Diploma, Anna University-UG, PG., HSC & SSLC

Notes
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				Standa	rd X	Re	g.No.:	¥.
ime	: 3.00 hou	rs.	Nor-II-	SCIEN	CE		Marks: 7	5
nstr	ructions:	of fairnes	s, inform	n the Hall	Supervisor rite and per	immed	iting. If there is any lac liately. raw diagrams.	k
lot	e : i)					this, bo	12 x 1 = 1	
	II	the option					Ilternatives and writ wer	е
1.		e of universal g	as const	ant	Just.	no to be a		
	217	J mol-1 K-1		122 15 6	b) 8.03 J m	ol-1 K-1		
	c) 1.38	J mol ⁻¹ K ⁻¹			d) 8.31 J m	101-1 K-1		
2.	Kilowatt	hour is the unit	of		DH. B. HW		Sto notice ent al fed y	
	a) resist	ivity			b) conducti	vity	modern en de Lois	
	c) elect	rical energy		7 verves	d) electrica	power	ris yes Plo sach vich	
3.	When a	sound wave tra	vels thro	ugh air, t	the air partic	cles		
	a) vibra	te along the dire	ection of	the wave	e motion			
	b) vibra	te but not in any	fixed di	rection	rale spanis			
	c) vibrate perpendicular to the direction of the wave motion							
		ote vibrate						
4.	The isoto	ope which cures	anaem				THE THE PROPERTY OF THE PARTY O	
		ım-24 b) l			the second second second second second		d) Cobalt-60	
5.		group contains		ber of ha	alogen famil	у.	CONTRACTOR OF THE PROPERTY OF	
	a) 17 th	b)	15 th		c) 18 th		d) 16 th	
6.	Match th	e following:	calign					
	1) Pollir	nation by wind	i)	Hydrop	and the second second			
		nation by insect	1770		A CONTRACTOR OF THE PARTY OF TH			
	3) Pollir	nation by water	iii)	Zoophil	ly		Physics all Blacky	
		nation by anima		Entomo	THE RESERVE OF THE PARTY OF THE			
	a) (1)-(i	i), (2)-(i), (3)-(iii), (4)-(iv)		b) (1)-(i), (2	2)-(iii), (3)-(ii), (4)-(iv)	
	c) (1)-(i	i), (2)-(iv), (3)-(i), (4)-(iii)		d) (1)-(iv),	(2)-(i), (3)-(ii), (4)-(iii)	
7.	Powdered CaCO ₃ reacts more rapidly than flaky CaCO ₃ because of							
		surface area			b) high pre			
	c) high	concentration	1		d) high tem	peratu	re	
8.	Kreb's c	ycle takes place	e in					
	a) chlor				b) mitochor	ndrial m	natrix	
	c) stom	N. C.			d) inner mit	tochono	drial membrane	
9.		ermost of the c	ranial me	eninges i				W
	a) arac	nnoid membran	е	labor French	b) piamate	r	o and FE imale has plan	A
	c) dura	mater			d) myelin s	heath	riving a Tancillanary	

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10	B	ipolar neurons are found in	OMMON HALF-YEARLY (2) Standard X	X Science		
		retina of eye	b) cerebral cortex	anuort 06,6 cer		
		A CONTRACTOR OF THE PARTY OF TH	d) respiratory epithelium			
11	. A	nemophilous flowers have	of fairness, inform the Hall Supervisor			
			b) Small smooth stigma			
		Coloured flower	d) Large feathery stigma			
12			ne centre of chromosome.	A - (I : e)		
			and more b) metacentric and eacond			
			d) acrocentric			
	-	Sub-inclacefullo Maria III	Part - II			
No	to.	Answer any seven quest		nm 18 F (p.		
13	IA.	hen and where was the firs	ions: Q.No.22 is compulsory:	$7 \times 2 = 14$		
				aund theumini Di		
15	0	ploulate the malar according	with dil. HCl and H ₂ SO ₄ ? Write the equa			
10.		alculate the molar mass of C	Ja ₃ (PO ₄) ₂ . d	Alivitaisen (e		
		ow does pH play an importa		c) electrical		
17.			d wave travels through air, the air par \$1			
40			ong the direction of the wave motion?			
			ethods of preventing corrosion.			
			of fossils. To nother be all of relucibned			
	Define genetic engineering.					
		hat are the main parts of Sc				
22.	Ca	alculate the resistance of a	conductor through which a current 2 A	passes, when		
	th	e potential difference betwe	een its ends is 30 V.	group		
			Part-III			
No	te:	Answer any seven questi	ons: Q.No.32 is compulsory:	7 x 4 = 28		
23.	i)	State Boyle's law.	by wind i). Hydrophily	1) Pollination		
	ii)	Distinguish between ideal	gas and real gas. A second yell	2) Pollination		
24.	i)					
	ii)	List the merits of LED bulb				
25.	a)	a) (1)-(ii), (2),				
		i) CH ₃ CH ₂ OH ii) CH ₃	nd its structural formula for the following			
	b)	Calcualte the volume of eth	nanol in 200 ml solution of 20% V/V aqu	eous solution		
	100		ce area b) high pres	shua agral (a		
26.	i)	What are oxysomes? Draw				
			Write the reaction for photosynthesis.			
27.	i)	Explain how locomotion tal	ke places in Leach	a) -chloroplas		
	ii)	What are the medicinal val	use of Leach?			
28			the types of Reflex action.			
29	Ar	ure tall plant (TT) is crosse	bionflows to			
	F	generations? Evelsis	d with pure dwarf plant (tt), what would	be the F, and		
	2	generations? Explain.	nemble (in the			

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(3)

X Science

- 30. Define Ethnobotany and write its importance.
- 31. How are stem cells useful in regenerative process?
- 32. An organic compound 'A' is widely used as a preservative and has the molecular formula C₂H₄O₂. This compound reacts with ethanol to form a sweet smelling compound 'B'.
 - a) Identify the compounds 'A' and 'B'
 - b) Write the chemical equation for its reaction with ethanol to form compound 'B'.
 - c) Name the process.

Part - IV

Note: Answer all the questions.

 $3 \times 7 = 21$

- (Draw diagram wherever necessary)
- 33. a) i) State and prove the Law of Conservation of Momentum.
 - ii) Calculate the velocity of a moving body of mass 5 kg whose linear momentum is 2.5 kgms⁻¹.

(or)

- b) Differentiate the following:
 - i) Myopia and Hypermeteropia
 - ii) Convex lens and Concave lens.
- 34. a) i) Mention the ores of Aluminium with its formula.
 - Explain the extraction of Aluminium from its ore by Baeyer's process and Hall's process.

(or)

- b) i) In what way hygroscopic substances differ from diliquescent substances?
 - ii) Classify the following substances into diliquescent, hygroscopic.
 Conc.Sulphuric acid, Copper sulphate pentahydrate, Silica gel, Calcium chloride and gypsum salt.
 - iii) A solution is prepared by dissolving 45 g of sugar in 180 g of water. Calculate the mass percentage of solute.
- 35. a) i) Which is 'Life saving' hormone? Why it is called so?
 - ii) Write any two physiological effects of gibberellins.
 - iii) Enumerate the functions of blood.

(or)

- b) i) How does rainwater harvesting structures recharge ground water?
 - ii) What is POCSO Act? What are the objectives of this Act?
