

KIMYO MAXSUS 2

1. Berilgan moddalardan qaysinisining 1 mol miqdori normal sharoitda yuqori hajmga ega?
A) O₂ B) H₂O C) Br₂ D) Cu

2. Miqdorlari 1 moldan bo'lganda hajmlari teng (n.sh.) moddalar juftligini toping.
A) O₂ va N₂ B) H₂O va H₂
C) O₂ va KNO₃ D) HNO₃ va H₂SO₄

3. Teng massasi bir xil hajmga ega moddalar juftligini ko'rsating.
A) N₂ va O₂ B) Ar va Ne C) CO₂ va N₂O D) H₂ va He

4. Teng massada olingan quyidagi gazlarning bir xil sharoitda hajmlari ortib borish tartibi qaysi javobda to'g'ri ko'rsatilgan?
1) O₃ 2) N₂ 3) O₂ 4) NH₃
A) 1, 3, 2, 4 B) 4, 2, 3, 1 C) 2, 4, 3, 1 D) 3, 2, 1, 4

5. Bir xil sharoitda hajmlar teng bo'lgan quyidagi gazlarda atomlar soni ortib borish tartibida joylashtiring.
1) O₃ 2) CH₄ 3) NH₃ 4) C₃H₈
A) 1, 2, 3, 4 B) 1, 3, 2, 4 C) 4, 2, 3, 1 D) 2, 3, 1, 4

6. 22,4 sm³ (n.sh.) suv namunasidagi molekular sonini toping.
A) 6,02 · 10²⁰ B) 6,02 · 10²³ C) $\frac{22,4}{18} N_A$ D) $\frac{18}{22,4} N_A$

7. Normal sharoitda suvning molyar hajmi (mol/sm³) nechaga teng bo'ladi?
A) 22,4 B) 22,4 · 10⁻³ C) 18 D) 36

8. Gazning molyar konsentratsiyasi 0,25 mol/dm³, 2,5 dm³ gaz namunasidagi molekular sonini toping.
A) 0,1N_A B) 0,625N_A C) 6,02 · 10²³ D) 10N_A

9. 36 sm³ (4°C, 101,3 kPa) suv namunasidagi molekular sonini toping.
A) 12,04 · 10²³ B) $\frac{36}{22400} N_A$ C) $\frac{36}{22,4} N_A$ D) 6,02 · 10²⁰

10. 7,6N_A dona atom tutgan Fe₂(SO₄)₃ · 7H₂O tarkibini kristallogidrat namunasi massasini (g) toping.
A) 105,2 B) 52,3 C) 32,16 D) 48,4

11. Noto'g'ri formulani ko'rsating.
A) M_r = D_{H₂}(X)/2 B) M_r = D_{He}(X) · 4
C) D_{havo}(X) = M_r(X)/29 D) D_{Cl₂}(X) = M_r(X)/71

12. 6,8N_A dona atom tutgan Al₂(SO₄)₃ namunasidagi sulfat ionlari massasini (g) toping.
A) 38,4 B) 115,2 C) 19,6 D) 217,6

13. Toza havo bu—
1) alohida modda 2) bir jinsli aralashma

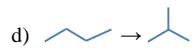
3) azot va kislorod birikmasi 4) oddiy modda
A) 2 B) 2, 3 C) 1, 4 D) 1, 2, 3

14. Berilgan moddalarning qaysi birning nomidan uning molyar massasini aniqlab bo'lmaydi?
A) ammiak B) kaliy sulfat C) sellyuloza D) oq fosfor

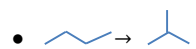
15. 0,015 mol CuCl₂ · xH₂O kristallogidrat namunasida 1,245 mol elektron bor. x ni aniqlang
A) 3 B) 4 C) 5 D) 2

16. Xlor atomi quyida berilganlardan qaysilariga ega?
a) massa b) rang c) o'lcham d) agregat holat
A) b, c B) a, c C) a, d D) a, b

17. Kimyoviy hodisa sxemasini ko'rsating.
a) I₂(qattiq) → I₂(gaz) b) P₄(oq) → P (qizil)
c) ²¹⁰Po → ²⁰⁶Pb + α

d) 
A) b, d B) a, b, d C) c, d D) a, b, c, d

18. Berilgan o'zgarishlardan nechitasi kimyoviy jarayonga kiradi?
● I₂(qattiq) → I₂(gaz) ● P₄(oq) → P (qizil)

● ²¹⁰Po → ²⁰⁶Pb + α
● 
A) 1 B) 2 C) 3 D) 4

19. KBr va K₂SO₄ aralashmasida moddalarning mol nisbati 2 : 1 bo'lib, aralashmada atomlar soni 3,01 · 10²³ dona. Aralashma massasini (g) toping.
A) 15,06 B) 24,08 C) 19,32 D) 18,72

20. S_x molekulasida tarkibida 96 ta elektron bo'lsa, modda formulasini toping.
A) S₁₂ B) S₄ C) S₆ D) S₈

21. M_r(DCl¹⁷O₄) = 107 bo'lsa, molekula xlorning qaysi izotopi mavjud?
A) ³⁵Cl B) ³⁶Cl C) ³⁷Cl D) ³⁴Cl

22. Tarkibi E₃N₂ bo'lgan birikma molekulasida 182 ta proton bo'lsa, E ni toping.
A) Fe B) Ba C) Er D) Md

23. 3,61 g metall namunasida 11,438 · 10²¹ dona atom bo'lsa, metanni toping.
A) Ru B) Md C) Os D) Sc

24. 6,0 g Ca va 4,1 g P aralashirilib qizdirildi. Reaksiyon aralashmada qaysi moddadan qanday massada (g) chiqarib yuborilganda, moddalar qoldiqsiz reaksiya kirishadi?
A) 1 g Ca B) 1 g P C) 1,2 g Ca D) 1,55 g P
25. 2 : 5 molyar nisbatdagi N₂ va CH₄ aralashmasining zichligini (n.sh.) toping.

A) 0,53 B) 0,47 C) 0,34 D) 0,86

26. Ikki dona molekula SO₂ tarkibidagi kislorod massasini (g) toping.

A) 64 B) $\frac{128}{6,02 \cdot 10^{23}}$ C) $\frac{64}{6,02 \cdot 10^{23}}$ D) 32

27. Zichligi 2,5 g/dm³ (n.sh.) bo'lgan gazning 10 g namunasida necha dona molekula bor?
A) 24,08 · 10²³ B) $\frac{5,6}{10} N_A$ C) 1,505 · 10²³ D) $\frac{10}{56} N_A$

28. Cu(OH)₂·CuCO₃ namunasida Cu va C massalari yig'indisi 28,0 gramm. Ushbu namunadagi O atomlari massasini (g) toping.
A) 16 B) 24 C) 8 D) 32

29. ⁶⁵Cu nuklidining 0,1 mol namunasidagi neytronlar miqdorini (mol) toping.
A) 3,6 B) 36 C) 6,5 D) 65

30. C₂H₆ namunasida C va H atomlari soni yigindisi 18,06 · 10²³ dona. Namuna massasini (g) toping.
A) 16,32 B) 11,25 C) 34,65 D) 45,3

31. Qaysi modda tarkibida "elektron gaz" mavjud?
A) mis B) xlor C) mis (II) xlorid D) vodorod xlorid

32. CO va CO₂ aralashmasida atomlar soni molekular sonidan 2,75 marta ko'p. Aralashmadagi φ(CO) qiymatini (%) toping.
A) 40 B) 36 C) 25 D) 56

33. Zn va noma'lum metall dan iborat 25 g aralashmada noma'lum metallning massa ulushi 30%, atomlar soni 7,055 · 10²² dona. Metallni toping.
A) Cu B) Al C) Cd D) Ca

34. 6,85 g IIA guruhcha metali namunasida 0,1 mol valent elektron bor. Metallni toping.
A) Ca B) Sr C) Ba D) Ra

35. Al(NO₃)₃ termik parchalanishidan olingan gazlar aralashmasida φ(O₂) qiymatini (%) toping.
A) 20 B) 30 C) 40 D) 50

36. CH₄ va C₃H₈ dan iborat 1 : 4 molyar nisbatdagi aralashmaning zichligini (n.sh.) toping.
A) 2,45 B) 1,71 C) 3,16 D) 1,23

37. Atomlar soni molekular sonidan 2,75 marta ko'p bo'lgan O₂ va O₃ aralashmasi vodoroddan necha marta og'ir? A) 44 B) 10 C) 11 D) 22

38. 3,0 dm³ CO ga qanday hajmda O₂ qo'shilganda aralashmaning zichligi (n.sh.) 1,362 g/dm³ ga teng bo'ladi?
A) 4 B) 3 C) 5 D) 6

39. Quyida berilgan atom va ionlarni ular radiuslari ortib borish tartibida joylashtiring: 1) Cl⁻ 2) Ar 3) K⁺

4) Ca²⁺
A) 1, 2, 3, 4 B) 4, 2, 1, 3 C) 4, 3, 2, 1 D) 2, 1, 3, 4

40. 250 sm³ 0,05 mol/dm³ Al₂(SO₄)₃ eritmasidagi sulfat ionlari miqdorini (g) toping.
A) 3,6 B) 1,25 · 10⁻² C) 5,4 D) 9,6

41. Quyidagi moddalarni bog'lanishning valent burchagi ortib borish tartibida joylashtiring.
1) CH₄ 2) NH₃ 3) C₂H₄ 4) H₂O
A) 1, 2, 3, 4 B) 4, 2, 1, 3 C) 2, 4, 1, 3 D) 2, 1, 3, 4

42. CuSO₄ ning suvli eritmasida tuz va suvning mol nisbati 1:15 bo'lsa, ω(CuSO₄) qiymatini (%) toping.
A) 42,5 B) 34,8 C) 37,2 D) 46,2

43. Sulfat kislotaning suvli eritmasida ω(S) = 16% bo'lsa, ω(H₂SO₄) qiymatini (%) toping.
A) 24,5 B) 38 C) 49 D) 36

44. Quyidagi moddalarni kristalla panjara mustahkamligi ortib borish tartibida joylashtiring.
1) Cu 2) CuF₂ 3) HF 4) S₈
A) 1, 2, 4, 3 B) 1, 2, 3, 4 C) 3, 4, 2, 1 D) 3, 4, 1, 2

45. 0,02 mol CuCl₂ · xH₂O kristallogidrat namunasida kislorod tarkibida bo'lgan 0,8 mol elektron bor. x ni aniqlang.
A) 4 B) 5 C) 3 D) 2

46. 7,6 mol atom saqlagan Fe₂(SO₄)₃ · nH₂O namunasida 53,2 mol elektron bo'lsa, n qiymatini toping.
A) 8 B) 7 C) 6 D) 5

47. Nitrat kislotaning suvli eritmasida kislorod atomlari umumiy atomlarning 40% qismini tashkil etsa, kislota va suvning mol nisbatini toping.
A) 1 : 6 B) 1 : 5 C) 2 : 7 D) 4 : 9

48. Ca va 4,1 g P bo'lgan aralashmadan 1 g P chiqarib yuborilganda Ca ning 80% qismi reaksiyaga kirishdi. Dastlabki aralashma necha gramm bo'lgan?
A) 12,3 B) 18,5 C) 22,45 D) 11,6

49. Berilganlardan nechitasi tarkibida "elektron gaz" mavjud: temir; alyuminiy karbid; karbonat anhidrid; suv; vodorod bromid; oltin; po'lat?
A) 3 B) 4 C) 2 D) 6

50. Sirka kislota eritmasida quyidagi metallardan qaysi biri eng tez eriydi?
A) Mg B) Zn C) Fe D) Cr