

## Alkanlar.

1. Stihimetric nisbatda olingan alkan va kislorod aralashmasi yondirilganda olingan gazlar aralashmasi dastlabki hajmni 83,33 % ga teng bo'lsa, alkanni toping.  
A) butan B) etan C) metan D) propan
2. Kim boshchiligida oltingugurtli alkaloidli ustida ilmiy ishlar olib borildi?  
A) O.Sodiqov B) Y.Yunusov  
C) A.Asqarov D) A.Abduvahobov
3. Zelinskiy qaysi ishi bilan kimyoni rivojlanishiga o'z hissasini qo'shgan?  
A) to'yingan va to'yinmagan uglevodorodlar kimyosini o'rganishi bilan  
B) uglerodni to'rt valentli ekanligini aniqlash orqali  
C) uglerod atomlari o'zaro C-C bog'i hosil qilishini aniqlash bilan  
D) allen va diyen uglevodorodlarni kimyosini o'rganish bilan
4. Oksalat kislotasi birinchi marta nimadan olingan?  
A) etilendan B) dioksidan  
C) aseton oksimidan D) ditsiandan
5. S.Yunusov boshchiligida qaysi moddalar ustida ilmiy ishlar olib borilgan?  
A) indol, spiroxid B) diterpen, tropan  
C) pirolizidin, stovarsol D) tiofen, indol
6. Kimning tadqiqoti asosida "Kovilon" deb ataluvchi plazma o'rnini bosuvchi dori olingan?  
A) Tolipov B) Sharipova  
C) Rashidova D) Asqarov
7. Donli ekinlarni ekishdan oldin urug'larni kapsullash masalasi kimning boshchiligi bilan o'rganilgan?  
A) Rashidova B) Tolipov C) Sodiqov D) Soipov
8. Organik brikmalarda molekulan kovalent bog'lanishlar orqali hosil bo'lishi ularni qaysi xususiyatga ega bo'lishini taminlaydi?  
1. elektrolit bo'lishini 2. suvda erishini 3. noelektrolit bo'lishini 4. past temperatradagi suyuqlanishini 5. yonishga kam moyilligini 6. suvda erimasligini  
A) 1,2,4,5 B) 1,3,5,6 C) 3,6,4 D) 1,4,5,6
9. Organik brikmalar bilan anorganik brikmalar qaysi xususiyatlar bilan bir biridan farq qilmaydi?  
A) qizdirilganda oson parchalanishi  
B) barqarorligi bilan C) A,B D) t.j.y.
10. Organik brikmalarda bir vaqtning o'zida birnecha reaksiyani paralel borishiga nima sabab bo'ladi?  
A) ularda turli funksional guruhlar mavjudligi  
B) ularda turli bog'lanishlar mavjudligi  
C) A va B to'g'ri D) t.j.y.
11. Hozirda organik brikmalar soni qancha?  
A) 9,5 mln dan ortiq B) 10 mln dan ortiq  
C) 12 mln ga yaqin D) 9,5 mln ga yaqin
12. Organik moddalarning tuzilish nazariyasini asosiy qoidalari qaysi yili elon qilindi?  
A) 1873 B) 1861 C) 1859 D) 1878
13. Dimetil efirni agregat holatini toping.  
A) gaz B) suyuq C) qattiq D) plazma
14. Askarbin kislotasi tarkibidagi  $sp^3$  va s orbitallar soni nisbatini toping.  
A) 4;1 B) 3;1 C) 8;3 D) t.j.y.
15. Vodorod atomlari soni sigma bog'lar soniga teng bo'lgan alkan va alkanlarning 5 - vakili aralashmasida C va H atomlari nisbati 1;3 bo'lsa Mr kichik bo'lgan gazni massa ulushini toing.  
A) 35 B) 50 C) 40 D) 65
16. Etan va propan aralashmasini vodorodga nisbatan zichligi 18 ga teng bo'lgan 144 gr aralashmani yoqish uchun n.sh.da o'lchangan necha litr kislorod sarflanadi? Unum 85%.  
A) 315,52 B) 568,3 C) 385,7 D) 459,3
17. Etan tarkibida uglerod atomlari arasidagi masofa etilen molekulasidagi uglerod atomlari orasidagi masofadan necha  $A^0$  ga farq qiladi?  
A) 0,2 B) 0,3 C) 0,02 D) 0,04
18. 6 ml alkan va kislorodning stihimetric nisbatdagi aralashmasi yondirilib suv bug'lari kondensatlanganda hajm dastlabki hajmga nisbatan 50% ga kamaydi. Bu alkanni nechta izomeri borligini aniqlang.  
A) yo'q B) 2 C) 3 D) 4
19. 4,5 g organik modda yondirilganda n.sh.da o'lchangan 15,68 l  $CO_2$  va 6,3 g suv bug'i olindi. Modda nomini toping.  
A) asetofenon B) benzoy kislotasi

- C) etilatsetat D) sirka kislova
20. Oktan izomerlari soni qaysi alkan izomerlar sonidan 4,167 marta kam?  
A) eykozandan B) pentadekandan  
C) nonandan D) dekanadan
21. Quydagilardan nukleofil zarrachalarni toping.  
A)  $\text{NO}_2^+$  B)  $\text{BF}_3$  C)  $\text{CN}^-$  D)  $\text{B}_3\text{C}^+$
22. Monoaminomonokarbon aminokislotaning 9 gr miqdorida 1,2 mol atom bo'lsa, aminokislotaning 350 gr miqdori yondirilganda necha gr  $\text{CO}_2$  hosil bo'ladi?  
A) 410,7 B) 396 C) 220 D) 385
23. Geptanni to'rtlamchi uglerodga ega bo'lgan jami izomerlar tarkibidagi birlamchi va ikkilamchi uglerodlar soni nachta.  
A) 10;4 B) 8;4 C) 13;4 D) 7;3
24. Akrolein tarkibidagi uglerodning oksidlanish darajalari yig'indisini toping.  
A) 0 B) -3 C) +1 D) -2
25. 3,3,4,7-tetrametil 5,7-dimetilnonin-1 molekulasidagi  $\text{sp}(a)$ ,  $\text{sp}^2(b)$ ,  $\text{sp}^3(c)$  orbital,  $\sigma$ -bog'lar (d) va bog' hosil qilishda qatnashgan orbital (e) sonini toping.  
A) a-4 ta; b-0 ta; c-48 ta; d-42 ta; e-96 ta  
B) a-4 ta; b-0 ta; c-60 ta; d-48 ta; e-112 ta  
C) a-4 ta; b-0 ta; c-48 ta; d-42 ta; e-88 ta  
D) a-4 ta; b-0 ta; c-60 ta; d-48 ta; e-100 ta
26.  $\text{CH}_4$  va  $\text{C}_3\text{H}_6$  dan iborat 11,2 l (n.sh.) aralashma yoqish uchun  $\varphi(\text{O}_2)=86\%$  bo'lgan kislorod va ozon aralashmasidan 1,4 mol sarflandi. Hosil bo'lgan  $\text{CO}_2$  ni nordon tuzga aylantirish uchun 17,5% li ( $\rho=1,2\text{g/ml}$ )  $\text{KOH}$  eritmasidan necha ml kerak?  
A) 240 B) 288 C) 480 D) 400
27. Uglerod vodorod atom nisbatlari 0,6;2,4 bo'lgan propan va pentan gazlari aralashmasini n.sh. da o'lchangan 5,6 l hajmi yonishidan olingan gaz 40% li 130 g  $\text{NaOH}$  eritmasi bilan reaksiyaga kirishdi. Reaksiya mahsulotlari formulasi va massasini toping.  
A)  $\text{Na}_2\text{CO}_3$ -63,6;  $\text{NaHCO}_3$ -29,4  
B)  $\text{Na}_2\text{CO}_3$  37,1;  $\text{NaHCO}_3$ -50,4  
C)  $\text{Na}_2\text{CO}_3$ -100,7  
D)  $\text{NaHCO}_3$ -79,8
28. Alkanlarda eng ko'p uchraydigan bog'lanish qaysi?  
A) biroz qutblangan kovalent bog'  
B) biroz ionlashgan kovalent bog'  
C) qutbsiz kovalent bog'  
D) qisman zaryadlangan ion bog'
29. Kovalent bog'lanishlar bir biri bilan nimasi bilan farq qiladi?  
A) bog' uzunligi bilan B) to'tinuvchanligi bilan  
C) yo'naluvchanligi bilan D) qutblanuvchanligi bilan
30. Bog'lanishning yo'naluvchanligi nimaga bog'liq bo'ladi?  
A) molekulaning energiyasiga  
B) molekulaning tuzilishiga  
C) molekuladagi atomlarning valentligiga  
D) uglerod atomini to'yinganligiga
31. Bog'lanishlar puhtaligining bir hilligi kimning kashf qilgan qoidasi bilan izohlanadi?  
A) Butlerov B) Tile C) Bayer D) Poling
32. Nima uchun gibridlangan orbitalardan hosil bo'lgan bog'lanish gibritlanmagan orbitalardan hosil bo'lgan bog'lanishga nisbatan ancha mustahkam hisoblanadi?  
A) gibridlangan orbitalarni energiyasi yuqori bo'ladi  
B) gibridlangan orbitalar yo'naluvchan bo'ladi  
C) gibridlangan orbitalar gibridlanmagan orbitalarga nisbatan bir birini ko'proq qoplaydi  
D) gibridlangan orbitalardan hosil bo'ladigan bog'lanishda elektron juft atomlar uchun teng taqsimlanadi
33. Umuman trigonal gibridlanishli uglerod atomiga ega bo'lmagan molekulani toping.  
A) metan B) vinilasetilen C) propadiyen D) izopren
34.  $\text{C}\equiv\text{C}$  da atomlar orasidagi masofa qanchaga teng ( $\text{A}^0$ ).  
A) 0,12 B) 120 C) 0,012 D) 1,2
35. 7 ta uglerodga ega bo'lgan alkanda eng ko'pi bilan bir vaqtda nechta uglerod atomi uchlamchi holatda bo'lishi mumkin?  
A) 1 B) 3 C) 2 D) 4
36. Vodorod atomlari uglerodni massa ulushi 82,758% bo'lgan alkan molekulasidagi  $\text{sp}^3$  orbitalariga teng bo'lgan alken molekulasida  $\text{sp}^2$  orbitalar bilan sigma bog'lar nisbatini toping.  
A) 1,5;5,75 B) 2;8,33 C) 1,33;7,66 D) 2,25;8,125
37. Agar vyurs reaksiya natijasida olingan ikki modda formulasi  
 $\text{CH}_3\text{CH}_2\text{C}(\text{CH}_3)_2(\text{CH}_2)_2\text{C}(\text{CH}_3)(\text{CH}_3)\text{CH}_2\text{CH}_3$  va  
 $\text{CH}_3\text{CH}_2\text{C}(\text{CH}_3)_2\text{CH}_2\text{CH}(\text{CH}_3)\text{C}(\text{CH}_3)(\text{CH}_3)\text{CH}_3$   
bo'lsa uchinchi modda tarkibidagi birlamchi va uchlamchi uglerod atom nisbatlarini toping.  
A) 3;1 B) 5;1 C) 4;1 D) 7;1

38. Nomalum alkandan uglerodlar soni teng bo'lgan bir asosli to'yingan karbon kislotasi olindi. Karbon kislotadagi elektronlar soni alkan tarkibidagi alaktronlar sonidan 1,7777 marta ko'p bo'lsa, alkanni toping.  
A) etan B) metan C) butan D) propan
39. Vyurs reaksiyasini hosil bo'lgan uchta vakili  $\text{CH}_3(\text{CH}(\text{CH}_3))_4\text{CH}_3$ ,  $\text{CH}_3(\text{C}(\text{CH}_3)_2)_4\text{CH}_3$  va  $\text{CH}_3\text{C}(\text{CH}_3)(\text{CH}_3)(\text{CH}_2)_2\text{C}(\text{CH}_3)_2\text{CH}_3$  kabi moddalar bo'lsa qolgan moddalarni formulasini toping.  
1.  $\text{CH}_3\text{C}(\text{CH}_3)_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{CH}_3$   
2.  $\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{C}(\text{CH}_3)_2\text{CH}_3$   
3.  $\text{CH}_3\text{CH}(\text{CH}_3)\text{C}(\text{CH}_3)_2\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{CH}_3$   
4.  $\text{CH}_3\text{C}(\text{CH}_3)_2\text{C}(\text{CH}_3)_2\text{C}(\text{CH}_3)(\text{CH}_3)\text{CH}_2\text{CH}_3$   
5.  $\text{CH}_3\text{C}(\text{CH}_3)_2\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{CH}_3$   
6.  $\text{CH}_3(\text{C}(\text{CH}_3)_2)_2\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{CH}_3$   
A) 2,4,6 B) 1,4,5 C) 2,4,5 D) 1,5,6
40. N.sh.da o'lchangan 336 litr metan va azot aralashmasi (geliyga nisbatan zichligi 5,2) 1000 C<sup>0</sup> gacha qizdirildi. Hosil bo'lgan binar mahsulot massasini toping.  
A) 118 B) 162 C) 136 D) 102
41. Butanni krekninglanishidan olingan gazlar aralashmasi geliyga nisbatan zichligi 9,0625 ga teng bo'lsa, krekninglanish unumini toping  
A) 60 B) 55 C) 45,8 D) 72
42. Butanni krekningidan olingan gazlar aralashmada metanni hajmiy ulushi 37,5% bulsa, aralashmadagi alkenni massa ulushini toping. Olingan aralashma faqat 3 hil moddadan tashkil topgan deb qaralsin.  
A) 57,1 B) 48,8 C) 31,0 D) 43,45
43. Nomalum alkanning qanchadir massasi dixlorlanganda 5,65 gr moddani, huddi shunday aralashmasi tribromlanganda 14,05 gr moddani hosil qilsa, alkanni toping.  
A) etan B) propan C) metan D) butan
44. Stihimometrik nisbatda olingan alkan va kislorod aralashmasi yondirilgandan so'ng suv bug'lari kondensatlandi. Qolgan hajm dastlabki hajmni 57,14% ni tashkil qildi. Alkanni Mr ni toping.  
A) 16 B) 58 C) 44 D) 30
45. CO va C<sub>3</sub>H<sub>8</sub> aralashmasini 10 litr hajmini shuncha kislorod bilan yoqish mumkin bo'lsa, dastlabki aralashmadagi CO ni massa ulushini toping.  
A) 83,58 B) 69,67 C) 56,0 D) 63,63
46. 12 g etanni xlorlanishidan olingan gazsimon mahsulot 224 g 30% li KOH eritmasini neytrallash uchun etarli bo'lsa etanni xlorlanishidan olingan xlorli hosila formulasini toping.  
A) C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub> B) C<sub>2</sub>H<sub>2</sub>Cl<sub>4</sub> C) C<sub>2</sub>H<sub>5</sub>Cl D) C<sub>2</sub>H<sub>3</sub>Cl<sub>3</sub>
47. 4 g alkandan Kanavalov reaksiyasi bilan 7,1 g azotli brilma olindi. Alkanni toping.  
A) etan B) metan C) butan D) propan
48. Sanoatda alkanlarga qaysi moddalar ta'sir ettirish orqali nitrobrikmalar olinadi?  
A) NO<sub>2</sub>, N<sub>2</sub>O<sub>4</sub> B) HNO<sub>3</sub> bug'i, NH<sub>3</sub>  
C) NO, HNO<sub>3</sub> bug'i D) HNO<sub>3</sub>(konsen), N<sub>2</sub>O<sub>4</sub>
49. Alkanlar xlor va SO<sub>2</sub> bilan nima ishtirokida ta'sirlashib alksnsulfoxloridlar hosil qiladi?  
A) ultrabinafsha nur B) qorong'ulikda  
C) qizdirilganda D) Ni, Co ishtirokida
50. Sulfonil tuzlari nima uchun ishlatiladi?  
A) erituvchilar sifatida B) yuvish vositasi sifatida  
C) portlovchi sifatida D) oqartuvchi sifatida
51. Alkil gruppaning elektron juftini kislorodga siljishi natijasida alkil gruppaning elektrofilligi qanday o'zgaradi?  
A) ortadi B) kamayadi C) o'zgarmaydi D) t.j.y.
52. Furandagi kislorodni massa ulushi qanchaga teng?  
A) 32,8 B) 41,7 C) 35,6 D) 23,5
53. Tiofendagi oltingugurti gibridlanish turini toping.  
A) sp<sup>3</sup> B) sp<sup>2</sup> C) sp D) sp<sup>3</sup>d
54. Vazelin sifatida ishlatiladigan modda tarkibini toping.  
A) C<sub>12</sub>H<sub>26</sub> - C<sub>25</sub>H<sub>52</sub> B) C<sub>19</sub>H<sub>40</sub> - C<sub>36</sub>H<sub>74</sub>  
C) C<sub>15</sub>H<sub>32</sub> - C<sub>30</sub>H<sub>62</sub> D) C<sub>22</sub>H<sub>46</sub> - C<sub>38</sub>H<sub>78</sub>
55. Parafin tarkibini aniqlang.  
A) C<sub>12</sub>H<sub>26</sub> - C<sub>25</sub>H<sub>52</sub> B) C<sub>19</sub>H<sub>40</sub> - C<sub>36</sub>H<sub>74</sub>  
C) C<sub>15</sub>H<sub>32</sub> - C<sub>30</sub>H<sub>62</sub> D) C<sub>22</sub>H<sub>46</sub> - C<sub>38</sub>H<sub>78</sub>
56. Organik moddaarda qaysi element borligi anialanayotganda berlin lazuri hosil bo'ladi?  
A) oltingugurt, Cl B) azot, S C) vodorod D) galogen
57. Soch tolalari Na metali bilan qattiq qizdirilganda qaysi tuzlar hosil bo'ladi?  
A) Na<sub>2</sub>CO<sub>3</sub>, Na<sub>2</sub>S B) Na<sub>2</sub>S, NaCN  
C) NaCN, Na<sub>2</sub>CO<sub>3</sub> D) Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, NaCN
58. Metan va xlor aralashmasi nima ta'sirida portlaydi?  
A) MnO<sub>2</sub> B) quyosh nuri C) Pt D) luis kislotasi