

B.Sc VI Sem. (Chemistry) Exam 2020

DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbon and UV, IR Spectroscopy

(Sample questions)

1. The frequency range of IR radiation is:

- a) 4000– 667 cm^{-1}
- b) 3000 – 667 cm^{-1}
- c) 4000– 1000 cm^{-1}
- d) None of the above

अवरक्तविकिरणों की आवृत्ति दूरी होती है :

- a) 4000– 667 cm^{-1}
- b) 3000 – 667 cm^{-1}
- c) 4000– 1000 cm^{-1}
- d) उपर्युक्त में कोई नहीं

2. The shift of an absorption maximum towards longer wavelength is known as:

- a) Hypsochromic effect
- b) Bathochromic effect
- c) Hyperchromic effect
- d) Hypochromic effect

vo'kks" k.k vf/kdre dk yEch rjaxnS?;Z dh rjQ cnyko dks dgrs gSa :

- a) fgllksdzksfed izHkko
- b) cSFksdzksfed izHkko
- c) gkbjdzksfe dizHkko
- d) gkbiksdzzksfed izHkko

3. The Effective Atomic Number (EAN) of Fe in $\text{Fe}(\text{CO})_5$ is

- a) 36
- b) 34
- c) 30
- d) 40

$\text{Fe}(\text{CO})_5$ esa Fe dh izHkkoh izek.k la[;k gS :

- a) 36
- b) 34

- c) 30
- d) 40

4. Out of the following, which transitions require maximum energy :

- a) $n-\pi^*$
- b) $\pi-\pi^*$
- c) $n-\sigma^*$
- d) $\sigma-\sigma^*$

fuEufyf[kr esa fdl ladze.k esa vf/kdre ÅtkZ dh t;jr gksxh :

- a) $n-\pi^*$
- b) $\pi-\pi^*$
- c) $n-\sigma^*$
- d) $\sigma-\sigma^*$

5. Hemoglobin is the metalloporphyrin of :

- a) Fe^{2+}
- b) CO^{2+}
- c) Mg^{2+}
- d) Ni^{2+}

gheksXykschu fuEu e safldk esVkyksiksjQkbfju gS :

- a) Fe^{2+}
- b) CO^{2+}
- c) Mg^{2+}
- d) Ni^{2+}