

Model answer lesson 3 chapter 1

Question	Answer	Question	Answer
1	C	21	A
2	C	22	B
3	A	23	C
4	C	24	D
5	D	25	A
6	B	26	C
7	A	27	C
8	A	28	B
9	C	29	C
10	B	30	B
11	A	31	D
12	C	32	B
13	D	33	B
14	B	34	D
15	C	35	A
16	A	36	A
17	D	37	D
18	D	38	A
19	C	39	A
20	D	40	Essay ↓

Essay question :

40)

We must determine the element on the graph , so we try to know remarkable element which is **A**

A⁺³: after losing 3 electrons its magnetic moment become **5** so its **Fe**

So, By arrangement of the elements :

D → Cr

B → Mn

A → Fe

C → Co

E → Ni

1)

- $D^{+6} [_{18}Ar] 3d^0 \rightarrow$ magnetic moment = **0** (Diamagnetic)

- $B^{+6} [_{18}Ar] 3d^1 \rightarrow$ magnetic moment = **1** (Paramagnetic)

2)

cations (element) which are used in decreasing activation energy > as it means act as catalyst

Fe used as catalyst in preparation of ammonia in industry by (Haber-Bosch) method

Ni used as catalyst in hydrogenation of oils

Mn⁺⁴ is used as a catalyst in the preparation of oxygen gas "Decomposition of hydrogen peroxide process"