Jashore Board 2016

Chemistry

Subject Code

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Time — 2 hours 10 minutes

(Creative Essay Type Questions)

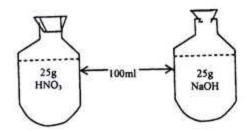
[N.B. — The figures in the right margin indicate full marks. Read the stems carefully and answer any four questions.]

- A hydrocarbon contains 17.24% Hydrogen and its molecular mass is 58.
- a. What is sublimation? b. How many changes are occurred during the burning of candle? Explain it.
- Find out the molecular formula of the compound stated in the stem.
- Is it possible to prepare fatty acid from mentioned compound of the stem? Give opinion.
- 2. ▶ A part of the periodic table is given below :--

Li		A
В	D	CI
С	***************************************	Br

[Here A, B, C and D are not the symbol of any regular element]

- What is nucleon number?
- b. Why the melting point and boiling point of a same compound are different?
- Arrange A, B, and D elements according to their atomic size.
- d. Between the mentioned two groups, elements of one group form ionic bond and elements of another group form both ionic and covalent bond. Analyze it.
- 3. ▶



- What is called inert gas?
- b. Why NH₄⁺ is a radical? Explain it.
- Find out the limiting reagent, if both of the reagents are mixed together in an appropriate condition.
- Will the concentration of both reagents be same? Give mathematical logic.
- In an electrolytic cell NaCl solution is taken as an electrolyte.
- What is strong acid?
- b. Why pure hydrochloric acid is not a electrical conductor? Explain it.
- Calculate the number of molecule in 50g of mentioned electrolyte.
- d. Write the reactions occur in the electrode if CaCl₂ is taken instead of solute of the stem and explain it with your logic.
- 5. (i) $2H_2(g) + O_2(g) \longrightarrow 2H_2O(g)$; $\Delta H = -488KJ$.
 - (ii) $KOH(aq) + HCl(aq) \longrightarrow K^{+}(aq) + Cl(aq) + H_2O(1)$
 - (iii) $A + BSO_4 \longrightarrow ASO_4 + B$.

[Atomic number of 'A' and 'B' are 30 and 29 respectively]

- a. What is ore?
- b. Why alkanes are called paraffin?
- In the reaction No. (i) of the stem, bond energy of H-H, O-H are 435, 464KJ/mol respectively. Find out the bond energy of 3
- Between the reaction No. (ii) and (iii) one is oxidation-reduction reaction and another one does not. Explain it.
- 6. \blacktriangleright CH₃CH₂OH $\xrightarrow{\text{H}_2\text{SO}_4}$ X + H₂O.
- What is fossil fuel?
- b. What is the reason of hardness of water?
- Compound 'X' is an unsaturated hydrocarbon. Prove it by experiment.
- d. Is it possible to prepare food preservatives from the mentioned reaction? Analyze logically.

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Creative Multiple Choice Questions

Subject Code 1 3 7
Full marks — 35

@ Egypt

10. Which gas is used as fuel for vehicles?

[NB. Answer all the questions. Each question carries one mark. Block fully, with a ball point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for the Multiple Choice Questions Examination.]

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		ct/best answer in the "Answer Sheet" fo			
ı.	from getting r	used to prevent foods			
	a SO ₂	ⓑ CO₂			
	© NO ₂	(d) N ₂ O ₄			
2		1.70ml - 5 - 6			
2.	In petroleum—				
	i. having 5% Petrol				
	ii. having 10% Naphtha				
	iii. having 98% H ₂ SO ₄ Which one is correct?				
	a i and ii	ⓑ ii and iii			
	© i and iii	(d) i, ii and iii			
2	Which one is a	1075(f) 7500 MARIN 1000 MARIN 1000 M			
э.	(a) C ₂ H ₂	⊕ C ₂ H ₆			
	\bigcirc C ₂ H ₂ \bigcirc C ₃ H ₈	(a) C_2H_6			
4		Section of the sectio			
4.	Which is used to make cloths of				
	pants and shir	20			
	Nylon T	(b) Ethanol			
_	© Terylene				
	Which is used to preserve pictes?				
	Vinegar	(b) Slaked fine			
	© Lime	@ Salt			
		amount of nitrogen in			
	urea?	O 500/			
	a 40%	ⓑ 50%			
	© 56%	@ 46%			
7.	$2H_2(g) + O_2(g)$				
	In the reaction—				
	i. H–H bond energy is 435kJ mol ⁻¹				
	ii. O-H bond energy is 464kJ mol ⁻¹				
	iii. on the reaction $\Delta H = -572kJ$				
	Which one is				
	a i and ii	(b) i and iii			

To. Trinich gas is use	u as i	uci it		icics.
Methane	6	Propa	ne	
© Butane	(d)	CO ₂		
11. Which one is sul	blima	te sub	stanc	e?
Sand	6	Lime		
© Potassium lodio	de (d)	lodine	33	
2. What happer	The state of the s			ature
of boiling?			AMIN'S SECTION	
i. Temperature applying heat	incr	eases	due	e to
ii. Temperature r	emair	s sam	ie	
iii. Pressure rema	in cor	stant		
Which one is con	rrect?	0		
@ i and ii	(b) ii and iii			
© i and iii	@ i, ii and iii			
3. What is the aton	nic nu	mber	of Ir	on?
a 56	6	46		
© 36 @ 26				
4. Which relative	mol	ecula	r ma	ss is
more?				
	b	HCI		
© F ₂	a	N_2		
5. Which isot	ope	is us	ed to	the
treatment of bor	ie pai	n?		
@ 60Co	(b)	131 _I		
© 125 _I	_	89 _{Sr}		
	_		10211	
16. Which one is	the	eleme	ent o	t 4th
period?	0	01		
@ Mg	⊕ CI			
© Cr	(1)	Sr		
Answer to the ques	stions	No.	17 an	d 18.
on the basis of the fo	ollowi	ng ste	m :	20
Element	P	Q	R	S
Atomic Number	14	15	16	17
Atomic Number				_
	re no	t sym	ibol o	fany
[Here, P, Q, R, S a regular element]	re no	t sym	ibol o	fany

group of the periodic talbe?

14

@ 16

(a) 13

© 15

9. Where was international ray sign used first?

8. Which one is the main chemical

② Japan

© Wax

© ii and iii

(a) Methane

constituent of wood?

(b) Russia

d i, ii and iii

(b) Cellulose

d Hydrogen

18. In the above ster	m—	Answer to the questions No. 27 and 28 on				
 size of 'P' is bigger than 'Q' 		the basis of the following stem :-				
ii. electronegativity of 'R' is less than 'S'		$Zn + H_2SO_4 \longrightarrow ZnSO_4 + H_2$				
iii. PO ₂ is more acidic than Q ₂ O ₃		27. What type of r	27. What type of reaction mentioned in			
Which one is con		the stem?				
a i and ii	(b) i and iii	Precipitation	Neutralization			
© ii and iii		© Hydrolysis	@ Redox			
19. $1S^2 2S^2 2$	P ⁶ is the electronic	28. In case of the re	action in the stem-			
configuration o	f which element or	i. Zn is reductant				
ion?	2	ii. H ₂ SO ₄ is redu	ctant			
② Mg	ⓑ Mg ²⁺	iii. Oxidation occ	urs of Zn			
© Na	@ Ca ²⁺	Which one is correct?				
20. How many bor	nd pair electron are	a i and ii	⊕ i and iii			
there in ammon	ia molecule?	© ii and iii	d i, ii and iii			
@ 1	ⓑ 2	29. What is the ap	proximate time when			
© 3	@ 4	the reserve of t	he fossil fuels will be			
21. Which compou	nd has the highest	finished?				
melting point?		100 years	ⓑ 200 years			
SO₂	NaCl	© 1000 years	d 2000 years			
© Al ₂ O ₃	$\textcircled{d} H_2O(s)$	30. What are the fu	els of fuel cell?			
22. If 0.1 mole at	mount of solute get	(a) Methane, Ethane				
dissolved in on	e liter solution, then	(b) Petrol				
what will be the	e concentration of the	© Ethanoic acid				
solution?	0/4439704704016-5016	@ Methanol, Eth	nanol			
@ 0.1M	ⓑ 0.01M	31. Which is used in				
© 0.5M	@ 0.05M	ⓐ Hg₂O	ⓑ CoO₂			
The state of the s	of expressing density	© PbO ₂	ⓓ MnO₂			
is —			ired PH value of urine?			
(a) liter	(b) mole		ⓑ 7			
© milligram	(d) molarity	© 6	@ 4			
24. 12g magnesium	react with how much		to prevent the dental			
amount oxygen?		caries?	to prevent the dental			
a 8g	(b) 16g	Acid	(b) Base			
© 32g	@ 12g	© Salt	(d) Water			
25. What is the c	colour of dehydrated	1.400 HARRY (***********************************	1000 Miles Miles (1000)			
CuSO ₄ ?	85V 17		ount of sulphuric acid d sulphuric acid by			
(a) Blue	(b) Green	weight ratio?	a surpliaric acid by			
© White	d Brown	@ 35%	ⓑ 65%			
26. What type of	substance present in	© 90%	@ 98%			
banana tree?		35. Which one is the				
Acidic	Alkaline	(a) Haematite	(b) Celcosite			
© Neutral	d Fat	© Calamine	d Bauxite			
			77			
The state of the s	5 ® 6 ® 7 ® 8 ® 9 © 10 ®					
21 6 22 6 23 6 24 8 2	5 © 26 9 27 @ 28 9 29 9 30 @	31 9 32 9 33 9 34 9 35 9				