General Science Model Test Questions 30 With Answers [Chemistry - 8]

1. Rusting of iron is ---------- process

(A) Oxidation (B) Reduction

(C) Neither oxidation nor reduction (D) Both oxidation and reduction

2. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	List-II
(a) Ammonium sulphate	1. Fertilizer
(b) Chloroform	2. Reducing agent
(c) Carbon	3. Anaesthesia
(d) Hydrogen peroxide	4. Bleaching agent

Codes:

	a	b	c	d
(A)	**1**	**3**	**2**	**4**
(B)	1	2	3	4
(C)	2	3	4	1
(D)	3	2	1	4

3. Consider the following statements:

Assertion (A): Drinking soda is mildly acidic in nature.

Reason (R): It contains carbon dioxide.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

4. Enriched Uranium is

(A) Uranium U-238 **(B) Uranium U-235**

(C) Uranium mixed with Thorium (D) Uranium mixed with Plutonium

5. The compound whose aqueous solution is basic in nature is

(A) $NaNO_3$ (B) Na_2CO_3 (C) Na_2SO_4 (D) $MgCl_2$

6. The mobility of H^+ ion in aqueous solution is high because

(A) Of the small size of H^+ ion (B) It has no electron

(C) It exhibits Grothus type of conduction (D) Hydrogen is the lightest element

7. The molarity of sulphuric acid is 2M. The normality of sulphuric acid is ---------- N

(A) 2.0 **(B) 4.0** (C) 3.0 (D) 1.0

8. Formalin is an aqueous solution of

(A) Methanol **(B) Methanal** (C) Propanone (D) Ethanol

9. Which of the following is weak acid?

(A) HCl **(B) CH_3COOH** (C) HNO_3 (D) H_2SO_4

10. ---------- is used in the manufacture of artificial leather.

(A) Ketone **(B) Acetone** (C) Aldehyde (D) Acetic acid

11. The greenhouse gas is

(A) O_2 (B) H_2 (C) N_2 **(D) CO_2**

12. The polymer used in the manufacture of electrical goods like switches, plug, etc., is

(A) Chloroprene **(B) Bakelite** (C) Teflon (D) Nylon

13. Chlorofluoro Carbon contributes about ---------- percent of global warming.

(A) 60 (B) 6 (C) 14 (D) 20

NOTE: 10.4%

14. Sulphates of calcium, barium and strontium exhibit

(A) Chemiluminescence **(B) Fluorescence**

(C) Phosphorescence (D) Bioluminescence

15. The products in the electrolysis of aqueous potassium bromide are

(A) Potassium metal and Oxygen **(B) Potassium metal and Bromine**

(C) Hydrogen and Bromine (D) Oxygen and Bromine

16. Which statement is correct?

(A) All minerals are ores (B) A mineral cannot be an ore

(C) An ore cannot be a mineral **(D) All ores are minerals**

17. Which metal is used for Galvanisation of iron

(A) Chromium **(B) Zinc** (C) Nickel (D) Manganese

18. Lead is considered as

(A) Air pollutant (B) Water pollutant (C) Soil pollutant **(D) All of these**

19. Which of the following gases is absorbed mostly by activated charcoal?

(A) CO_2 (B) N_2 (C) CH_4 (D) Ar

20. What is the chemical difference between celluloid and cellophane?

(A) These two material have the same chemical composition

(B) Cellophane is much more inflammable than celluloid

(C) Celluloid contains Nitrogen while cellophane does not

(D) Photographic images stick better to celluloid

21. The Avogadro number is

(A) 6.00×10^{24} **(B) 6.023×10^{23}** (C) 6.054×10^{22} (D) 6.504×10^{22}

22. The oxidation number of Fe in K_3 [Fe $(CN)_6$] is

(A) +2 **(B) +3** (C) +1 (D) +4

23. Which of the following is Natural Rubbber?

(A) Polyester (B) Polyamide **(C) Polyisoprene** (D) Polysaccharide

24. The end product of fermentation of molasses of sugarcane by yeast is

(A) Pyruvate (B) Phenol (C) Lactic acid **(D) Ethyl alcohol**

25. Which of the following is correctly matched?

(A) TNT - Fertilizer **(B) Gasoline - Petrochemical**

(C) Potassium Sulphate - Explosive (D) Cement - Molecular crystal

26. An example of addition co-polymer is

(A) Buna – S (B) PVC (C) Neoprene (D) Glyptal

27. The reaction that takes place in a Daniel cell is

(A) $Cu + Hg \rightarrow Cu.\ Hg$ **(B) $Zn^0 + Cu^{2+} \rightarrow Zn^{2+} + Cu^0$**

(C) $Cu^{2+} + 2Ag \rightarrow Cu^0 + 2Ag^+$ (D) $3Fe^{2+} + Cr^{6+} \rightarrow 3Fe^{3+} + Cr^{3+}$

28. Natural gas is a mixture of aliphatic hydrocarbons. What is the main important gas available in that?

(A) Oxygen (O_2) (B) Nitrogen (N_2)

(C) Methane (CH_4) (D) Carbon-di-oxide (CO_2)

29. An alkane earth metal 'M' forms covalent compounds. It forms water soluble sulphate MSO_4 and water insoluble hydroxide $M(OH)_2$ which is amphoteric in nature. The metal 'M' is ----------

(A) Calcium **(B) Beryllium** (C) Magnesium (D) Strontium

30. During electrolysis of molten calcium hydride ----------

(A) Calcium is deposited at anode

(B) Hydrogen is liberated at anode

(C) Hydrogen is liberated at cathode

(D) Hydrogen and oxygen are liberated at cathode and anode respectively

31. Aqueous solution of which of the following is a good conductor of electricity?

(A) Ammonium acetate (B) Glucose

(C) Ammonia **(D) Acetic acid**

32. Ammonia burnt with O_2 liberate which of the following ions/radicals?

(A) $NH^+_4 + OH^-$ **(B) $N_2 + H_2O$** (C) $NO_2 + H_2O$ (D) $N_2 + H_2$

33. The laws of electrolysis are given by

(A) Ostwald **(B) Faraday** (C) Arrhenius (D) Lewis

34. How many electrons can be accommodated in d-orbital?

(A) 3 (B) 6 **(C) 10** (D) 8

35. The toxic carcinogenic metal ion in the following is

(A) Cr^0 (B) Cr^{3+} (C) Cr^{2+} **(D) Cr^{6+}**

36. The specific rotation, if the plane of polarization is turned through 26.4° traversing 20cm. length of 20% sugar solution is

(A) 6.6° (B) 0.66° **(C) 66°** (D) 6°

37. Which of the following is a natural polymer?

(A) Cellulose (B) Polystyrene (C) Polythylene (D) Nylon

38. The ground state energy of the electron in the hydrogen atom is 13.6 eV. The energy of the state n = 2 is

(A) 13.6 eV (B) 6.8 eV (C) 4.5 eV **(D) 3.4 eV**

39. Consider the following statements:

I. Diamond is a bad conductor of electricity.

II. Graphite is used for making electrodes of electric furnaces.

III. Solid carbon monoxide is known as dry ice.

IV. Carbon dioxide turns most litmus us slightly bluish.

Which of the above statement is/are correct?

(A) (I) and (III) (B) (II) and (III) **(C) (I) and (II)** (D) (III) and (IV)

40. Match List – I with List – II correctly and select your answer using the codes given below:

List – I (Ores)	**List – II (Metals)**
(a) Haematite	(1) Lead
(b) Cinnabar	(2) Iron
(c) Calamine	(3) Mercury
(d) Galena	(4) Zinc

Codes:

	a	b	c	d
(A)	**2**	**3**	**4**	**1**
(B)	3	2	1	4
(C)	2	4	3	1
(D)	4	2	1	3

41. Critically observe the reaction and choose the correct RQ from the option given below:

$C_{15}H_{24}O_2 + 25.5\ O_2\ 18\ CO_2 + 17\ H_2O$

The correct RQ of this reaction is

(A) 00.071 **(B) 0.71** (C) 7.1 (D) 71

42. Which of the following statements is not correct?

(A) An increases in oxidation number of an element implies that the element has undergone oxidation

(B) An increases in oxidation number of an element implies that it has undergone reduction

(C) The oxidation number of an element can be a fraction

(D) Oxidation number of an element is positive or negative integer

43. Choose the correct order the increase in the oxidation number of iodine in the following compounds:

I_2, HI, HIO_4 and ICl

(A) I_2, HI, ICl, HIO_4 (B) HI, ICl, HIO_4, I_2 **(C) HI, I_2, ICl, HIO_4** (D) HIO_4, ICl, I_2, HI

44. Examine the following statements carefully and select the answer using the code given below:

Assertion (A): Boron carbide is used to make bullet – proof clothing.

Reason (R_1): It is an intestitial carbide and has isosahedral structure.

Reason (R_2): The fibres of them have enormous tensile strength.

(A) All (A), (R_1), (R_2) are correct

(B) (A) is correct, (R_1) is the correct explanation for (A) and (R_2) is incorrect

(C) (A) is correct both (R_1) and (R_2) are correct but cannot explain (A)

(D) (A) is correct, (R_1) is incorrect but (R_2) is the explanation for (A)

45. Consider the following statements:

Assertion (A): In nature Ag and Pb occur as oxides and not as sulphides.

Reason (R): The cations of Ag and Pb can polaries O^{2-} ion easily than S^2 ion.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) Both (A) and (R) are false

46. The oxidant used in the testing of alcohol in breadth is

(A) MnO_2 (B) $KMnO_4$ **(C) $K_2Cr_2O_7$** (D) KNO_3

47. Sulphide ores are concentrated by

(A) Hand picking (B) Magnetic separation

(C) Gravity separation **(D) Froth floatation**

48. Duralumin contains

(A) Mg and Al (B) Al and Au (C) Mn and Al (D) Zn and Al

49. Magnetic separation is used for the concentration of

(A) Argentite (B) Galena **(C) Haematite** (D) Magnesite

50. Consider the following statements:

Assertion (A): Diamond is thermodynamically more stable than graphite at room temperature and ordinary pressure.

Reason (R): In diamond each carbon is tetrahedrally surrounded by fourth other carbon atoms and the tetrahedral are linked together into a three dimensional giant molecule.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) Both (A) and (R) are false

51. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	**List-II**
(a) Malathion	1. Rodenticide
(b) Calomel	2. Herbicide
(c) Atrazine	3. Fungicide
(d) Nor-bromide	4. Insecticide

Codes:

	a	b	c	d
(A)	**4**	**3**	**2**	**1**
(B)	1	4	3	2
(C)	3	2	1	4
(D)	2	1	4	3

52. Which of the following is the correct pH range of blood of a healthy person?

(A) 6.9 – 7.1 (B) 7.0 – 8.0 (C) 7.21 – 8.10 **(D) 7.35 – 7.45**

53. The radio isotopes for blood circulation disorder or thyroid disorder are

(A) Radio sodium and radio iodine (B) Radio sodium and radio phosphorous

(C) Radio iodine and radio phosphorous (D) Radio iron and radio sodium

54. 'Argentine' is a chief ore/mineral of

(A) Silver (B) Gold (C) Mica (D) Limestone

55. Consider the following:

I. CO burns with a blue flame.

II. CO is good reducing agent and reduces alkali metal oxides.

III. CO is toxic because it forms a complex with haemoglobin in the blood and this complexes is 300 times more stable than oxyhaemoglobin.

IV. CO from complex with Ni at 50°C and decomposition resulting complex gives pure Ni.

Which of the following statements given above is/are correc?

(A) All are correct

(B) (II) is not correct while (I), (III) and (IV) are correct

(C) (I), (II) and (III) only are correct

(D) (II), (III) and (IV) are correct

56. The pH of a soft drink is 3 and that of milk is 7. How many times greater is the concentration of H_3O^+ in soft drink than in milk?

(A) 4 times (B) 40 times (C) 1000 times **(D) 10,000 times**

57. Nicotine upon oxidation with chromic acid gives

(A) Pyridine – 3 – Carboxylic acid (B) Pyridine – 2 – Carboxylic acid

(C) Pyridine – 4 – Carboxylic acid (D) Pyridine – 2,3 – Dicarboxylic acid

58. Natural rubber is

(A) Polymer of ethylene (B) Polymer of butadiene

(C) Polymer of acetylene **(D) Polymer of 2 methyl butadiene**

59. Which of the following is correct regarding steel?

(A) Iron with > 0.5% carbon (B) Iron with < 0.25% carbon

(C) Iron with 0.25 - 2% carbon (D) Iron with 2 - 45% carbon

60. Which is wrongly matched?

(A) Zinc – Enzymes (B) Iron – Haemoglobin

(C) Magnesium – Dry cell (D) Beryllium – X-ray tubes

61. The state of matter in their increasing entropy is

(A) Solids, Liquids, Gases, BECs (B) Liquids, Gases, BECs, Solids

(C) Gases, Liquids, Solids, BECs **(D) BECs, Solids, Liquids, Gases**

62. Identify the odd one from the group of materials given below:

Glass, ebonite, copper, rubber

(A) Ebonite **(B) Copper** (C) Glass (D) Rubber

63. The oxidation states of nitrogen in the following equations are:

$4[NH_3OH]^+ \rightarrow N_2O + 2\ NH^+_4 + 2H^+ + 3H_2O$

	(X)	(Y)	(Z)
(A)	+1	0	-3
(B)	-1	1	-2
(C)	-1	-2	-3
(D)	**-1**	**1**	**-3**

64. During the oxidation of acidified ferrous ammonium sulphate with dichromate solution

(A) The oxidation number of chromium and iron changes from +6 to +3 and +3 to +2 respectively

(B) The oxidation number of chromium and iron changes from +3 to +6 and +3 to +2 respectively

(C) The oxidation number of chromium and iron changes from +6 to +3 and +2 to +3 respectively

(D) The oxidation number of chromium and iron changes from +2 to +3 and +6 to +3 respectively

65. Consider the following statements:

Assertion (A): Copper is mainly used in Electrical Engineering Industry.

Reason (R): Copper has the property of high conductivity.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) does not explain (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

66. The conjugate base of $[Fe\ (H_2O)_6]^{+3}$ is

(A) $[Fe(H_2O)_5 OH]^{+3}$ **(B) $[Fe(H_2O)_6 OH]^{+2}$**

(C) $[Fe(H_2O)_5]^{+3}$ (D) H_2O

67. In the extract of iron from its haematite ore, the flux added and gangue formed respectively are

(A) Oxygen, iron oxide (B) Carbon dioxide, iron carbonate

(C) Silica, iron silicate (D) Sulphur dioxide, iron sulphate

68. The structure of methane is

(A) Octahedral **(B) Tetrahedral** (C) Square planar (D) Linear

69. pH value of blood is

(A) 5.5 to 7.5 (B) 4.5 to 5.5 **(C) 7.3 to 7.5** (D) 4.0 to 4.4

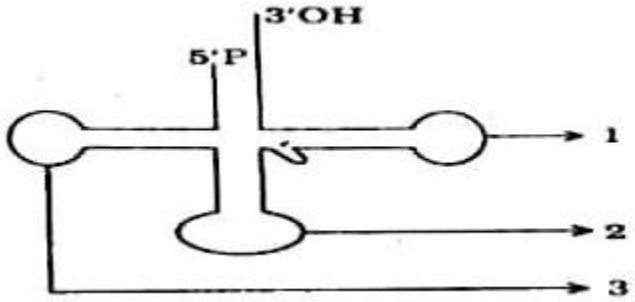
70. Greenhouse gas is

(A) Carbon dioxide (B) Oxygen (C) Hydrogen (D) Nitrogen

71. If the mass number of an element is 16 and the atomic number is 8 then the number of neutrons is

(A) 16 **(B) 8** (C) 32 (D) 4

72. Choose the correct order of the parts marked in the diagram.



A) 1) TUC loop, 2) Anticodon loop, 3) DHU loop B) 1) Anticodon loop, 2) TUC loop, 3) DHU loop

C) 1) TUC loop, 2) DHU loop, 3) Anticodon loop D) 1) DHU loop, 2) Anticodon loop, 3) TUC loop

73. Which of the following statements about 'Fertilizer' is true?

I. It should be available in low cost.

II. It should be easily assimilated by plants.

III. It should not dissolve readily in water.

(A) (I) and (II) (B) (II) and (III) (C) (I) and (III) (D) (III) only

74. Identify the odd from the group of chemicals given below:

BHC, DDT, 2, 4-D, Urea

(A) BHC (B) DDT (C) 2, 4-D **(D) Urea**

75. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	**List-II**
(a) Baking soda	1. $CaSO_4 . ½ H_2O$
(b) Washing soda	2. Na_2CO_3
(c) Plaster of pairs	3. $CaSO_4 . 2H_2O$
(d) Gypsum	4. $NaHCO_3$

Codes:

	a	b	c	d
(A)	1	2	3	4
(B)	2	1	4	3
(C)	**4**	**2**	**1**	**3**
(D)	4	3	2	1

76. Consider the following statements:

Assertion (A): Silver is known as a noble metal.

Reason (R): Silver has a poor chemical activity.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

77. Which of the following statements about nitrogen is false?

I. It is a colourless, odourless and tasteless gas.

II. It is only slightly soluble in water.

III. Magnesium ribbon does not burn in a jar of nitrogen.

(A) (I) only (B) (I) and (II) **(C) (III) only** (D) (II) and (III)

78. Which of the following is a organo phosphate, used as an insecticide?

(A) DDT (B) Allethrin (C) Gammexane **(D) Malathion**

79. Read the following statements with reference to fertilizers:

I. Nitrogen is highly essential for rapid growth of plants.

II. Phosphate promotes early growth as well as early maturity of plants.

III. Potassium develops a healthy root system.

Which of the following statement(s) is/are correct?

(A) (I) and (II) **(B) (I), (II) and (III)** (C) (I) and (III) (D) (I) only

80. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	**List-II**
(a) Etching on glass	1. Zinc carbonate
(b) Calico printing	2. Bordeaux mixture
(c) Skin ointment	3. Hydrofluoric acid
(d) Fungicide	4. Potassium dichromate

Codes:

	a	b	c	d
(A)	**3**	**4**	**1**	**2**
(B)	1	3	4	2
(C)	2	1	3	4
(D)	4	2	1	3

81. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	**List-II**
(a) Citric acid	1. Stomach juices
(b) Tartaric acid	2. Tea
(c) Hydrochloric acid	3. Lemon juice
(d) Tannic acid	4. Grapes

Codes:

	a	b	c	d
(A)	3	1	2	4
(B)	2	3	4	1
(C)	1	2	3	4
(D)	**3**	**4**	**1**	**2**

82. Match list-I with list-II correctly and select your answer using the codes given below:

	List-I	List-II
(a)	Bleaching powder	1. Insectiside
(b)	Plaster of paris	2. Disinfectant
(c)	DDT	3. Purification of drinking water
(d)	Potash alum	4. Plastering the fractured bone

Codes:

	a	b	c	d
(A)	1	2	4	3
(B)	**2**	**4**	**1**	**3**
(C)	3	1	2	4
(D)	4	3	2	1

83. The conjugate base of NH^+_4 is

(A) NH_3 (B) NH_4OH (C) NH^-_2 (D) N_2H_4

84. Galena is

(A) An oxide ore **(B) A sulphur ore** (C) A halide ore (D) A carbonate ore

85. Oxidation state of Nickel in Nickel Tetracarbonyl ($Ni(CO)_4$) is

(A) +2 **(B) 0** (C) +4 (D) +1

86. Pick out the correct order of increasing melting points of the four metals

(A) Tungsten < Silver < Iron < Gold (B) Gold < Iron < Silver < Tungsten

(C) Silver < Gold < Iron < Tungsten (D) Gold < Silver < Tungsten < Iron

87. Match the following:

	Column A	Column B
(a)	White vitriol	1. $CuCO_4 . 5H_2O$
(b)	Oil of vitriol	2. $FeSO_4 . 7H_2O$
(c)	Blue vitriol	3. H_2SO_4
(d)	Green vitriol	4. $ZnSO_4 . 7H_2O$

Codes:

	a	b	c	d
(A)	3	4	1	2
(B)	**4**	**3**	**1**	**2**
(C)	1	2	3	4

(D) 1 3 2 4

88. Choose the correct match:

(a) Nylon	1. Polyamide
(b) Thermacol	2. Polysoprene
(c) Teflon	3. Polytetra fluoroethylene
(d) Natural Rubber	4. Polystyrene

Codes:

	a	b	c	d
(A)	1	2	3	4
(B)	**1**	**4**	**3**	**2**
(C)	4	3	2	1
(D)	3	1	2	4

89. One among the following ionic carbide compounds is a acetylide

(A) Calcium carbide (B) Aluminium carbide

(C) Magnesium carbide (D) Beryllium carbide

90. Which of the following statement is not correct?

(A) Oxidation is a process of addition of oxygen

(B) Oxidation is a process of removal of hydrogen

(C) Oxidation is a process in which an atom loses one or more electrons

(D) Oxidation is a process in which an atom gains one or more electrons

91. The chemical compounds used to kill rats and mice are called as ----------

(A) Fungicides (B) Herbicides **(C) Rodenticides** (D) Insecticides

92. The chemical compound responsible for the smell chlorine in the drinking water supplied by Corporation is

(A) $CaCl_2$ **(B) $CaOCl_2$** (C) Hcl (D) NaCl

93. Match List I with List II.

List-I	List-II
(a) HCl	1. Weak acid
(b) NaOH	2. Strong acid
(c) $Ca(OH)_2$	3. Strong base
(d) CH_3COOH	4. Weak base

Codes:

	a	b	c	d
(A)	**2**	**3**	**4**	**1**
(B)	4	2	1	3
(C)	3	4	1	2
(D)	4	3	2	1

94. Which one is readily soluble in water at room temperature?

(A) N_2 (B) NH_3 **(C) CO_2** (D) Cl_2

95. Group the statements which are correct.

1) Loss of electron or increase in the oxidation number of an element is oxidation

2) Gain of electron or decrease in the oxidation number of an element is reduction

3) Gain of electron or increase in the oxidation number of an element is oxidation

4) Loss of electron or decrease in the oxidation number of an element is reduction

(A) 1 and 2 are correct (B) 3 and 4 are correct

(C) 1 and 3 are correct (D) 2 and 4 are correct

96. Match the following:

List-I	**List-II**
(a) Direct fertilizer	1. NPK fertilizer
(b) Mixed fertilizer	2. Super Phosphate
(c) Stimulant fertilizer	3. Gypsum

Codes:

	a	b	c
(A)	1	2	3
(B)	**2**	**1**	**3**
(C)	1	3	2
(D)	2	3	1

97. The element used in making Lead pencil is:

(A) Carbon (B) Tin (C) Lead (D) Zinc

98. The indicator used in the estimation of oxalic acid by permanganometry is:

(A) Phenolphthalein (B) Methyl Orange

(C) Bromo thymol blue **(D) None of the above**

99. Match the items in column a with items in Column B

Column A	**Column B**
(a) Cesium (Cs)	1. Lanthanide element
(b) Barium (Ba)	2. Noble metal element
(c) Silver (Ag)	3. Alkaline earth element
(d) Cerium (Ce)	4. Alkali metal element

Codes:

	a	b	c	d
(A)	**1**	**2**	**3**	**4**
(B)	4	3	2	1
(C)	2	3	4	1
(D)	3	4	1	2

100. **Assertion (A):** Graphite is a bad conductor of electricity.

Reason (R): In graphite all the carbon bonds being not satisfied, some of the electrons are free to move through the crystal.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true