

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#1
T- Marks - 40	Subject: Chemistry	Time: 45 - M
مثبت سوچیں، خوش رہیں		
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں		
Q#1	Encircle the Correct Option	10X1=10

1. In group i-A charge to size ratio in a group

- | | | | | | | | |
|----------|----------|----------|----------|----------|-------------|----------|------|
| a | Decrease | b | Increase | c | Remain same | d | None |
|----------|----------|----------|----------|----------|-------------|----------|------|

2. Tin and lead are

- | | | | | | | | |
|----------|------------|----------|------------|----------|-----------------|----------|-----|
| a | Insulators | b | Conductors | c | Semi conductors | d | All |
|----------|------------|----------|------------|----------|-----------------|----------|-----|

3. Which group elements shows zero oxidation state

- | | | | | | | | |
|----------|----------|----------|----------|----------|---------|----------|--------|
| a | VIII - A | b | VIII – B | c | VII - A | d | VI - A |
|----------|----------|----------|----------|----------|---------|----------|--------|

4. In SnCl_4 the oxidation state of Sn is ?

- | | | | | | | | |
|----------|----|----------|----|----------|----|----------|----|
| a | +2 | b | -2 | c | -4 | d | +4 |
|----------|----|----------|----|----------|----|----------|----|

5. Non metallic character as atomic size increase .

- | | | | | | | | |
|----------|----------|----------|----------|----------|-------------|----------|------|
| a | Decrease | b | Increase | c | Remain same | d | None |
|----------|----------|----------|----------|----------|-------------|----------|------|

6. Second electron affinity of oxygen is

- | | | | | | | | |
|----------|-------|----------|-------|----------|------|----------|------|
| a | + 141 | b | + 744 | c | -141 | D | -744 |
|----------|-------|----------|-------|----------|------|----------|------|

7. Which of the following has highest ionization energy.

- | | | | | | | | |
|----------|---|----------|---|----------|---|----------|---|
| a | B | b | C | c | N | d | O |
|----------|---|----------|---|----------|---|----------|---|

8. Ionic Radius of F^- is .

- | | | | | | | | |
|----------|--------|----------|-------|----------|--------|----------|-------|
| a | 133 pm | b | 72 pm | c | 133 nm | d | 72 nm |
|----------|--------|----------|-------|----------|--------|----------|-------|

9. Which has highest Ionization energy .

- | | | | | | | | |
|----------|----|----------|---------------|----------|------------------|----------|------|
| a | Mg | b | Mg^+ | c | Mg^{++} | d | None |
|----------|----|----------|---------------|----------|------------------|----------|------|

10. Total periods in periodic table are .

- | | | | | | | | |
|----------|---|----------|---|----------|---|----------|----|
| a | 8 | b | 7 | c | 9 | d | 10 |
|----------|---|----------|---|----------|---|----------|----|

Q # 2

Short Questions

2X10 = 20

- Why the oxidation state vary in a period but remain constant in a group ?
- Why d and f – block elements are called transition elements ?
- How lanthanide contraction control the atomic sizes of elements of 6th and 7th periods ?
- Why diamond is a non conductor and graphite is fairly a good conductor .
- Why the second value of electron affinity is shown with positive sign .
- Why atomic radius decrease in a period.
- Define hydration energy with example
- Why ionic characters of halides decrease from left to right in a period?

9. What do you mean by metallic character ?
 10. Define electron affinity with example.

Q # 3	Long Questions	2 X 5 = 10
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1. Define ionization energy and explain it trends ?
 2. Explain melting and boiling points with trends .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#2
T- Marks - 40	Subject: Chemistry	Time: 45 - M
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں		
Q#1	Encircle the Correct Option	10X1=10

I. Which of the following is not an alkali metal ?

- a** Fr **b** Cs **c** Rb **d** Ra

II. The oxide of beryllium is ?

- a** Acidic **b** Basic **c** Amphoteric **d** None

III. The element calcium bears resemblance with ?

- a** Ca **b** Cr **c** Both **d** None

IV. Chile salt has chemical formula

- a** NaNO_3 **b** KNO_2 **c** $\text{Na}_2\text{B}_4\text{O}_7$ **d** None

V. Minerals $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ has the general name

- a** Dolomite **b** Gypsum **c** Calcite **d** Epsom salt

VI. Down cell is used to prepare

- a** Na_2Ca **b** NaHCO_3 **c** Na metal **d** All

VII. Solubility of sulphates of alkaline earth metals down the group .

- a** Decrease **b** Increase **c** Remain same **d** None

VIII. A saturated solution of in water is called lime water

- a** CaO **b** CaCO_3 **c** Ca(OH)_2 **d** None

IX. Alkaline earth metals show oxidation state.

- a** +1 **b** +2 **c** +3 **d** -2

X. Chemical formula of barite is .

- a** BaSO_4 **b** BaCO_3 **c** BaSO_3 **d** BaCO_2

Q # 2	Short Questions	11 X 2 = 20
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1. Why alkali metals are called so ?
 2. Write advantage of commercial preparation of Na metal in down cell .
 3. Why Be shows peculiar behavior.

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4. Draw diagram of down cell ?
5. Write formula of Beryl and sylvite .
6. What happen when LiOH is heated to red hot ?
7. Write reaction on cathode and anodic down cell ?
8. How sodium beryllate is produced ?
9. Write name of S block elements .
10. What happen when LiH is treated with water ?

Q # 3	Long Questions	2×5 = 10
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3. Explain commercial preparation of NaOH by the diaphragm cell?
4. Write a note on peculiar behavior of the lithium .

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سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#3	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Chemistry	Time: 45 - M	Obtained Marks:
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں			
Q#1	Encircle the Correct Option	10X1=10	

1. Basic acid is ?			
a	Weak base	b	Weak acid
c	Strong acid	d	Strong base
2. When basic acid is neutralized by soda ash is formed .			
a	H ₂ B ₄ O ₇	b	Na ₂ SO ₄
c	B ₂ O ₃	d	None
3. The geometry of H ² Bo ⁴ is .			
a	Triclinic	b	Cubic
c	Tetragonal	d	Hexagonal
4. Chemical formula of acid is			
a	H ₄ B ₉ O ₆	b	H ₃ B ₅ O ₈
c	H ₆ B ₄ O ₉	d	H ₄ B ₆ O ₉
5. The hydronic of borax is prevented in the presence of.			
a	Glycerin	b	Glycol
c	Glucagon	d	Glucose
6. Common oxidation States of boron are .			
a	+3	b	-3
c	Both	d	+1
7. Third most abundant element in earth crust is .			
a	Boron	b	Aluminum
c	Oxygen	d	Silicone
8. Which metal is used in the thermite process because of its reactivity ?			
a	Iron	b	Copper
c	Aluminum	d	Zine
9. Which element belong to IV – A group of the period table .			
a	Barium	b	Lead
c	Oxygen	Jd	Iodine
10. Chief are of aluminum is.			
a	Al ₂ O ₃ 2HO	b	Al ₂ O ₅ 2HO
c	Al ₇ O ₃ 2HO	d	None

Q # 2	Short Questions	12 2 = 20
	- Why boron shows peculiar behavior ? - How borax is produced from caluminate ? - What happen when borax is heated with $\text{NH}_4 \text{Cl}$? - What do you know about borax bead test ? - How does borax serve as water softening agent. - Gives the name and formulas and different acids and boron . - Give the name electronic configuration of group IV – A elements. - How will you convert boric acid into borax and vice versa. - What is the action of an aqueous solution of borax on litmus. - How does orthoboric acid react with $\text{C}_2\text{H}_5 \text{OH}$?	
Q # 3	Long Questions	2 X5 = 10

- Explain reaction of aluminum with ear non metals acid and alkaline .
- Write uses of aluminum .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#4
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Nitrogen and phosphorus give			
a	Acidic oxides	b	Basic oxides
c	Amphoteric	d	None
2. Common valencies of group V-A elements are .			
a	3	b	4
c	5	d	Both a and c
3. Which of the following is laughing gas ?			
a	NO_2	b	N_2O
c	NO	d	N_2O_3
4. Which gas is not combustible but resembles oxygen in rekindling a glowing splinter.			
a	N_2O	b	NO
c	NO_2	d	N_2O_5
5. Which oxide of nitrogen gives ring test .			
a	N_2O	b	NO
c	NO_2	d	None
6. Complete the reaction. $2\text{Pb} (\text{NO}_3) > 2\text{PbO} ? + \text{O}_2$			
a	N_2O	b	NO
c	NO_2	d	None
7. Phosphorus can exist in at least allomorphic forms			
a	Two	b	Three
c	Five	d	Six
8. Water contains nearly % oxygen.			

a	50%	b	89%	c	14%	d	¼th
9. Tellurium has allotropic forms .							
a	Two	b	Three	c	Five	d	Nine
10. Formula of stibnite is :							
a	Sb ₃ S ₂	b	Sb ₂ S ₃	c	Sb ₄ S ₃	d	None

Q # 2	Short Questions	13 2 = 20
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- How does aquaregiadissolve gold and platinum.
- How does nitrogen differ from other element of it's group?
- The structural formal of NO and N₂O₃ ?
- Write any method of preparation of NO₂ ?
- Which has is called laughing gas and why ?
- What are the oxyacid of nitrogen and draw their structural formula.
- Write one method of preparation of NHO₂.
- How NHO₂ act as an oxidizing agent .
- Write uses of NHO₃
- What do you about white phosphorus.

Q # 3	Long Questions	3 X 5 = 10
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- Explain manufacture of sulphuric acid .
- Explain properties of nitrous acid .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#5
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Obtained Marks:		
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Which hydrogen halides is the weakest acid in solution.							
a	HF	b	HCl	c	HBr	d	HI
2. The anhydride of HCl ⁴ .							
a	ClO ₃	b	ClO ₂	c	Cl ₂ O ₅	d	Cl ₂ O ₇
3. Which is the strongest acid .							
a	HClO	b	ClO ₂	c	HClO ₃	d	HClO ₄
4. Which halogen occurs naturally in positive oxidation State.							
a	Iodine	b	Bromine	c	Chlorine	d	Fluorine
5. Hydrogen bonds is the strongest between the molecules of.							
a	HF	b	HCl	c	HBr	d	HI
6. Which of the following is halite.							
a	KCl	b	NaCl	c	CsCl	d	KBr

7. The order of decreasing power as an oxidizing agent is :

- | | | | |
|--|--|--|--|
| a $\text{Cl}_2 > \text{F}_2 > \text{I}_2 > \text{Br}_2$ | b $\text{F}_2 > \text{Br}_2 > \text{Cl}_2 > \text{I}_2$ | c $\text{I}_2 > \text{Br}_2 > \text{Cl}_2 > \text{F}_2$ | d $\text{F}_2 > \text{Cl}_2 > \text{Br}_2 > \text{I}_2$ |
|--|--|--|--|

8. Which can oxidize various coloured dyes to colourless substances.

- | | | | |
|-----------------------|------------------------|------------------------|------------------|
| a F_2 | b Cl_2 | c Br_2 | d A and B |
|-----------------------|------------------------|------------------------|------------------|

9. HF is :

- | | | | |
|----------------|-----------------|--------------|-----------------|
| a Solid | b Liquid | c Gas | d Plasma |
|----------------|-----------------|--------------|-----------------|

10. Which is used for quantitative analysis of CO.

- | | | | |
|---------------------------------|---------------------------------|---------------------------------|--------------|
| a I_2O_5 | b I_2O_4 | c I_4O_9 | d All |
|---------------------------------|---------------------------------|---------------------------------|--------------|

Q # 2

Short Questions

10 2 = 20

1. What are the disproportionation reaction give examples?
2. Why halogens gain electron readily ?
3. Why does fluorine shows peculiar behavior ?
4. Fluorine remain restricted to -1 oxidation State.
5. Under what condition does aluminium corrode?
6. On which factors does the oxidizing power of halogen depends ?
7. What do you about Cl_2O_7 ?
8. What is per chloric acid ?
9. Why per chloric acid is used as 67% solution in water?
10. Why HF is weaker acid then HI ?

Q # 3

Long Questions

2 X 5 = 10

1. Write Beckmann's method for preparation of bleaching powder .
2. Explain properties of halogen halides.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#6	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Chemistry	Time: 45 - M	Obtained Marks:
Objective Type			
Q#1	Encircle the Correct Option		10X1=10

1. Valency shown by transition elements.

- | | | | |
|------------|------------|------------|-------------------|
| a 1 | b 2 | c 3 | d Variable |
|------------|------------|------------|-------------------|

2. Paramagnetic behavior is strongest for :

- | | | | |
|---------------------------|---------------------------|---------------|---------------|
| a Fe^{3+} | b Mn^{2+} | c Both | d None |
|---------------------------|---------------------------|---------------|---------------|

3. Covalent radii rapidly at start of series :

a	Decrease	b	Increase	c	Remain same	d	All
4. In first transition series increase in binding energy ends at :							
a	V	b	Mn	c	Zn	d	Cu
5. Which oxidation stake is shown by all elements of first transition series ?							
a	+1	b	+2	c	+3	d	+4
6. The solution of $[Ti(H_2O)_6]^{3+}$ looks in colour :							
a	Yellow	b	Pink	c	Violet	d	Blue
7. Group VI – B of transition elements contain :							
a	Zn,Cd,Hg	b	Cr,Mo,w	c	Mn,Te,Re	d	None
8. Which is non typical transition elements:							
a	Cr	b	Mn	c	Fe	d	Zn
9. Which is a typical transition element:							
a	Sc	b	Y	c	Re	d	Co
10. The strength of binding energy of transition elements depends upon :							
a	Number of electron pairs	b	Number of neutrons	c	Number of unpaired electron	d	None

Q # 2	Short Questions	10 2 = 20
	1. Define corrosion ? 2. What do you know about cathode coating ? 3. What are interstitial compounds ? 4. What do you know about typical and non typical transition elements ? 5. What are substitutional alloys ? 6. Write some properties of transition elements . 7. How the process of galvanizing protect iron from rusting ? 8. What is meant by d-d transition ? 9. How corrosion can be prevented ? 10. What are the outer transition elements?	
Q # 3	Long Questions	2 X 5 = 10

1. Explain electrochemical theory.
2. Write about the general characteristics of transition elements.
 - 1) Binding energies
 - 2) Para magnetism.
 - 3) oxidation State.
 - 4) covalent and ionic radii.

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#7
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. The chemist who synthesized urea from ammonium cyanate was :

a	Kolbe	b	Wohler	c	Lavoisier	d	None
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2. A double bond consists of :

a	Two pi bonds	b	Two sigma	c	One sigma one pi	d	None
----------	--------------	----------	-----------	----------	------------------	----------	------

3. Select which one is alcohol :

a	C_2H_5OH	b	CH_3-O-CH_3	c	CH_3COOH	d	All
----------	------------	----------	---------------	----------	------------	----------	-----

4. Linear shape is associated with hybridization :

a	sp_3	b	sp_2	c	sp	d	dsp
----------	--------	----------	--------	----------	------	----------	-----

5. Which set of hybrid orbitals has a triangular shape:

a	sp_3	b	sp_2	c	sp	d	d_2sp_3
----------	--------	----------	--------	----------	------	----------	-----------

6. State of hybridization in CH_4 is :

a	sp_3	b	sp_2	c	sp	d	d_2sp_3
----------	--------	----------	--------	----------	------	----------	-----------

7. Ethers and alcohols show isomerism :

a	Tautomerism	b	Functional group	c	Both	d	None
----------	-------------	----------	------------------	----------	------	----------	------

8. The diagram represents which compound :

a	Pyridine	b	Thiophene	c	Pyrrole	d	Furan
----------	----------	----------	-----------	----------	---------	----------	-------

9. Saturated alicyclic hydrocarbons have general formula :

a	C_nH_{2n+1}	b	C_nH_{2n}	c	C_nH_{2n-2}	d	None
----------	---------------	----------	-------------	----------	---------------	----------	------

10. Organic compounds are in water :

a	Insoluble	b	Soluble	c	Both	d	None
----------	-----------	----------	---------	----------	------	----------	------

Q # 2

Short Questions

10 2 = 20

1. Define catenation ?
2. What is valence force theory.
3. What do you mean by reforming ?
4. What are alicyclic compounds ?
5. Define functional groups give examples .
6. Write two features of organic compounds.
7. Define tautomerism and give examples.
8. What is cis-trans isomerism.
9. Why there is no free rotation around a double bond .
10. Define isomerism .

Q # 3

Long Questions

2 X 5 = 10

1. Explain sp hybridization with examples.
2. Explain cracking and its types.

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#8
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. For alkanes with more carbon atoms the root word is derived from the greek or Latin :

a 3 **b** 4 **c** 5 **d** 1

2. Alkanes also called :

a Olefins **b** Paraffin's **c** Acetylene **d** None

3. IUPAC names of $H_2C=CH-CH=CH_2$ is :

a 2,4- butadiene **b** 1,4-butadiene **c** 2,3-butadiene **d** None

4. Hydrogen lysis can be carried out in presence of :

a Pt/charcoal **b** Pcl- charcoal **c** Ni **d** None

5. Formula of chloroform:

a CH_3Cl **b** CCl_4 **c** $CH_2 Cl_2$ **d** $CHCl_3$

6. Synthetic rubber is made by polarization of :

a Chloroform **b** $CH=CH$ **c** Chloroprene **D** None

7. B-Dichloroethylsulphide is commonly known as :

a Mustard gas **b** Laughing gas **c** Phosgene gas **d** None

8. The presence of double bond in compound in sign of :

a Saturation **b** Unsaturation **c** Substitution **d** None

9. Which is used for artificial ripening of fruits:

a Ethene **b** Ethyne **c** Methane **d** Propane

10. Separation of vegetable ghee involves :

a Halogenation **b** Hydrogenation **c** Both **d** None

Q # 2

Short Questions

10 2 = 20

1. Write IUPAC names of the following.

- a) $CH_3 CH_2 (CH_3)_2 CH (CH_2 CH_3) CH_3$
- b) $(CH_3)_2 CH-CH-CH (CH_3)_2$

|
CH³

2. Compare the reactivities alkanes alkenes ,alkynes .
3. Prepare oxalic acid from ethyne.

4. What is hydration reaction of alkynes.
5. How ethyne is prepared from dehydrohalogenation of vicinal dihalide.
6. Why alkenes are so reactive .
7. Prepare alkenes from hydration of alcohols.
8. What is Clemmensen reduction.
9. Identify A and B ? $C_3H_7OH \xrightarrow{PCl_5} A \xrightarrow{Na} B$.

Ether

10. Convert 1-butene to 1-butyne.

Q # 3

Long Questions

2 X 5 = 10

1. Explain halogenation of alkanes and explain it step by step.
2. Explain acidity of alkynes .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2 nd Year	Ch#9
T- Marks - 40	Subject: Chemistry	Time: 45 - M
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں		
Q#1	Encircle the Correct Option	10X1=10

3.

1. C-C bond length in benzene is :

- | | | | | | | | |
|---|---------|---|--------|---|--------|---|------|
| a | 1-397 Å | b | 1.54 Å | c | 1.34 Å | d | None |
|---|---------|---|--------|---|--------|---|------|

2. Geometry benzene is :

- | | | | | | | | |
|---|-------|---|------------|---|-----------|---|------|
| a | Cubic | b | Tetragonal | c | Hexagonal | d | None |
|---|-------|---|------------|---|-----------|---|------|

3. Benzene was discovered by Michael Faraday in :

- | | | | | | | | |
|---|------|---|------|---|------|---|------|
| a | 1852 | b | 1825 | c | 1952 | d | 1925 |
|---|------|---|------|---|------|---|------|

4. Name of this compounds :

- | | | | | | | | |
|---|-------------|---|------------|---|--------------|---|------|
| a | Naphthalene | b | Anthracene | c | Phenanthrene | d | None |
|---|-------------|---|------------|---|--------------|---|------|

5. By distilling phenol with zinc dust is prepared :

- | | | | | | | | |
|---|--------|---|---------|---|--------------|---|---------|
| a | Xylene | b | Toluene | c | Bromobenzene | d | Benzene |
|---|--------|---|---------|---|--------------|---|---------|

6. Which of the following can be used as catalyst in Friedel-Crafts reaction:

- | | | | | | | | |
|---|-------------------|---|------------------|---|-------------------|---|------|
| a | AlCl ₃ | b | HNO ₃ | c | BeCl ₃ | d | NaCl |
|---|-------------------|---|------------------|---|-------------------|---|------|

7. Aromatic hydrocarbons are the derivatives of :

- | | | | | | | | |
|---|--------|---|---------|---|-------------|---|------|
| a | Alkene | b | Benzene | c | Cyclohexane | d | None |
|---|--------|---|---------|---|-------------|---|------|

8. During nitration of benzene the active nitrating agent is :

- | | | | | | | | |
|---|-----------------|---|-----------------|---|-----------------|---|------------------|
| a | No ₃ | b | No ₂ | c | No ₂ | d | HNO ₃ |
|---|-----------------|---|-----------------|---|-----------------|---|------------------|

9. Electrophile in aromatic sulfonation is :

- | | | | | | | | |
|---|--------------------------------|---|-------------------------------|---|-----------------|---|------|
| a | H ₂ SO ₄ | b | HSO ₄ ⁻ | c | SO ₃ | d | None |
|---|--------------------------------|---|-------------------------------|---|-----------------|---|------|

10. The conversion of n-hexane into benzene by heating in the presence of Pt is called:

- | | | | | | | | |
|---|---------------|---|---------------|---|--------------|---|------|
| a | Isomerization | b | Aromatization | c | Dealkylation | d | None |
|---|---------------|---|---------------|---|--------------|---|------|

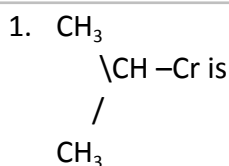
Q # 2	Short Questions	10 2 = 20
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1. What is side chain oxidation benzene.
2. How malic acid is prepared benzene.
3. Write mechanism for nitration of benzene.
4. Write mechanism for sulphonation of benzene.
5. Prepare benzyl chloride from toluene .
6. What is wurtz – fitting reaction.
7. Convert acetylene to benzene.
8. What are resonance structures.
9. What is meant by resonance energy.
10. Prepare benzene from n Hexane.

Q # 3	Long Questions	2 X 5 = 10
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1. Explain orientation in electrophilic substitution reaction.
2. Explain Friedel craft+ Alkylation and acylation.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#10	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Chemistry	Time: 45 - M	Obtained Marks:
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں			
Q#1	Encircle the Correct Option	10X1=10	



a	Primary alkylhalide	b	Secondary	c	Tertiary	d	None
2. Alkyl halides can be prepared by the :							
a	Halogenation of alkanes	b	Halogenation of alkenes	c	Halogenation alkynes	d	None
3. Those reaction of alkyl halides which involve the removal of HX from alkyl halide :							
a	Elimination reaction	b	Substitution reaction	c	Both	d	None
4. Iodide ion is a good nucleophile as well as :							
a	Bad leaving group	b	Good leaving group	c	Both	d	None

5. In primary alkyl halide the halogen atom is attached to a carbon atom which is attached to carbon atom :

a 2 b 3 c 4 d 1

6. When CO_2 made to react with ethyl magnesium iodide : Followed by acid hydrolysis the product is :

a C_3H_8 b $\text{CH}_3\text{CH}_2\text{COOH}$ c $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ d None

7. Which is not a nucleophile :

a H_2O b H_2S c BF_3 d NH_3

8. E_2 reaction shows order :

a 1 b 2 c 3 d 4

9. Primary alkyl halides follow:

a Sn_2 b Sn_1 c Both d None

10. Carbocation intermediate is formed in :

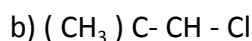
a SN_2 b E_2 c SN_1 d None

Q # 2

Short Questions

10 2 = 20

- What are the tertiary alkylhalides. 2 Write method of preparation of alkyl iodide .
- Define nucleophile .
- What is leaving group.
- How ethylethioalcohol is prepared from bromoethene.
- Write reaction of methyl and ethyl chloride with Na^+ pb ?
- What do you mean by wurtz synthesis?
- Write any method of preparation of alkyl halide from alcohol.
- How $(\text{CH}_3 - \text{CH}_2) \text{N}^+$ is produced from $\text{CH}_3 - \text{CH}_2 - \text{Br}$?
- Write IUPAC names.



Q # 3

Long Questions

2 X 5 = 10

- Explain SN_1 reaction and mechanism .
- Explain B- Elimination reaction.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#11	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Chemistry	Time: 45 - M	Obtained Marks:
ٹیسٹ سے پہلے کم از کم تین بار درد شریف پڑھ لیں			
Q#1	Encircle the Correct Option		10X1=10

1. Alcohol and phenol are considered as hydroxyl derivative of :

a Alkanes b Benzene c Both d Alkenes

2. Contains two three or more OH group:

a Monohydric b Polyhydric alcohol c Both d None

3. Optimum temperature for fermentation is :

a	20-35° C	b	25-30° C	c	25-35° C	d	None
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4. Alcohol obtained by fermentation is only:

a	10%	b	11%	c	12%	d	13%
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5. If a nucleophile attacks which bond break :

a	C-O	b	O-H	c	C-H	d	None
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6. Alcohol are resistant to oxidation :

a	Primary	b	Tertiary	c	Secondary	D	All
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7. Which enzyme is not involved in the fermentation of starch :

a	Diastase	b	Enzyme	c	Urease	d	Invertase
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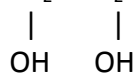
8. Which compound have maximum repulsion with water ?

a	C ₆ H ₆	b	C ₂ H ₅ OH	c	CH ₃ CH ₂ CH ₂ OH	d	All
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9. Which compound shows hydration bonding :

a	C ₂ H ₆	b	C ₂ H ₅ Cl	c	CH ₃ -O-CH ₃	d	C ₂ H ₃ OH
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10 CH₂ - CH₂ is named as :



a	Glycerol	b	Glycerin	c	Glucagon	d	Glycol
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Q # 2

Short Questions

10 2 = 20

1. What is Dow's method?
2. Write physical properties of phenol ?
3. Why phenol is acidic ?
4. What is Lucas test ?
5. Why products of dehydration of alcohol at different temperature .
6. Which products are formed when tertiary alcohol is oxidized .
7. Write order of reactivity of alcohol when O-H and C-O bond breaks .
8. What is Nitration of phenol .
9. Prepare Aspirin from phenol.
10. Differentiate between ethanol and methanol with the help of a test .

Q # 3

Long Questions

2 X 5 = 10

1. Write reaction in which C-O and O-H bond breaks .
2. Explain reaction of phenol due to benzene ring .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#12
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Objective Type		
Obtained Marks:		

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Q#1	Encircle the Correct Option	10X1=10
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1. ____ group is present camphor :

a	Aldehyde	b	Ketonic	c	Carboxylic	d	Alcohol
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2. ____ is prepared by the distillation of calcium acetate :

a	Propanone	b	Butanone	c	Acetone	d	Both A+C
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3. Reaction is used to separate carbonyl compounds from non carbonyl compounds:

a	Addition of Grignard reagent	b	Addition of HCl	c	Addition of sodium bisulphite	d	None
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4. Sodium nitroprusside is shown by :

a	Ketone	b	Aldehyde	c	Alcohol	d	None
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5. Aldehyde the first oxidation product of :

a	Primary alcohol	b	Secondary alcohol	c	Tertiary alcohol	d	Quaternary
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6. The carbon atom is carbonyl group is :

a	Sp-hybridized	b	Sp ₃	c	Sp ₂	d	(d) none
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7. Which is the highest boiling point :

a	CH ₃ -OH	b	Ethanol	c	Propanone	d	2-hexanone
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8. Formalin in :

a	10% water	b	40% formaldehyde	c	Both	d	None
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9. Aldehyde are strong agent :

a	Reducing	b	Oxidizing	c	Both	d	None
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3 10. C₆ H₅ -C''-CH₃ is :

a	Butanone	b	2-heptanone	c	Acetophenone	d	None
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Q # 2	Short Questions	10 2 = 20
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- What is iodoform test ?
- How metaformaldehyde and paraldehyde is produced .
- How acetone 2,4- DNPH is produced .
- Write four uses of Acetaldehyde .
- What is tollens test ?
- What do you know about oxidation of ketones .
- Write mechanism of reduction with sodium borohydride.
- Write mechanism of the reaction with ammonia derivative.
- Write mechanism of reaction with sodium bisulphite.
- What is cannizzaro reaction.

Q # 3	Long Questions	2 X 5 = 10
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- Explain Aldol condensation .
- Explain haloform reaction.

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#13
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Obtained Marks:		
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں		
Q#1	Encircle the Correct Option	10X1=10

1. Chemical formula of stearic acid :

- a** C₁₇ H₃₄ COOH **b** C₁₈ H₃₅ COOH **c** C₁₇ C₃₄ COOH **d** None

2. The irritation caused by an ant bite is due to :

- a** Formic acid **b** Acetic acid **c** Propionic acid **d** All

3. Hydrolysis of an alkene atrial on heating with a mineral acid or alkalis yield.

- a** Aldehyde **b** Ketone **c** Alcohol **d** Carboxylic acid

4. Malting point of botanic acid is :

- a** -22° C **b** -6°C **c** -36°C **d** -18°C

5. What is the flavour of Amy lactate :

- a** Apple **b** Banana **c** Apricot **d** None

6. Carboxylic acid an reduction with red phosphorus give:

- a** Alkanes **b** Alkenes **c** Alcohol **D** Alkynes

7. Which is not a fatty acid :

- a** Propionic acid **b** Acetic acid **c** Phthalic acid **d** None

8. Which acid is used in the manufacture of synthetic fiber :

- a** Formic acid **b** Oxalic acid **c** Carbonic acid **d** None

9. Which reagent is used to reduce a carboxylic group to an alcohol :

- a** H₂/Ni **b** H₂/pt **c** NaBH₄ **d** LiAlH₄

10. Acetic acid manufactured by :

- a** Distillation **b** Fermentation **c** Zonolysis **d** All

Q # 2

Short Questions

10 2 = 20

- What do you know about the boiling points of carboxylic acids.
- How carboxylic react with carbonates .
- How carboxylic acid is prepared by hydrolysis of ester .
- Prepare carboxylic acid from Grignard reagent.
- Which compound produced by oxidative cleavage of alkenes.
- Write mechanism of reaction of carboxylic acids with SOCl₂.
- Write four uses of acetic acid.
- Prepare acetic acid on industrial scale from acetylene.

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9. Write physical properties of acetic acid.
 10. How acetic anhydride is produced.

Q # 3	Long Questions	2 X 5 = 10
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1. Explain mechanism of formation of Ester.
 2. Explain mechanism of formation of amide

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#15
T- Marks - 40	Subject: Chemistry	Time: 45 - M
Obtained Marks:		
ٹیسٹ سے پہلے کم از کم تین بار درود شریف پڑھ لیں		
Q#1	Encircle the Correct Option	10X1=10

1. Which elements are needed for healthy growth of plants.			
a	N,S,P	b	N,Ca,P
c	N,P,K	d	N,K,C
2. The nitrogen present in some fertilizer helps plant.			
a	To fight again disease	b	To produce protein
c	To produce fat	d	To undergo photosynthesis
3. Phosphorus helps growth .			
a	Root	b	Leaves
c	Stem	d	Seed
4. Micro nutrients are required in quantity ranging from :			
a	4-40g	b	6-200g
c	6-200kg	d	4-40kg
5. Which is not a calcarious materials :			
a	Clay	b	Lime
c	Marble	d	Marine shell
6. Through how many zones does the charge pass in rotany kiln :			
a	4	b	3
c	2	D	5
7. For which crop ammonium nitrate fertilizer is not used ?			
a	Cotton	b	Wheat
c	Sugar can	d	Paddy rice
8. The temperature of decomposition zone goes upto :			
a	600°C	b	900°C
c	1000°C	d	1200°C
9. Ammonia contains % nitrogen:			
a	82%	b	33-33.5%
c	46.46%	d	None
10. Manure is an material used to fertilize land :			
a	Plant	b	Animal
c	Fungus	d	None

Q # 2	Short Questions	10 2 = 20
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1. Differentiate between macro nutrients and micro nutrients.

2. What are good qualities of good fertilizer.
3. What is cement?
4. What do you know about ammonia as fertilizer.
5. What are raw material used for manufacture of cement.
6. What do you know about potassium fertilizer.
7. What is prilling?
8. What do you know about diammoniumphosphate.
9. Write composition of cement.
10. What is slurry .

Q # 3

Long Questions

2 X 5 = 10

1. Explain manufacturing of urea .
2. Explain manufacturing of cement.