experiment to verify, the law of reflection of sound, reflector should be made of -
- (1)

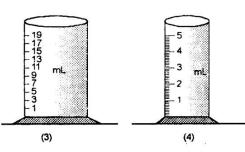
(1)

- a) card board
- b) wood
- c) cloth
- d) polished metal sheet

c)

Q.29 The most suitable cylinder for measuring the volume of nearly 1.5 ml liquid is-



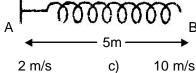


- a) (1)
- b) (2)
- c) (3)
- d (4)
- Q.30 Relative density of silver compared to that of water is 10.5, density of silver is-
- (1)

10.5 kg/m³ a)

- 105 kg/m³ b)
- 1050 kg/m³ c)

- 10500 kg/m³ d)
- Q.31 A pulse took 5 sec to travel from A to B then back to A. The velocity of pulse (1) for slinky indicated in figure is -



- a) 5 m/s
- b)
- 2 m/s
- 10 m/s
- 1.1 m/s d)

Q.32		In the experiment for determining the velocity of propagation of a pulse in a string, we prefer a long string because –					
	a)	It is easy to hold it.					
	b)	it is easy to give jerk					
	c)	pulse may move through it easily					
	d)	time taken by pulse to move from one end to other should be easily recorded					
Q.33		A cuboid of iron is kept over a table with different faces touching the table. In different cases the cuboid exerts.					
	a)	same thrust and same pressure					
	b)	same thrust and different pressure					
	c)	different thrust and same pressure					
	d)	d) different thrust and differnet pressure					
Q.34	The u	nnecessary observation to find pressure of solid is –	(1)				
	a)	least count of the spring balance					
	b)	zero error in the spring balance					
	c)	mass of solid in air					
	d)	volume of solid					
Q.35	To ve	rify the law of conservation of mass the correct experimental set up is -	(1)				
	a)	set up A b) set up B c) set up C d) set up D					
Q.36	While verifying the law of conservation of mass in a chemical reaction using a precipitation reaction, Savita carried out the following procedure: i) Dissolved the required quantities of BaCl ₂ and Na ₂ SO ₄ in distilled water taken in two separate beakers.						
	ii)	Determined the mass of both solutions separately.					
	,	iii) Mixed both solutions in a third beaker using a glass stirrer.					
	iv)	iv) Determined the mass of white precipitate formed after mixing both the solutions. The wrong step in the procedure is :					
	(a)	step (i) (b) step (ii)					
	(c)	step (iii) (d) step (iv)					

