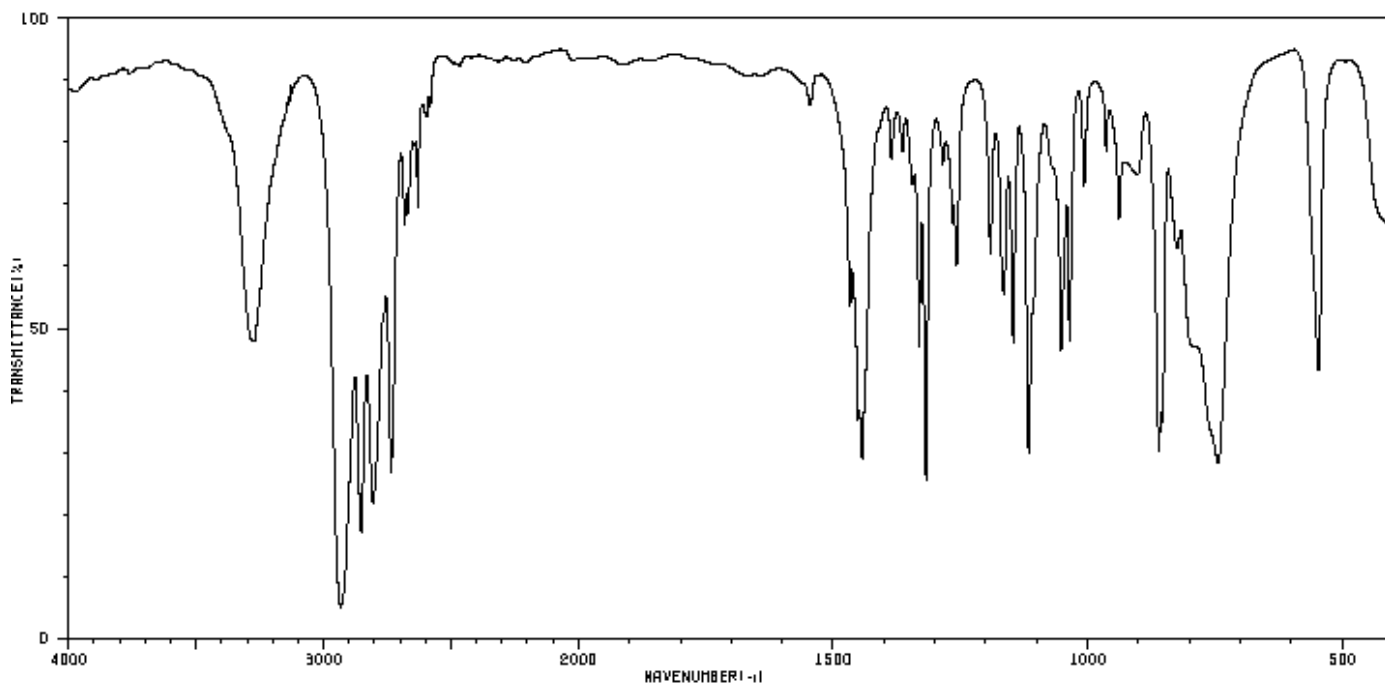


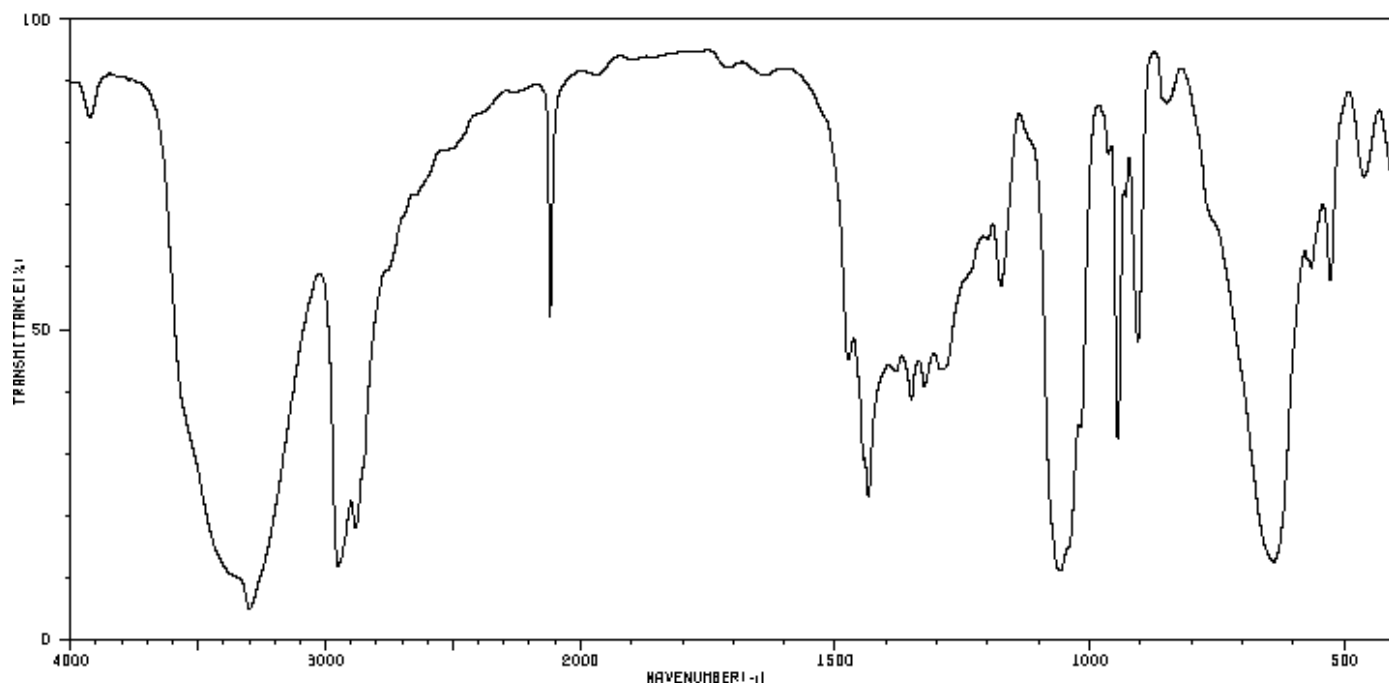
1. Deduce the structure of a compound that is consistent with each of the following IR spectra.

a. $C_5H_{11}N$



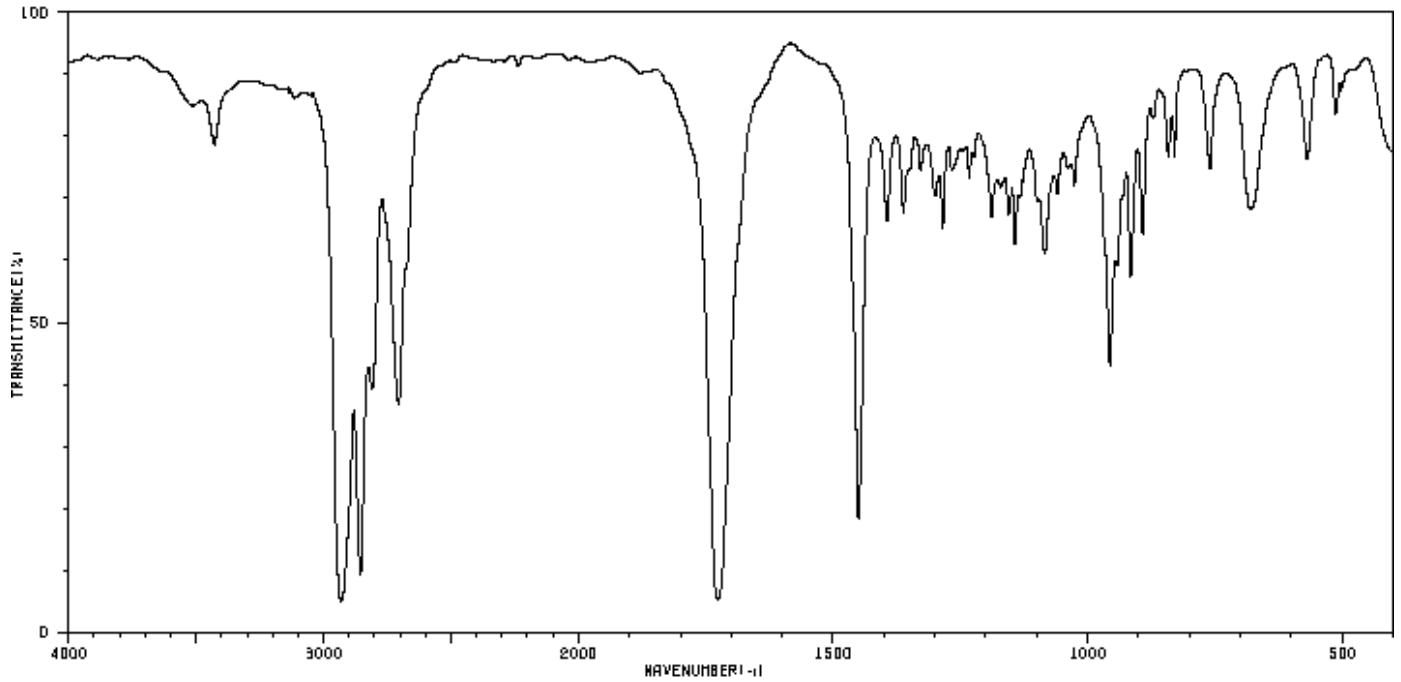
3276	46	2630	66	1345	70	1166	69	939	64
2933	4	2596	81	1331	44	1147	46	902	72
2853	16	1467	52	1318	24	1116	28	860	29
2806	21	1462	34	1286	74	1062	44	854	33
2735	26	1443	27	1266	64	1035	46	824	60
2681	64	1388	74	1258	58	1007	70	745	26
2668	66	1364	74	1191	68	964	74	647	41

b. C₅H₈O



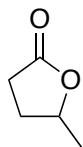
3922	81	1436	22	1069	10	670	68
3298	4	1381	42	963	74	565	57
2951	11	1351	37	945	31	527	55
2882	17	1325	39	906	46	461	72
2118	50	1295	42	856	84		
1475	43	1289	42	848	84		
1444	27	1176	66	639	12		

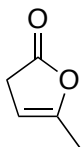
c. C₇H₁₂O

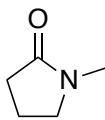


2932	4	1396	64	1233	70	1099	66	943	67
2908	13	1362	66	1224	74	1084	58	916	55
2856	8	1351	72	1189	84	1060	68	893	62
2809	37	1329	72	1170	70	1038	72	842	74
2705	35	1300	68	1156	64	1033	72	829	74
1727	5	1285	62	1144	80	1026	70	761	72
1461	17	1267	72	1133	68	967	42	681	66

2. Assign the appropriate carbonyl stretching frequency to each of the following compounds. The options are: 1687, 1786, and 1798 cm^{-1} .







Briefly describe your reasoning for the assignments you made above. Include any structures that will aid in your discussion.