The d-and f-Block Elements

1. Transistion metals, despite high E° oxidation, are poor reducing agents. The incorrect reason is
(a) high heat of vaporization.
(b) high ionization energies.
(c) low heats of hydration.
(d) complex forming nature.

▼ **Answer**

Answer: d

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2. Which of the following has magnetic moment value of 5.9?
(a) Fe^{2+}
(b) Fe^{3+}
(c) Ni^{2+}
(d) Cu^{2+}

▼ **Answer**

Answer: b

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3. Anomalous electronic configuration in the 3d series are of
(a) Cr and Fe
(b) Cu and Zn
(c) Fe and Cu
(d) Cr and Cu

▼ **Answer**

Answer: d

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4. Which of the following are d-block elements but not regarded as transistion elements?
(a) Cu, Ag, Au
(b) Zn, Cd, Hg
(c) Fe, Co, Ni
(d) Ru, Rh, Pd

▼ **Answer**

Answer: b

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5. $CuSO_4$. $5H_2O$ is blue is colour because
(a) It contains water of crystallization.
(b) SO_4^{2-} ions absorb red light.

(c) Cu^{2+} ions absorb orange red light.
(d) Cu^{2+} ions absorb all colours except red from the white light.

▼ **Answer**

Answer: c

6. Transistion elements form alloys easily because they have
(a) Same atomic number
(b) Same electronic configuration
(c) Nearly same atomic size
(d) None of the above

▼ **Answer**

Answer: c

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7. Which one of the following characteristics of the transistion metals is associated with higher catalytic activity?
(a) High enthalpy of atomisation
(b) Paramagnetic behaviour
(c) Colour of hydrate ions
(d) Variable oxidation states

▼ **Answer**

Answer: d

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8. Which of the following has the maximum number of unpaired electrons?
(a) Mg^{2+}
(b) Ti^{3+}
(c) V^{3+}
(d) Fe^{2+}

▼ **Answer**

Answer: d

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9. The property which is not characteristic of transistion metals is
(a) variable oxidation states.
(b) tendency to form complexes.
(c) formation of coloured compounds.
(d) natural radioactivity.

▼ **Answer**

Answer: d

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10. Which of the following is incorrect for $KMnO_4$ to be used as an oxidising agent?
(a) HCl cannot be used because some $KMnO_4$ is consumed in the reaction.
(b) Nitric acid is not used for the above purpose because it itself acts as a self oxidising agent and will react with the reducing agent.
(c) The equivalent weight of $KMnO_4$ in basic medium is 158.
(d) The number of electrons involved in oxidation of $KMnO_4$ in acidic medium is 3.

▼ **Answer**

Answer: d
