MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	If similar groups are attached to the same side, of C=C of alkene then it is	A. Cis isomer B. Trans isomer C. Tautomer D. All
2	2-propanol shows-----isomerism with 1-propanol	A. Chain isomerism B. Positional isomerism C. Metamerism D. Geometrical isomerism
3	State of hybridization of carbon in the carbocation is	A. sp3 B. sp C. sp2 D. dsp2
4	Nitro alkanes exhibit the:	A. Chain isomerism B. Positional isomerism C. Functional group D. Metamerism
5	Which of the following compound shows the geometrical isomerism	A. 2-butene B. 2-butyne C. 2-butanol D. Butanol
6	The maximum number of isomer for an alkene with the molecular formula C2H8	A. 2 B. 3 C. 4 D. 5
7	[Ti (H20)6]3+ ion isin colour.	A. Yellow B. Blue C. Violet D. Red
8	The energy difference of d-orbitals varies from	A. Atom to atom B. Ion to ion C. Electron to electron D. proton to proton
9	Which of the following are responsible for the colour developed in transition elements compounds?	A. s-orbitals B. p-orbitals C. d-orbitals D. f-orbitals
10	Transition compounds which occur as tripositive ions have no	A. 4s-electron B. 3p-electron C. 3s-electron D. 2s-electron
11	TiCl4 is used as catalyst for manufacture of	A. Sulphuric acid B. Plastics C. Ethanol D. Tetraethyl lead
12	Catalyst used for ammonia synthesis is	A. Cu B. Co C. Zn D. Fe
13	When light is exposed to transtion element, then electrons jump from lower orbitals to higher orbitals in	A. Orbitals of s-subshell B. Orbitals of d-subshell C. Orbitals of p-subshell D. between different shells
14	d-d transition cannot be shows by	A. Cu+1 B. Sc+3 C. Zn+2 D. All
15	Ti+3 shows minimum absorption (maximum transmittance) at-------and-------wavelength	A. Yellow, Green B. Red. Yellow C. Blue. Green D. Red. Blue

16	Number of electrons involved in d-d transition of [Ti(H2O)6]+3	A. 1 B. 3 C. 2 D. 4
17	Which of the following transition metal forms colourless compounds in +4 oxidation state?	A. Ti B. Cr C. Cu D. Zn
18	Which of the folowing compound is expected to be colored	A. Na2SO4 B. ZnCl2 C. MgF₂ D. CuF₂
19	The highest oxidation state of manganese is	A. +7 B. -7 C. +6 D. +4
20	The oxidation state of transition elements is usually	A. Variable B. Single C. Constant D. Infinite
21	Zine does not show variable oxidation state, because	A. Its d-subshell is incomplete B. Its d-subshell is complete C. It is relatively soft metal D. It has two electrons in outermost shell
22	At which oxidation state Cu achieves electronic configuration of Zn+2	A. 0 B. +2 C. +1 D. +3
23	The element which shows highest binding energy	A. V B. T C. So D. Cr
24	Which of the followings has electronic configuration of Ar in +3 oxidation state	A. Sc B. Mn C. Ti D. Zn
25	What is the sequence of electron take up and removal from 4s orbital a transition metal in 3d series?	A. Enters first, leaves after 3d electrons removal B. Enters after 3d electrons, leaves after 3d electrons C. Enters after 3d eleetrons, leaves first D. Enters first and leaves first
26	Variable Oxidation state of is related to transition elements	A. empty d-subshells B. Completely filled C. Partially filled d-subshell D. d-d transition
27	No of unpaired electrons are maximum in	A. V+3 B. Mn+2 C. Fe+3 D. Cr+3
28	Which of the following pair has the same no. of electrons in d- subshell	A. Sc+3,Ti+3 B. Mn+2,Fe+3 C. Ti+3,V+3 D. Cr+3.Co+2
29	Which of these has at least one d electron	A. Sc+3 B. Mn+7 C. Ti+4 D. Cr+3
30	The total number of 3d-series transition elements is	A. 10 B. 40 C. 14 D. 58
31	Which ion has maximum number of unpaired electrons in 3d subshell and shows maximum paramagnetic behavior?	A. Cr+3 B. Ni+2 C. Co+2 D. Fe+3
32	Which of the elements has seven electrons in d-subshell?	A. Zn B. Co C. Cu D. Fe

33	d-d transition cannot be observed in	A. Cr B. Cu C. Mn D. Zn
34	which of the following is a typical transition metal?	A. Sc B. Y C. Ra D. Co
35	which one pair has the same oxidation state of-Fe?	A. FeSO4 and FeCl4 B. FeCl4and FeCl3 C. FeSO4 and FeCl2 D. Fe2(SO4)3 and FeSO4
36	Which pair of transition elements shows abnormal electronic configuration?	A. Sc and Zn B. Cu and Sc C. Zn and Cu D. Cu and Cr
37	Oxidation state of Mn' in KMnO4. K2MnO4, MnO2 and MnSO4 is in the order	A. +7.+6.+2,+4 B. +6,+7,+2,+4 C. +7. +6.+4.+2 D. +4, +6, +7,+2
38	which of the following d blocks element can showthe highest oxidation number is its ompound	A. Chromium B. iron C. Copper D. Manganese
39	In [Ti (H2O)]3+ which colour is transmitted	A. Yellow B. Blue and red C. Blue and yellow D. red and yellow
40	In the electronic configuration of Cr one electron from 4s sub-shell is transferred to 3d sub-shell because	A. The 3d orbital is of lower energy than 4s B. The half-filled d-subshell is more stable than 4 electrons having d-subshell C. The 4s orbital is of equal energy to 3d orbital D. 6 unpaired electron make Cr more paramagnetic
41	Which of the following is a non-typical transition element?	A. Cr B. Zn C. Mn D. Fe
42	When light is exposed to a typical transition element, then electrons jumps from low orbitals to higher orbitals in	A. f-orbitals B. s-orbitals C. p-orbitals D. d-orbitals
43	Highest oxidation state af the transition elements is	A. +8 B. +7 C. +5 D. +1
44	Electrons in 5d energy level are filled up in case of	A. Lanthanides B. Transition metals C. Actinides D. Rare gases
45	Zn has	A. Zero unpaired electrons B. Three unpaired electrons C. Five unpaired electrons D. One paired electrons
46	The number of unpaired electrons present in Fe ions is	A. 1 B. 2 C. 5 D. 0
47	Paramagnetic behaviour is caused by the presence of	A. Unpaired electrons B. Paired electrons C. Paired protons D. Paired electrons in an atom. molecule or ion
48	A transition element X has a configuration [Ar) 4s3dd in its +3 oxidation state. Its atomic number is	A. 25 B. 26 C. 22 D. 19
		A. +6 B. +7

49	The maximum oxidation state of Mn is	C. +5 D. +4
50	All 3d series elements show an oxidation state of oxidation state	A. +1 B. +2 C. +3 D. Zero
51	Which of the following shows group IIIB	A. Zn, Cd. Hg B. Cu. Ag. Au C. Sc. Y. La D. Ni. Pd. Pt
52	Group of element belongs to IIB group	A. Zn. Cd. Hg B. Cu. Ag. Au C. Sc. Y. La D. Ni. Pd. Pt
53	Stability of Cu-metal is due to filled of d-orbital	A. Half B. Completely C. Partially D. Quarterly
54	Group VIB of transition elements contains	A. Zn. Cd. Hg B. Cr. Mo, w C. Fe. Ru, Os D. Mn. Te. Re
55	The strength of binding energy of transition elements depends upon	A. Number of electron pairs B. Number of unpaired electrons C. Number of neutrons D. Number of protons
56	D-block elements are also called	A. Non-typical transition element B. Outer transition elements C. Abnormal transition elements D. Inner transition
57	Fluorine is largely used in	A. rocket fuels B. making Teflon C. making freon D. All
58	Which noble gas is used in mixture used for breathing by divers?	A. Ge B. Ar C. Kr D. He
59	Which compound gives carbon when heated with conc. H2SO4.	A. Starch B. Ethyl alcohol C. Oxalic acid D. Formic acid
60	The reaction between Cu and conc. H2SO4 produces	A. Cu+2 B. SO₂ C. SO₃ D. H₂