

CHAMPS 2022-23 ALL INDIA SCIENCE CHALLENGE EXAM (AISCE)

	Class	:	Subje	ct: Science	Time: 60 Min			
	 Each question can Separate Optical Read the question Rough work shout Return the OMR A You can carry the 	 nstructions to the Candidate Each question carries 1 mark. There is no negative marking. Separate Optical Mark Reader (OMR) Answer Sheet is supplied to you along with question paper booklet. Read the questions carefully and fill in the circle corresponding to your answer. Fill in the circle Completely. Rough work should be done only in the space provided in the Question Paper Booklet. Return the OMR Answer sheet to the invigilator before leaving the examination hall. You can carry the question paper with you after completing the examination. Once you enter the examination hall, you are not permitted to leave till the end of the examination. 						
			VIII Cla	ss Science				
1.	If μ_S, μ_K and μ_R are the coefficients of limiting kinetic and rolling frictions							
	between two	between two given surfaces. Arrange them in ascending order						
	(A) μ_R, μ_S, μ_K	(B) į	$\mu_{\mathrm{K}}, \mu_{\mathrm{R}}, \mu_{\mathrm{S}}$	(C) μ_S, μ_K, μ_R	(D) $\mu_{R}, \mu_{K}, \mu_{S}$			
2.	If a man is walking, direction of friction is							
	(A) Opposite to direction of motion (B) same as that of direction of motion							
	(C) perpendicular to that of direction of motion							
	(D) 45° to the direction of motion							
3.	A vehicle of mass M is moving on a rough horizontal road with a momentum P.							
	If the coefficient of friction between the tyres and the road is μ , then the							
	stopping dis	tance is						
	(A) $\frac{p}{2\mu Mg}$	(B)	$\frac{p^2}{2\mu Mg}$	(C) $\frac{p^2}{2\mu M^2 g}$	(D) Zero			
4.	What kind of substances are known as lubricants							
	(A) Increase friction			(B) decrease friction				
5.	(C) increase			(D) none of th	lese			
J.	Electroplating is based on (A) heating effect of electricity (C) physical effect of electricity			` '	(B) chemical effect of electricity(D) magnetic effect of electricity			
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Name of the Student :______ Roll No.: ______ Roll No.: ______ Date :______

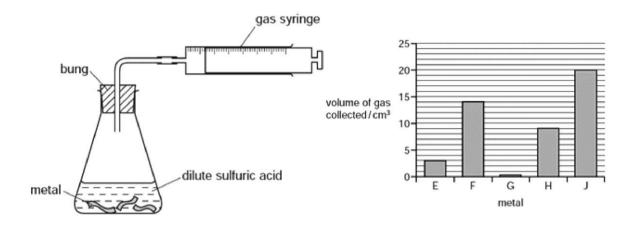
6.	When electrodes are immersed in water and electricity passed, the bubbles						
	formed on the positive terminal is actually gas						
	(A) hydrogen	(B) carbon dioxi	de (C) oxygen	(D) nitrogen			
7.	A plane mirror produces a magnification of						
	(A) -1	(B) +1	(C) zero	(D) between 0 and $+\infty$			
8.	The time period	l of an electromagnetic wave is $10^{-15}\mathrm{sec}$. What is the frequency					
	of wave in hertz	z?					
	(A) 10 ¹⁵	(B) 10 ⁵	(C) 10 ⁻¹⁵	(D) 10			
9.	Sound cannot to	ravel through					
	(A) solids	(B) liquids	(C) vacuum	(D) gases			
10.	Earthquakes can cause						
	(A) flood	(B) land slide	(C) tsunami	(D) all of these			
11.	Liquid pressure	of a point in a liqu	uid does not depen	d on the			
	(A) Density of lie	quid					
	(B) shape of the vessel in which the liquid is kept						
	(C) depth of the	C) depth of the point from the surface					
	(D) acceleration	due to gravity					
12.	One Pascal is th	ne pressure genera	ted by				
	(A) Force of 1N of	on 1cm ²	yne on 1m ²				
	(C) Force of 1N	on $1m^2$	(D) Force of 1N on 1000 cm ²				
13.	If the angle of d	eviation after reflec	ction of a light ray	n of a light ray is 'd' then find			
	(1) angle of incid	dence	(2) angle of reflection				
	(3) angle of glan	cing					
	(A) $i = \frac{180 - d}{2}$, $r = \frac{180 - d}{2}$, $\frac{d}{2}$		(B) $i = \frac{180 + d}{2}$, $r = \frac{180 - d}{2}$, $\frac{d}{2}$				
	(C) $i = \frac{180 - d}{2}, r = \frac{180 - d}{2}$	$=\frac{150-d}{2},\frac{d}{2}$	(D) $i = \frac{180 - d}{2}$, $r = \frac{180 - d}{2}$, $\frac{d}{4}$				
14.	Keeping the incident ray constant, if a plane mirror is rotated through an angl						
	θ , about an axis	s lying in its plane	, then the reflected	l ray turns through can			
	angle						
	(A) θ	(B) 2θ	(C) 3θ	(D) 40			
15.	The relation between u, v and R for a spherical mirror is						
	$(A) R = \frac{2}{u+v}$	(B) $R = \frac{2u + v}{uv}$	$(C) R = \frac{2uv}{u+v}$	(D) None of these			
16.	Which of the fol	lowing does not be	long to the family	of solar system?			
	(A) Planet	(B) Galaxy	(C) Meteor	(D) comef			

17.	Which star is nearest to earth?						
	(A) pole star	(B) orion	(C) cassipeia	(D) sun			
18.	Which one of the following is not force?						
	(A) Impulse	(B) Tension	(C) Thrust	(D) weight			
19.	Which of the following demonstrates the law of reflection?						
	(A)	(B)	(C)	(D)			
20.	0. Which of them has highest amplitude?						
	(A)	(B)	(C)	(D)			
21.	Secondary sexual characters in man are						
	(I) Formation of Adam's apple						
	(II) Maturation of	testis					
	(III) Formation of sperm						
	(IV) Joining of mu	ıscles					
	(V) Axial hair						
	Choose the correct	ct option					
	(A) I, IV & V	(B) I, II, III	(C) II only	(D) I, II, IV, V			
22. Identify the hormones secreted by ovary							
(A) Progesterone(C) Oestrogen			(B) Testosterone				
			(D) Both (A) & (C)				
23.	23. Difference between national park and sanctuary is						
	(I) In national par	ks animals are res	tricted to a closed	zone			
	(II) In national pa	rk human activity	is allowed.				
	(III) In sanctuaries organisms are conserved in their natural habitat						
	(IV) Human activ						
	Identify correct of						
	(A) All except IV (B) All except I (C) All except (D) All I to IV						
24.	24. Planting new trees is called						
	(A) Species	(B) deforestation	(C) Reforestation	(D) Agriculture			
25.	Which of the following is called the energy currency of the cell						
	(A)Endoplasmic r	eticulum	(B) Oxygen				
	(C)ATP		(D) Mitochondria)				
26.	First living cell wa	as identified by					
	(A) Robert hooke		(B) Robert brown				
	(C) Leewen hock		(D) Rudolf virchow				

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27.	Identify the wrong pair between disease and causative organism (A) Chicken pox – Varicella virus (B) Dengue – Aedes mosquito (C) Sleeping sickness – Trypanosoma (D) Malaria – Plasmodium						
28. Match the vaccine with disease that it prevents.							
	Column – I (Vaccine)			Column – II (Disease)			
	(1)	BCG		(a)	Tuberculosis		
	(2)	DPT		(b)	Diphtheria		
	(3)	MMR		(c)	Measles		
	(4)	Varicella Zoa	aster	(d)	Chicken pox		
	(A) $1 \rightarrow a$, $2 \rightarrow c$, $3 \rightarrow b$, $4 \rightarrow d$ (B) $1 \rightarrow b$, $2 \rightarrow c$		\rightarrow b, $2\rightarrow$ a, $3\rightarrow$ c,	4→d			
	(C) $1\rightarrow a$, $2\rightarrow b$, $3\rightarrow d$, $4\rightarrow c$ (D) $1\rightarrow a$, $2\rightarrow b$, $3\rightarrow c$, $4\rightarrow d$				4→d		
29.	9. Which of the following method is used for food preservation					on	
	(A) F	ermentation		(B) V	accination	accination	
	(C) P	asteurization		(D) All the above			
30.		is not a m	odern method of in	rigati	on		
	(A) Chain (B) Sprinkler (C) drip (D) Both (A) & (C)						
24							
31.	Identify the product based on the given features. I. It is a man-made product.						
	i. II.		- Data - Casa-Section 1994	omer	units		
	II. It has a linear arrangement of monomer units.III. It is used for making goods like toys, combs, containers, etc.						
32.						ts. Which is a polymer	
	A. Ether B. Cellulose C. Amino acid		Amino acid	D. Ester			
33	Modern non-stick cookware and the flat end of an electric iron has a coating of a polymer. Identify the name of the polymer.					has a coating of a	
	A. P	VC	B. Rayon	C.	Teflon	D. Polyester	
34.		(1 -	bres are used in ma				
	25	A59 Visio 1494	res are a replacemen			parrent avalenation of	
	Α.	assertion.	i and reason are true	anu	rie reason is the t	correct explanation of	
	B. Both assertion and reason are true but the reason is not correct explanation of the assertion.						
	C. The assertion is true but the reason is false.						
	D.	The assertion	is false but the reas	on is t	rue.		
35.			hthalate belongs to t			10	
A. Nylon B. Polyolefin C. Polyester D. None of the					D. None of these		

- 36. Firefighters' uniform is coated with a plastic that is fire resistant. Identify the plastic from the given options.
 - A. Teflon
- B. Melamine
- C. PET
- D. Polyester
- Samples of five different metals, E, F, G, H and J were reacted with dilute sulfuric acid using the apparatus shown. The volume of hydrogen gas collected after one minute was measured. The results are shown on the bar chart.



What is the order of reactivity of the metals (most reactive first)?

- A. E, F, G, H, J
- B. G, E, H, F, J
- C. J, F, H, E, G
- D. J, H, G, F, E
- Which type of fire extinguisher is used to extinguish fire caused by burning oil and petrol?
 - A. Foam type
- B. Water type C. Soda acid type
- D. CCl₄ type
- 39. The statements describe how different metals react with cold water.
 - Calcium sinks, fizzing and releasing a steady stream of hydrogen.
 - Copper does not react.
 - Sodium floats, fizzing and rapidly releasing hydrogen.
 - Zinc does not react but does react with steam, releasing hydrogen.

Using the information, where should hydrogen be placed in the reactivity series?

A. below copper

B. between sodium and calcium

C. between calcium and zinc

- D. between zinc and copper
- 40. Metal X lies between zinc and iron in the reactivity series.

Which statements about metal X are correct?

- 1. It reacts with steam to produce hydrogen gas.
- 2. It does not react with steam but will produce hydrogen with dilute acid.
- 3. The metal can be obtained from its oxide by heating strongly with charcoal.
- 4. The metal oxide cannot be reduced using carbon
- A. 1 and 3
- B. 1 and 4
- C. 2 and 3
- D. 2 and 4