2017 (A)


SSC PART-I (9th CLASS)


TIME ALLOWED: 1.45 Hours
MAXIMUM MARKS: 48
SUBJECTIVE

邁 $1.45=$ ت $48=36$

NOTE: - Write same question number Ht and its part number on answer book, as given in the question paper.

## SECTION-I حصاول

## 2. Attempt any five parts.

(i) Define Chemical Formula with examples.
(ii) Differentiate between Atom and Ion.
(iii) Write two properties of Canal Rays.
(iv) Write the Electronic Configuration of Argon (At No =18) and Boron (At No =5).
(v) Define Isotopes. Give examples.
(vi) What is meant by Electronegativity?
(vii) Briefly describe the trend of Atomic Radius in a group.
(viii) Define Period and Group.
3. Attempt any five parts.

## $10=2 \times 5$

(i) Why a Dipole develops in a Molecule?
(ii) What are the Van der Walls Forces?
(iii) What is a Dative Covalent Bond?
(iv) Why does ice float over water?
(v) Convert $-30^{\circ} \mathrm{C}$ to Kelvin Temperature.
(vi) What is Diffusion? Give one example.
(vii) Differentiate between Evaporation and Boiling Point.
(viii) Define Boyle's Law of Gases.
4. Attempt any five parts.
(i) What do you meanby"Like dissolves like"?
(ii) Why do we stir paints thoroughly before using?
(iii) Differentiate between Strong and Weak Electrolytes.
(iv) Why Steel is plated with Nickel electroplating before the electroplating of Chromium?
(v) Why an Iron grill is painted frequently?
(vi) Why Copper is used for making Electrical Wires?
(vii) Why Magnesium is harder than Sodium?
(viii) Why does Electropositivity increase from top to bottom in a group?
$10=2 \times 5$
-- UN (i)




- V (v)

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## SECTION -II [3, D

NOTE: - Attempt any two questions.
5.(A) Explain types of Molecules in detail. 5
(B) Explain results of the experiment of Rutherford's Atomic Model. 4
6. (A) Define Ionic Compound with an example. Give its properties.
(B) Describe Solid state of Matter. Explain its various properties,
7.(A) Define Molarity.

 Write its unit and write its formula to prepare Molar solution.
(B) Discuss the construction and working of the cell in which


## NUMBER： 1481

SSC PART－I（9th CLASS）

## CHEMISTRY（NEW SCHEME）GROUP－I（2015－2017＊）

TIME ALLOWED： 15 Minutes

## MAXIMUM MARKS： 12

$\therefore 15=\pi$
$12=7.5$

リ－
Note：You have four choices for each objective type question as $A, B, C$ and $D$ ． The choice which you think is correct，fill that circle in front of that question number．Use marker or pen to fill the circles．Cutting or filling two or more circles will result in zero mark in that question．Attempt as many questions as given in objective type question paper and leave others blank．No credit will be awarded in case BUBBLES are not filled．Do not solve question on this sheet of OBJECTIVE PAPER．

## Q．No． 1

（B）Oxygen
（C）Aluminium
（D）Iron 0

$$
\begin{equation*}
-\pi x+14\left(-\frac{1}{4}\right) \text { rna } \tag{2}
\end{equation*}
$$

（2）One amu（Atomic Mass Unit）is equivalent to：－
（C） $1.66 \times 10^{-23} \mathrm{~g}$
（D） $1.66 \times 10^{-24} \mathrm{~kg}$
（A） $1.66 \times 10^{-24} \mathrm{mg}$
（B） $1.66 \times 10^{-24} \mathrm{~g}$

（3）Isotopes of Hydrogen are：－
（A）One
（B）Two,
（C）Three
ت
（D）Four of
（4）Modern Periodic Table consists of：
（A）Two blocks $\mathcal{J}$
（B）Three blocks $\mathcal{v}$
（C）Four blocks $\cup 1$
（D）Five blocks $-4 v^{*}$
$-4 \cos ^{3} 6 \%{ }^{2}$
（5）Alkali metals belong to：－

（A）inst group $=\underset{7}{ }$ ）
（B）Ind group $\leq$ ，
（6）Molecule with Double Covalent Bond is：－

（A） $\mathrm{H}_{2}$
（B） $\mathrm{O}_{2}$
（C） $\mathrm{N}_{2}$
（D） $\mathrm{C}_{2} \mathrm{H}_{2}$
－Cunstroju $\qquad$
（7） $\qquad$ is an example of Amorphous Solid．
（A）Sodium Chloride $2 \% 1,5 ;=$
（B）Diamond S＇H
（8）Air is an example of a Solution of：－
（A）Liquid in gas Sưu゙年
（B）Gas in gas $\mathfrak{r}^{5} \cup \downarrow$
（3）Solid in gas $\mathrm{U}^{2} \mathrm{H}$
（D）Glucose is
－ب ل U $\qquad$ In
（D）Gas in liquid $\cup \leq$ un c
（9）Mil of Magnesia is an example of：－

$$
\begin{equation*}
-\downarrow^{2} \sim 6 \tag{9}
\end{equation*}
$$

（A）Solution $4^{5}$
（B）True solution $e^{4}+\sqrt[y]{t}$
（C）Colloids ；isis
（D）Suspension $w^{3-}$
（10） $\qquad$ is a weak electrolyte．
（A） NaCl
（B） $\mathrm{Ca}\left(\mathrm{OH}_{12}\right.$
（C） NaOH
（D） $\mathrm{H}_{2} \mathrm{SO}_{4}$

$$
\begin{equation*}
-4 \tag{10}
\end{equation*}
$$

（11）The gas collected at Cathode is：－

$$
\begin{equation*}
\text { (D) } \mathrm{O}_{2} \tag{11}
\end{equation*}
$$

（12）
（A） $\mathrm{Cl}_{2}$
（B） $\mathrm{O}_{3}$
（C） $\mathrm{H}_{2}$
（A）Sodium fo，
（B）Potassium $\stackrel{\text { F }}{\text { B }}$ ，
（C）Calcium or
（D）Magnesium

TIME ALLOWED: 1.45 Hours

SUBJECTIVE
Er $1.45=\ddot{\#}$
MAXIMUM MARKS: 48
$48=\lambda$
 and its part number on answer book, as given in the question paper.

## SECTION-1 حصاول

## 2. Attempt any five parts.

$10=2 \times 5$
(i) State Nuclear Chemistry and Analytical Chemistry.
(ii) Define Valency with an example.
(iii) Write two differences of Bohr's Atomic Theory and
Rutherford's Atomic Theory.
(iv) Write any two properties of the Positive Rays.
-

(vi) What is the trend of Ionization Energy in a Period?

(vii) Define Electronegativity. Also write Electronegativity of Chlorine.
-
(viii) State Shielding Effect. Write its trend in Period.

## 3. Attempt any five parts. <br> $10=2 \times 5$

- 

(i) What is the difference between Duplet and Octet Rule?
?
©
(ii) Why Boiling Point of Water is higher than that of Alcohol?
(iii) Why Noble Gases are Non-reactive?


(iv) Write down two properties of Non-polar Compounds.

(v) Define Diffusion and give an example.
(vi) Write down the names of Allotropic forms of Phosphorus and Sulphur.
(vii) Define Boyle's Law.
-
(viii) Why Evaporation causes Cooling?
4. Attempt any five parts.
$10=2 \times 5$

(i) Define Electrolysis.

(ii) Define Tyndall Effect. - Ext
-
(iii) Differentiate between Oxidizing Agents and Reducing Agents.
(iv) Briefly describe the process of Tin Coating.
(v) Find out the Oxidation number of Sulphur in $\mathrm{Na}_{2} \mathrm{SO}_{4}$.
(vi) Why Metallic Character decreases along a Period
 from left to right in a Periodic Table?
(vii) How will you compare the Electropositivity
 of Alkali Metals and Alkaline Earth Metals?
(viii) Write chemical reaction of Sodium with Oxygen.
-

## SECTION -II [OM

## NOTE: - Attempt any two questions.

()
5.(A) Explain types of Molecules with examples.

5

(B) Describe the Isotopes of Hydrogen and Carbon with diagram. 4 -
6.(A) State and explain Coordinate Covalent Bond 5 6 with examples.
(B) What is Vapour Pressure?

4 How it is affected by different factors?
7.(A) Define Solubility and explain general principle of Solubility.
(B) Write down the rules for assigning the Oxidation state.


 TIME ALLOWED： 15 Minutes

$\therefore 15=-7$,
MAXIMUM MARKS． 12
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Note：You have four choices for each objective type question as A，B，C and D．． The choice which you think is correct，fill that circle in front of that question number．Use marker or pen to fill the circles．Cutting or filling two or more circles will result in zero mark in that question．Attempt as many questions as given in objective type question paper and leave others blank．No credit will be awarded in case BUBBLES are not filled．Do not solve question on this sheet of OBJECTIVE PAPER．

## Q．No． 1

（1）Mass number of an Element is represented by： －cublabitucun
（A）$Z$
（B）$A$
（C） N
（D） K
（2）The Empirical formula of Glucose is：－

$$
\begin{equation*}
-4 \tag{2}
\end{equation*}
$$

（A） $\mathrm{H}_{2} \mathrm{CO}_{3}$
（B） CH
（C） $\mathrm{CH}_{2} \mathrm{O}$
（D） HO
（3）M Shell can accommodate number of electrons－
-
（A） 32
（B） 18
（C） 08
（D） 02
（4）The elements which are present on the extreme left side of the periodic table are called．
（A）A Mall metals

（C）Halogen group
（D）Noble gases $-\sim$－ 5
（5）The number of elements in Sixth Period is：－
-
（A） 8
（B） 18
（C） 22
（D） 32
（6）Hydrogen bond is represented by：－
（A）Dotted lIre $C$ utu， Bis $^{2}$
（B）Single line $=$ ：
（C）Double lines $二 厶!$ ：
（D）Triple lines $ニ$ ri
（7）The unit of Pressure is：－

$$
\begin{equation*}
- \text { - } \tag{7}
\end{equation*}
$$

（A）Joule $J_{2}$
（B）Pascal i＂；
（C）Ampere 姑
（D）Gram pis
（8）Butter is an example of Solution：－


- culactron

（9）Sea water is a resource of naturally occurring elements：－
- 

（A） 43
（B） 63
（C） 71
（D） 92
（10）The chemical formula of Rust is：－
－ 4 Hm，
（A） $\mathrm{FeSO}_{4} \cdot 10 \mathrm{H}_{2} \mathrm{O}$
（B） $\mathrm{Fe}_{2} \mathrm{O}_{3} \cdot \mathrm{AlCl}_{2}$
（C） $\mathrm{Fe}_{2} \mathrm{O}_{3} \cdot \mathrm{nH}_{2} \mathrm{O}$
（D） $\mathrm{Fe}(\mathrm{OH})_{3} \cdot 4 \mathrm{H}_{2} \mathrm{O}$
（11）The oxidation number of Nitrogen in Nitric $\mathrm{Acd}\left(\mathrm{HNO}_{3}\right)$ is：－
（A）+5
（B）+4
（C）+3
（D）+2
（12） $\qquad$ metal is brittle．
$\qquad$
（A）Magnesium
（B）Barium is
（C）Aluminum $\mathrm{B}_{\mathrm{Cz}}$
（D）Sodium（－ir

OBJECTIVE KEY FOR S.S.C ( $1 \mathrm{H}^{-6} / 9$ h) Annual Examination, 2017. Name of Subject Chemistry

Croup: lIst


Session 2015-2017
Group: 2nd


## SSC PART－I（9th CLASS）



CHEMISTRY（OLD SCHEME）GROUP－I（ 2012－2014＊＊）

TIME ALLOWED： 2.45 Hours
SUBJECTIVE
薙 $2.45=$ ， $63=76$

## MAXIMUM MARKS： 63

NOTE：－Write same question number and its part number on answer book，as given in the question paper．

## SECTION－I حصـد

2．Attempt any five parts．
（i）Define Organic Chemistry．
（ii）Differentiate between Matter and Substance．
（iii）Write the symbols of the following elements：－
$10=2 \times 5$

（i）

 Calcium（i） ؟必机
（iv）What is meant by Electronic Configuration？
＜Ur

¢

－
（i）Define Covalent Bond and write the names of
$12=2 \times 6$
－会 its types．
（ii）Why does Ice float on liquid water？

（iii）Why Ionic compounds are
Q． good conductor of electricity in solution or in fused state？
（iv）Define Standard Atmospheric Pressure．

> تئ
（v）What is meant by Rigidity of Solids？
化
（vi）Define Effusion．Also write its one example．
（vii）Write down the chemical properties of Metals．
－U．


 －
4．Attempt any five parts．

$$
10=2 \times 5
$$

（i）Define Unsaturated Solution．
（ii）What is meant by Mass／Volume Percentage？
（iii）Define Colloid and write its two examples．
（iv）Why Benzene and Petrol are insoluble in Water？
（v）Define Oxidation on the basis of
芜
 ..... （i）
－ Electronic concept and write its one example．
（vi）Define Redox reaction and write one example．

（vii）Determine the Oxidation number of Nitrogen in $\mathrm{HNO}_{3}$ ．
（viii）Define Oxidising Agent．
 （ $\left.{ }^{2}, ~ J, ~\right)$

## SECTION－II

NOTE：－Attempt any three questions．
5．（A）Differentiate between Molecule and 4
Molecular Ion at least with four points．
（B）Write three differences between Compound and Mixture． 3 （ب）
6．（A）Write four properties of Canal Rays．
4

（B）Define Electron Affinity． 3 －（ب） Describe its trend in group and period．

4 7
7．（A）Define Hydrogen Bonding．Explain that how these forces affect the physical properties of compound？
（B）Differentiate between Crystalline solids 3 －－ك（ب） and Amorphous Solids．

8．（A）What is Electroplating？ Write down its procedure in detail．
（B）Write three uses of Sodium．

4


9．（A）Differentiate between Suspension and Colloid． 4 －9－（الف） 3 （ 3 （ب）＂Like dissolves Like＂（ب）
（B）What is meant by＂Like dissolves Like＂？Explain with examples．

## SECTION－III

10．NOTE：－Attempt any two parts． $5+5$
2
会：\％
（A）（i）Write down the apparatus required to determine the boiling point of Ethyl Alcohol．
（ii）Write down the procedure to 3
observe sublimation process by using Ammonium Chloride．
（B）（i）Write down the apparatus required for the preparation of $100 \mathrm{~cm}^{3}$ of 0.1 M Sodium Carbonate $\left(\mathrm{Na}_{2} \mathrm{CO}_{3}\right)$ solution．

$$
\begin{equation*}
3 \text { - } \tag{ii}
\end{equation*}
$$

（ii）Write down the procedure to separate the mixture of Alcohol and Water by distillation．
（C）（i）Write down the apparatus required to prepare $100 \mathrm{~cm}^{3}$ solution of 0.01 M from given 0.1 M Hydrochloric Acid solution．

$$
3 \text { - - 会 }
$$

（ii）Write the procedure for the preparation of Pure Copper Sulphate Crystals from the given Impure Copper Sulphate．

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MAXIMUM MARKS: 12
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Ul -
Note: You have four choices for each objective type question as $A, B, C$ and $D$. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.
Q. No. 1
(1) Empirical formula of Hydrogen Peroxide is:-

(A) HO
(B) $\mathrm{H}_{2} \mathrm{O}$
(C) $\mathrm{HO}_{2}$
(D) $\mathrm{H}_{2} \mathrm{O}_{2}$

$$
\begin{equation*}
-4 \mathrm{u}^{\prime} /-6 \mathrm{H}_{2} \mathrm{SO}_{4} \tag{2}
\end{equation*}
$$

(A) 98 g
(B) 98 amu
(C) 9.8 g
(D) 9.8 amu
(3) The maximum number of Electrons in L-Shell is:-
(D) 32
(A) 2
(B) 8
(C) 18
(A) 8
(B) 9
(C) 18
(D) 27
(Triads)
(5) The concept of Triads was presented by:-
(A) Dobereiner $\overline{\text { Al ks }}$
(B) Newlands

(6) The compound which is ron-directional in bonding is:-
(A) $\mathrm{CH}_{4}$
(B) KBr
(C) $\mathrm{CO}_{2}$
(D) $\mathrm{H}_{2} \mathrm{O}$
(7) Blood pressure of a healthy person is:-
(D) $150,70 \mathrm{mmHg}$
(8) Solution which has more water is:-

-     - 

(A) 4 M
(B) 2 M
(C) 0.50 M
(D) 0.25 M
(9) A Universal Solvent on Earth is:-

$$
\begin{equation*}
- \text { - } \tag{9}
\end{equation*}
$$

(A) Ether $P$
(B) Ammonia
(C) Alcohol WWI
(D) Water is
(10) Oxidation number of Hydrogen in HCl is:-

- Cf
(A) +1
(B) -1
(C) Zero
(D) -2
(11) The chemical formula of Rusting is:-

(A) $\mathrm{Fe}_{3} \mathrm{O}_{4}$
(B) $\mathrm{Fe}_{2} \mathrm{O}_{3} \cdot \mathrm{HH}_{2} \mathrm{O}$
(C) $\mathrm{Fe}(\mathrm{OH})_{3}$
(D) $\mathrm{Fe}^{\prime}(\mathrm{OH})_{3} \cdot \mathrm{nH}_{2} \mathrm{O}$
(12) The Lustrous non-metal is:-
 $\qquad$
(A) Sulphur $户$
(B) Carbon



## SSC PART-I (9th CLASS)



TIME ALLOWED: 2.45 Hours
MAXIMUM MARKS: 63

$$
\begin{aligned}
& \text { 些 } 2.45=\text {, } \\
& 63=5
\end{aligned}
$$

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

## SECTION-I حصراول

## 2. Attempt any five parts.

$10=2 \times 5$
(i) Define Atomic Number and give two examples.
 - (ii)
(ii) Write Electronic Configuration of Carbon.

- كِّهُ (iii)
(iii) Define Cations and Anions.

Give one example in each.
(iv) For what purpose U-235 is used?
?
(v) Differentiate between Shell and Subshell with examples of each. -
(vi) Define Isotope with an example.

- (
(vii) Define Electron Affinity.

(viii) Define Period and Group.

3. Attempt any six parts.
$12=2 \times 6$
(i) Why Water has Polar Covalent Bond?
(ii) Define Octet Rule.
(iii) Write two properties of Metals.
(iv) Density of Gases is less than Liquids. Why?
(v) Convert 700 mmHg into atm.
(vi) Evaporation causes Cooling. Why?
(vii) Write two uses of Sodium.
(viii) Write down the reaction of Magnesium with Oxygen.
(ix) Why the Alkali Metals are Reactive?
4. Attempt any five parts.
(i) $10=2 \times 5$
(i) What is the reason for the difference between Solutions, Colloids and Suspensions?
(ii) How will you explain the $\quad$ Eu Solute - Solvent interaction to prepare a NaCl solution.
(iii) Justify with an example that solubility of a salt increases with the increase in temperature.
(iv) Why is $\mathrm{O}_{2}$ necessary for rusting?

$$
\begin{equation*}
؟<\text { © } \tag{iii}
\end{equation*}
$$

(v) Which products are produced in Nelson's Cell?


(vi) Differentiate between Strong and Weak Electrolytes.
§
(vii) What is the nature of Cathode used in Electroplating of Chromium?
(viii) Why an Iron grill is painted frequently?

؟


## NOTE：－Attempt any three questions．

（B）Write down the chemical formulas of the following：－ 3 （ب）



6．（A）Write any four uses of Isotopes．
（B）Write the features of Modern Periodic Table．

7．（A）Explain Coordinate Covalent Bond with examples．
（B）Explain what are the factors on which diffusion of liquid depends upon？

3 －

8．（A）Define Electroplating． Explain the Electroplating of Silver．
（B）Describe three uses of Sodium．

9．（A）Explain the process of dissolution of 4 Sodium Chloride in water．
（B）Explain three points 3 of general principle of Solubility＂Like dissolves like＂．

## SECTION－III



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10．NOTE：－Attempt any two parts． $5+5$
 －登
（A）（i）Write down the apparatus to demonstrate Sublimation using Ammonium Chloride．
 the melting point of the Naphthalene．
（B）（i）Write down the material required to separate Naphthalene from a given mixture of Sand and Naphthalene by sublimation．
 procedure to prepare $100 \mathrm{~cm}^{3}$ of 0.1 M Sodium Hydroxide $(\mathrm{NaOH})$ solution．

$$
\begin{equation*}
2 \text {-U系納に, } \tag{i}
\end{equation*}
$$

（C）（i）Write down the required material to prepare $100 \mathrm{~cm}^{3}$ of 0.01 M Oxalic acid solution from the given 0.1 M soluiton．
（ii）Write the procedure to prepare $100 \mathrm{~cm}^{3}$ of 0.1 M

$$
3-u_{n}\left\{\sum^{3}\right.
$$

Sodium Hydroxide $(\mathrm{NaOH})$ solution from given 1 M solution．

## 

TIME ALLOWED： 15 Minutes
MAXIMUM MARKS： 12 OBJECTIVE حـدرْتى
－ $15=$ ت $12=3$
A．
 Note：You have four choices for each objective type question as A，B，C and D．－ The choice which you think is correct，fill that circle in front of that question number．Use marker or pen to fill the circles．Cutting or filling two or more circles will result in zero mark in that question．Attempt as many questions as given in objective type question paper and leave others blank．No credit will be awarded in case bubbles are not filled．Do not solve question on this sheet of OBJECTIVE PAPER．

## Q．No． 1

（1）The atomic number of Aluminium is：－
$-4 \therefore$ Cor
（A） 10
（B） 11
（C） 12
（D） 13
（2）The number of elements in Fourth Period is：－
（A） 08
（B） 18
（C） 32
（D） 23
－ب ا
（3）Covalent Bond is present：in $\mathrm{C}_{2} \mathrm{H}_{2}$
（A）Single for
（B）Double U＇s $^{\text {f }}$
（C）Triple $V_{?}$
（D）Coordinate 3 退；T\％

$$
\begin{equation*}
-\uparrow \text { C } 4 \tag{3}
\end{equation*}
$$

（4）The density of $\mathrm{O}_{2}$ gas at $20^{\circ} \mathrm{C}$ is：－
（A） $1.4 \mathrm{gdm}^{-3}$
（B） $1.5 \mathrm{gcm}^{-3}$
（C） $1.8 \mathrm{gdm}^{-3}$
（D） $1.0 \mathrm{gdm}^{-3}$
ب
（5）Butter is an example of a solution of：－
（A）Liquid in liquid Cैlじél
（C）Solid in liquid

$$
\begin{equation*}
\text { (B) Liquid in solid } \mathcal{U} \cup \cup \cup \geqslant \tag{5}
\end{equation*}
$$


（D）Solid in solid
（6） $\qquad$ is heterogeneous mixture

$$
\begin{equation*}
-4 \overbrace{}^{6}{ }^{6} \tag{6}
\end{equation*}
$$

（A）Milk ae，＂
（B） $1 n k$
（C）Sugar solution
（D）Milk of Magnesia
（7）The formula of Aluminum Oxide is：－
（A） $\mathrm{AlO}_{3}$
（B） $\mathrm{Al}_{2} \mathrm{O}_{3}$
（C） $\mathrm{Al}_{2} \mathrm{O}_{5}$
（D） AlO
（8）The formation of water from $\mathrm{O}_{2}$ and $\mathrm{H}_{2}$ is a type of chemical reaction：－
（A）Redon（it，
（B）Decomposition $\mathrm{N}^{4 \times}$

（D）None of these $\mathcal{\sim}$
（9）The extremely used metal is：－
-
（A）Cesium $\mathrm{f} \mathrm{\%}$
（B）Iron 0．7
（C）Lead
（D）Silver
（10）The percentage value of $\mathrm{O}_{2}$ by weight in atmosphere is：－
ك
（A） $86 \%$
（B） $47 \%$
（C） $78 \%$
（D） $21 \%$
（11）The element which is present in liquid state at room temperature is：－

（A）Nitrogen $ن^{2}, 4$
（B）Chlorine
（C）Bromine

（12）Neil Bohr presented the Atomic Model in：－

（A）U 1915
（B） 1927
（C）山 1892
（D）$\cup \mathbb{L} 1913$


