Time Allowed: 20 Minutes

## Chemistry (Part-II)

(Fresh/New Course)

"Section-A"

Note: There are three sections in this paper i.e. Section A, B & C.

version:

В

Marks: 18

Total Marks: 85

	<ul> <li>Use black ball point</li> </ul>	or mar	MCQs Answer She	e circ	le for correct option of a	questi	on.	
Q. 1.				writi	ng and multiple circles sl	ıading	<u>s.</u>	
1.	The most stable oxidation state of manganese in neutral or acidic solution is							
	♠ +7	B		(c		<b>a</b>	+2	
2.	Which one of the follow						τ2	
	<b>⊘</b> co	_	C <sub>2</sub> O <sub>4</sub> <sup>-2</sup>	6	NH <sub>3</sub>	<b>(</b> 1)	H <sub>2</sub> O	
3.	Naphthalene belongs to		~ .	٠	, mm <sub>3</sub> .	٩	1120	
	Heterocyclic	_	Aromatic	0	) Alicyclic	<b>(</b>	Aliphatic	
4.	The major component of natural gas is							
•	Butane	B	Ethane	@	Propane		Methane	
5.	Which one of the following is nucleophile?							
	♠ H₂0	•	BF <sub>3</sub>	<b>©</b>	H+	ക	NO‡	
6.	Isomerism in which the	isome	-	_				
	Metamerism	<b>®</b>			Optical		Position	
7.	Alcohols, phenols and et				•	٩	rosition	
.•	⊕ HCl		H <sub>2</sub> O		NaOH	0	NH <sub>3</sub>	
8.	Phenol on hydrogenation	n with	•			w	ипз	
	Benzene		Toluene	Caldi,	Cyclohane	<b>(</b>	A ].	
· 9,	The functional group of a			•	Gyclonalie .	•	Aldehyde	
	· o		o		.0.		0	
	(A) II		и — С — Н	0	$-C \equiv N$	<b>©</b>	II - C - NH <sub>2</sub>	
10.	The hydrolysis of ester in	ı the r		U is 1			- G - NH <sub>2</sub>	
	Saponification	_	Decarboxylation	(O		6	T	
11.					Esterification	0	Transesterfication	
	Water		Ether	_	A1	_		
12.	Lactose is a disaccharide			(6)	Acetic acid	(D)	Ethyl alcohol	
14,	and the second s			_		_		
13.	Glucose and Galactose RNA is primarily seen in	(e)	Glucose and ribose	0	Glucose and sucrose	(b)	Glucose and fructose	
	Nucleus			•		_		
1./			Cytoplasm	(c)	Cell wall	(9)	Cell membrane	
14.	Which one of the followi	_	- •					
	♠ Cellulose		Protein	©	Rubber	•	Polytherie	
15.	Which sphere constitutes			heigl	nt but 80% of its mass?			
	<ul> <li>Troposphere</li> </ul>		Mesosphere	0	Stratosphere	<b>©</b>	Thermosphere	
16.	Which of the following is	quant	itative analysis?					
	Titration	(9)	Salt analysis	<b>©</b>	Flame test	0	Borax bead test	
17.	Al <sub>2</sub> O <sub>3</sub> is oxi	de.						
	Base	B	Acidic	0	Neutral	•	Amphoteric	
18.	Which of the following m	etal su	lphate is not soluble i	n wa	ter?		•	
	Na₂SO₄		K <sub>2</sub> SO <sub>4</sub>	_	BaSO <sub>4</sub>	0	ZnSO <sub>4</sub>	

Total Time: 2:40 Hours

## Chemistry (Part-II)

(Fresh/New Course)

## "Section-B"

Marks: 40

- Q. 2. Write short answers of any Ten (10) of the following parts. Each part carries equal marks.
  - (i) How beryllium differs from other members of its group?
  - (ii) What is bond enthalpy? Support your answer by explaining enthalpy in halogens.
  - (iii) Explain the catalytic behavior of transition elements.
  - (iv) Differentiate between homocyclic and heterocyclic.
  - (v) Discuss the mechanism of SN<sup>2</sup> reaction.
  - (vi) What is the main difference between Metamerism and Tautomerism.
  - (vii) Indicate at least four physical properties of Alcohols.
  - (viii) What is Decarboxylation reactions? Give at least two examples.
  - (ix) What are lipids? Give classifications of lipids.
  - (x) What are adhesives? Give their importance.
  - (xi) Give at least four applications of Green House Chemistry.
  - (xii) How empirical formula can be calculated?
  - (xiii) What methods are employed for control of SO2 pollution?

## "Section-C"

"Marks: 27

Note: Answer any Three (3) questions. Each question carries equal marks.

- Q. 3. (a) Describe the effect of heat on Nitrates and Carbonates with at least one example each.
  - (b) Discuss at least five characteristics of organic compounds.
- Q. 4. (a) How would you prepare the following compounds from Benzene?
  - (i) Acetophenone
- (ii) Toluene
- (iii) Trinitrobenzene
- (iv) Benzene-sulphonic Acid

(v)

- (b) What are elimination reactions?
- Q. 5. (a) Give IUPAC names to the followings:
  - (i) K[ptCl<sub>6</sub>]

- (iii) (CH<sub>3</sub>)<sub>3</sub> CCOOH
- (ii)  $CH_3 C = CH(CH_3)_2$
- (iv)  $\begin{array}{c} O \\ II \\ CH_3 C (CH_2)_2 CH_3 \end{array}$

NH<sub>2</sub>

- (b) Explain the role and nutritional importance of carbohydrates.
- Q. 6 (a) Explain the fractional distillation of petroleum.
  - (b) Differentiate between the atomic emission and absorption spectra.