

Hajare Foundation's PADMAVATI INTERNATIONAL SCHOOL, HOSUR-RABKAVI

PT-I, 2020

Sub: Science Date: 28/10/2020 Marks: 80 Time: 3hrs Class: X

Instructions

iii. Urea

- 1. Question paper comprises 4 sections. A B C D. There are over all 30 questions. All questions are compulsory
- 2. Section A question number 1 to 12 are objective type questions of one mark each.
- 3. Section B question from 13 to 22 are short answer type questions, carrying 3marks.
- 4. Section c question from 23 & 24 are short answer type questions, carrying 4marks.
- 5. Section D question from 25 to 30 are long answer type questions, carrying 5 marks.

Section A								
1.	What type of reaction is an exothermic reacti	on?	[1]					
	a) Decomposition reaction	b) Displacement reactions						
	c) Combustion reaction	d) Redox reaction						
2.	A student took four test tubes containing solu	tion of different colours marked I, II, III and IV as	[1]					
	shown below. The test tubes, containing copper sulphate solution and ferrous sulphate							
	solution, could be the tubes:							
	colourless blue orange pale green							
	a) II and III	b) I and III						
	c) III and IV	d) II and IV						
3.	Which of the following is the most reactive halogen?							
	a) F	b) I						
	c) Br	d) Cl						
4.	Which of the following is an example of Dobe	reiner's triad?	[1]					
	A. Li, Na, K							
	B. Cl, Br, I							
	C. Na, Mg, Al							
	D. F, I, Br							
	a) A and B	b) All of these						
	c) A and C	d) C and D						
5.	Oxygen liberated during photosynthesis comes from							
	a) Carbon dioxide	b) Water						
	c) Glucose	d) Chlorophyll						
6.	Choose the forms in which most plants absorb nitrogen		[1]					
	i. Proteins							
	ii. Nitrates and Nitrites							

	iv. Atmospheric nitrogen		
	a) (i) and (ii)	b) (iii) and (iv)	
	c) (i) and (iv)	d) (ii) and (iii)	
7.	Choose the function of the pancreatic juice from the following		
	a) Trypsin digests proteins and lipase emulsified fats	b) Trypsin digests emulsified fats and lipase proteins	
	c) Trypsin and lipase digest fats	d) Trypsin digests proteins and lipase carbohydrates	
8.	The correct sequence of organs in the male reproductive system for transport of sperms is		
	a) testis $ ightarrow$ urethra $ ightarrow$ ureter	b) testis $ ightarrow$ ureter $ ightarrow$ urethra	
	c) testis $ ightarrow$ ureter $ ightarrow$ vasdeferens	d) testis $ ightarrow$ vasdeferens $ ightarrow$ urethra	
9.	In the list of organisms given below, those that reproduce by the asexual method are		[1]
	i. banana		
	ii. dog		
	iii. yeast iv. Amoeba		
	a) (i) and (iv)	b) (ii), (iii) and (iv)	
	c) (ii) and (iv)	d) (i), (iii) and (iv)	
10.	In peas, a pure tall plant (TT) is crossed with a short plant (tt). The ratio of pure tall plants to short plants in F_2 is		
	a) 1:1	b) 3:1	
	c) 1:3	d) 2:1	
11.	A trait in an organism is influenced by		[1]
	a) Both maternal & Paternal DNA	b) Paternal DNA only	
	c) Neither maternal nor paternal DNA.	d) Maternal DNA only	
12.	Which type of organism will have more varia	ations sexually or asexually reproducing	[1]
	organisms? Justify.		
10		ction B	[O]
13.	What happens when ferrous sulphate crystals are heated?		[3] [3]
14.	i. Why iron corrodes but aluminium does not?ii. Write the chemical name and the formula of the brown gas produced during thermal decomposition of lead nitrate.		[o]
	iii. What is the general name of the chemical to prevent the development of rancidity?	s which are added to fat and oil-containing foods	
15.	Can the following groups of elements be clas i. Na, Si and Cl	sified as Dobereiner's triads?	[3]

ii. Be, Mg and Ca

	[Aton	nic mass of Be = 9, Na = 23, Mg = 24, Si = 28, Cl = 35 and Ca = 40]				
	Expla	in by giving reason.				
16.	An at	An atom has electronic configuration 2, 8, 7. What is the atomic number of this element?				
17.	How do leaves of plants help in excretion?					
18.	What is the role of Hydrochloric acid in our stomach?					
19.	What	are the changes seen in girls at the time of puberty?	[3]			
20.	What is meant by pollination? Name and differentiate between the two modes of pollination					
	in flo	in flowering plants.				
21.	i. 'M	i. 'Males are heterogametic'. Why?				
	ii. Di	ii. Differentiate between inherited and acquired characters by giving two points.				
22.	Two	plants, A with white flowers and B with red flowers were crossed. The F ₁ progeny shows	[3]			
	all re	d flowers and F_2 has three red and one white. Categorise the trait as dominant and				
	reces	sive.				
		Section C				
23.	State	True or False:	[4]			
	a)	The formula of Phosphorous pentachloride is PCl ₃ .				
	b)	In a group, the atomic radius decreases from left to right.				
	c)	The rate of breathing in aquatic animals is faster than others.				
	d) Vas deferens is not a part of the female reproductive system in human beings.					
24.		the blanks:	[4]			
	a)	Rusting of iron occurs due to				
	b)	Moving in a group from top to bottom, the atomic radius				
	c)	The other name of Fallopian tube is				
	d)	Gene is the part of a which controls the appearance of a set of hereditary				
		characteristics.				
25.	Thora	Section D	[5]			
45.		There are different types of chemical reactions occurring around us or being carried out for the benefit of mankind, e.g. combination reactions, decomposition reactions, displacement				
		reactions, precipitation reactions, reduction-oxidation (redox) reactions, photochemical				
		reactions etc.				
		Now answer the following questions:				
		i. Combustion of coke is a combination reaction. CO_2 is not a pollutant. Then why is				
		mbustion of coke harmful?				
	ii. W	hich reaction followed by two combination reactions are involved in white wash of alls?				
	iii. Gi	iii. Give one use of tin plating in daily life.				
	iv. Ho	ow photochemical reactions have played an important role in photography?				
26.	Give a	an account of the process adopted by Mendeleev for the classification of elements. How	[5]			
	did h	e arrive at "periodic law"?				
27.	What	is nutrition? Briefly explain the two major kinds of nutrition.	[5]			
28.	With	the help of a well labelled diagram explain the structure of human excretory system.	[5]			

- 29. Write the functions of placenta. [5]
- 30. How do Mendel's experiments show that gene may be dominant or recessive? [5]