**1-Variant**

**Birinchi savol:** 5 ta turli xatni 5 ta turli konvertga necha xil usulda joylash mumkin?

**Ikkinchi savol:** -7 + *4x*+2x2 = 0 tenglamaning ildizlari *x1 va x2* bo‘lsa, *x1* + *x2* ning qiymatini toping.

**Uchinchi savol:** AB va BS – markazi O’ nuqtada bo’lgan aylananing vatarlari, ˂ABS=300 .

Agar aylana radiusi 10 sm ga teng bo’lsa, AS vatarning uzunligini toring.

**Toʻrtinchi savol:** Tabiatda qimmatbaho komponentlarni o’z ichiga olaigan suyuq, qattiq va gazsimon aralashmalar mavjud. Inson asrlar davomida hayotida aralashmalardan foydalanib kelishgan. Siz hayotingizda uchraydigan tabiiy aralashmalarni javoblar ichidan tanlang: **Kislorod, dengiz suvi, havo, osh tuzi, yodlangan osh tuzi, ichimlik sodasi, neft, qazib olingan ko’mir, distillangan suv.** ( agar javoblar ichidan 5 tanlansa 1 ball, 3 yoki 4 tasi tanlansa 0,5 ball, undan kam tanlansa 0 ball)

Javob : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Nigorani oyisi unga 500 gr 70% li ichimlik sodasi eritmasi tayyorlashni buyurdi. Nigora bu eritmani tayyorlashh uchun necha gramm tuz va suvda foydalanishi kerak. ( Masala oson usulda ishlangan bo’lsa, 1 ball, ishlanmagan bo’lsa 0 ball)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** 96 % li sulfat kislotaning elektr tokini o’tkazuvchanligini oshirish uchun qanday usullardan foydalanish kerak?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2-Variant**

**Birinchi savol:** Asoslari 8 va 12 ga teng bo’lgan teng yonli trapetsiyaning diagonallari o’zaro perpendikulyar. Trapetsiyaning yuzini toping.

**Ikkinchi savol:** Romb burchaklari nisbati 1:5 ga, tomoni esa a ga teng. Shu rombning yuzini toping.

**Uchinchi savol:** Uchburchakning yuzi 150 sm2 ga teng. Uchburchakning balandliklari 15 sm, 12 sm va 20 sm ga teng bo’lsa, uning perimetrini toping.

**Toʻrtinchi savol:** 6. Choy damlash, tuzli suv tayyorlash, xonaga xushbo’ylantiruvchi sepish hodisalari qanday hodisaga misol bo’ladi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Berilganlar ichidan oq cho’kma hosil qiladiganlarni tanlang. Zn(OH)2, AgBr, Ag J, BaSO4, Ag3PO4, AgCl, NaCl, CaCO3 (Javoblar ichidan 3 yoki 4 tasi tanlansa, 1 ball, undan kam tanlansa 0 ball)

**Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Oltinchi savol:** Tabiatda shunday g’orlar borki, ularni “it g’ori” deb atash mumkin. Chunki, bu g’orga odam kirsa, hech narsa bo’lmaydiyu, it kirsa, yuqoriga sakrab sakrab o’lib qoladi. Sababini tushuntiring.

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3-Variant**

**Birinchi savol:** Parallelogramning diagonallari 11 va 23 bo’lsa, qo’shnitomonlari kvadratlari yig’indisini toping.

**Ikkinchi savol:** Tenglamani yeching: .

**Uchinchi savol:** Hisoblang: .

**To’rtinchi savol:** Insonning kalsiyga bo’lgan ehtiyoji taxminan 0,8 gramm. Sigir sutida taxminan 16% kalsiy bo’ladi. Demak, siz organizmingizni kalsiyga bo’lgan ehtiyojini to’la qondirish uchun bir kunda qancha sigir sutini iste’mol qilishingiz kerak? (iste’mol qilinadigan boshqa oziq-ovqat mahsulotlaridan kalsiy olinmagan deb hisoblang.)

Javob;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Mis-kaliy-azotli mikroo’g’itning tarkibini yozing

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Faqat ozn bilan ta’sirlashib oksid hosil qiladigan metal.

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4-Variant**

**Birinchisavol:**Futbol jamoasi ishqibozlari soni 1-o‘yinda 18000 nafar 2-o‘yinda 15200 nafar 3-o‘yinda 16900 nafar va 4-o‘yinda 17500 nafar bo‘ldi.Futbol jamoasi ishqibozlari sonining o‘zgarish kengligini toping.

**Ikkinchisavol:** Kvadrat tenglamani yeching: 

**Uchinchisavol:**Rombning yuzi 162 ga, diagonollaridan biri 36 ga teng. Ikkinchi diagonalining uzunligi qancha?

**Toʻrtinchi savol:** Yadrosi tarkibida neytroni bo’lmagan element atomi qaysi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** 1. mandarin, 2. apelin, 3. Olma, 4. Nok, 5. Limon, 6. Behi, 7. Ananas tarkibida qandat tabiiy kislotalar bor. a) limon kislota b) olma kislotasi. Javoblarni sistemaga ajrating.

Javob: a-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Javoblar ichida faqat suv hosil bo’ladiganlarini aniqlang. (bir nechta javob qabul qilinishi mumkin)

1. NaOH+HCl=
2. CaCl2+ HNO3 =
3. KOH+ H2SO4=

**5-Variant**

**Birinchi savol:** Maktabga tibbiy ko‘rikka kelgan doktor 9-sinf o‘quvchilarini og‘irliklarini o‘lchab yozib bordi. Tibbiy ko‘rik oxirida daftarda quyidagi yozuvlar bor edi. Shu tanlanmaning modasini toping?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 65 kg | 67 kg | 71 kg | 65 kg | 68 kg | 69 kg | 65 kg | 65 kg | 62 kg | 72 kg | 71 kg | 61 kg | 63 kg | 68 kg | 63 kg |

**Ikkinchi savol:** 2x2+4x-6=0 tenglamaning ildizlari x1 va x2 bo’lsa, x12+x22 ning qiymatini toping?

**Uchinchi savol:** Teng yonli trapetsiyaga aylana ichki chizilgan. Agar trapetsiyaning yon tomoni 12sm ga teng bo‘lsa, uning o‘rta chizig‘ini toping.

**To‘rtinchi savol:** 10 gr CuO va 10 gr Cu2O vodorod bilan qaytarilganda bir xil miqdorda suv hosil bo’ladimi? (Javobni ha yoki yo’q bilan izohlang)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Atom yadrosi atrofida to’xtovsiz harakatlanadigan zarracha qanday zaryadga ega va uni kim kashf etgan?

**Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Oltinchi savol:** Maktabda yoqilg’I uchun keltirilgan ko’mirni tahlil qilish uchun uning 12 grami yondirildi. Natijada n. sh da o’lchangan 15,12 litr karbonat angidiri hosil bo’ldi. Agar hosil bo’lgan karbonat angidrid nazariy jihatdan olinishi mumkin bo’lgan miqdorga nisbatan 90 % ni tashkil etgan bo’lsa, keltirilgan ko’mirning tarkibida necha foiz sof uglerod bo’lgan?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6-Variant**

**Birinchi savol:**(x-3)(x-5)≤0 tengsizlikning eng kichik natural yechimini toping?

**Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Ikkinchi savol:** Tomonlari 6sm va 8sm ga teng parallelogramning o‘tkir burchagi 300ga teng bo‘lsa uning yuzini toping? **Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Uchinchi savol:**O‘qituvchi sinfdagi 7 nafar a’lochi o‘quvchidan sinfkom va uning yordamchisini necha xil usulda tanlashi mumkin?

**To‘rtinchi savol:** Yodlangan osh tuzi tarkibida 0,02 % yod bo’lsa, 2 kg osh tuzi tarkibida necha gramm yod bor?

**Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Beshinchi savol:** 16% va undan ortiq kremniy tutgan po’lat kislotalarga chidamli bo’la oladimi? (Javob ha yoki yo’q bilan belgilansin)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Atom yadrosi tarkibida 16 ta neytroni bo’lgan elementni yozing

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7-Variant**

**Birinchi savol:** O‘qituvchi sinfdagi 5 nafar a’lochi o‘quvchidan sinfkom va uning yordamchisini necha xil usulda tanlashi mumkin?

**Ikkinchi savol:** y=x2+6x-16 funksiyaning eng kichik qiymatini toping?

**Uchinchi savol:** Romning o‘tkir burchagi 600 va katta diaganali 6sm bo‘lsa, uning yuzini toping?

**To‘rtinchi savol:** O’zbek xalqi juda qadimdan kulolchilik sanoati bilan shug’ullanib kelgan. Samarqand, Buxoro va Xiva kabi shaharlarda asrlar davomida o’zining jozibsini yo’qotmasdan kelayotgan binolarning naqshlari ham sopoldan tayyorlangan. Nozik sopolllar tayyorlashda asosiy xom ashyoga qanday moddalar qo’shilgan?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Amadeo Avogadro qonuni qanday agregat holatdagi moddalar uchun amal qiladi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** O’qituvchi o’quvchilarga idishda rangsiz eritma berdi va unga natriy metali bo’lakchasidan tashlashlarini buyurdi. Natriy metali yonib reaksiyaga kirisha boshladi, ammo eritma rangi qizara boshladi. Savol eritmaga qanday modda qo’shilgan bo’lgan?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**8-Variant**

**Birinchisavol:**Futbol jamoasi ishqibozlari soni 1-o’yinda 18000 nafar 2-o’yinda 15200 nafar 3-o’yinda 16900 nafar va 4-o’yinda 17500 nafar bo’ldi.Futbol jamoasi ishqibozlari sonining o’zgarish kengligini toping.

**Ikkinchisavol:** Kvadrattenglamaniyeching: 

**Uchinchi savol:**Rombningyuzi 162 gadiaganollaridanbiri 36 gateng .Ikkinchidiagonalininguzunligiqancha?

**Toʻrtinchi savol:** Qaysi reaksiyalarda qo’ng’ir rangli gaz ajraladi?( bir nechta javob olinishi mumkin)

1. Zn+ H2SO4(kons) =
2. Cu+ H2SO4=
3. Na+ HCl=
4. CuO+ HCl=

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Qaysi indikatorlar kislota eritmalarida qizil rangni beradi?

Javob: lakmus, metiloranj, fenolftalein, indicator qog’oz ( to’g’ri javobni tagiga chizing)

**Oltinchi savol:**  Qaysi metallar kislotalar eritmalaridan vodorodni siqib chiqaradi?

Mis, natriy, oltin, kumush, rux, qo’rg’oshin, magniy, temir ( javoblar bir nechtasini tanlashingiz mumkin)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**9-Variant**

**Birinchisavol:**Futbol jamoasi ishqibozlari soni 1-o’yinda 18000 nafar 2-o’yinda 15200 nafar 3-o’yinda 16900 nafar va 4-o’yinda 17500 nafar bo’ldi.Futbol jamoasi ishqibozlari sonining o’zgarish kengligini toping.

**Ikkinchisavol:** Ushbuildizlarix1vax2 bo‘lsa 10 x1x2niqiymatinitoping.

**Uchinchisavol:**Rombningyuzi 162 gadiaganollaridanbiri 36 gateng .Ikkinchidiagonalininguzunligiqancha?

**Toʻrtinchi savol:** Suvning sifatini yaxshilash uchun qanday amallarni bajarish mumkin:

suvni yumshatish, suvga osh tuzi qo’shish, suvga yod qo’shish, suvni tiniqlashtirish, suvni zararsizlantirish, suvga rang beradigan qo’shimchalar qo’shish, suvni rangsizlantirish, suvni chuchuklashtirish. ( javoblardan bir nechtasini tanlab, ularning ostiga chizing)

**Beshinchi savol:** Pestisidlar so’zining ma’nosi qanday?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** 1755 yilda J.Blek kashf qilgan, qurilish sohasida eng ko’p ishlatilaigan modda tarkibida uchraydigan elementning atom tarkibini ayting (p,e, n)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**10-Variant**

**Birinchisavol:**16-umumta`limmaktabidao`tkazilgan “Yoshkitobxontanlovidaishtirokchilarnio`qiganasarlarisonidoskagayozilgandaquyidagima`lumotlarhosilbo`ldi.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7 0 | 85 | 82 | 85 | 72 | 83 | 82 | 85 |

Shutanlamaningmodasini toping.

**Ikkinchisavol:** x1 va x2  2x2-7x+3=0 tenglamaningildizlaribo`lsa 4 x1x2niqiymatini toping.

**Uchinchi savol:** Daraxtning soyasi 120 sm .Yergatikva vertical qo`yilgan 100 sm li yog`ochningsoyasi 20 smbo`lsadaraxtbalandliginechametr?

**Toʻrtinchi savol:** 14 gramm mis va mis(II)- oksid aralashmasini eritish uchun xlorid kislotaning 20% li eritmasidan 36,5 gramm sarflandi. Dastlabki aralashmadagi misning massa ulushini aniqlang.

Javob: \_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Beshinchi savol:** Deraza oynalarini tozalashda ekologik toza mahsulotni ayting: sintetik yuvish mahsulotlari, sirka kislota, ichimlik sodasi, suv. ( javobda faqat bittasini tanlang)

Javob : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Ichimlik sodasi, kir sodasi tarkibida kaliy elementi mavjudmi?( javobni ha yoki yo’q deb belgilang)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**11-Variant**

**Birinchisavol:**Bolalarpoyabzaliishlabchiqarmoqchibo`lganfirma 12-15-yoshlibolalardanbirnechtasinioyoqo`lchamlarinidaftargayozibolgandaquyidagiyozuvlarnioldi

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **35** | **36** | **35** | **41** | **36** | **37** | **37** | **39** | **37** | **38** | **40** | **36** |

Ushbu tanlamaning medianasini toping.

**Ikkinchisavol:** x1 va x2 x2-6x+5=0 tenglamaningildizlaribo`lsa, 2(x1 + x2 )niqiymatini toping.

**Uchinchisavol:**Oynakesayotganustato`g`rito`rtburchakshaklidagieni 60 cm vabo`yi 120cm

bo`lganoynadan , to`g`rito`rtburchakshaklidagieni 40cm vabo`yi 30cm bo`lganoynanikesiboldi. Qolganoynayuzinechacm2 ?

**Toʻrtinchi savol:** Uch litrli bankaga issiq suv quyib, ustiga metal plastinka yopamiz va usiga bir necha bo’lak muz qo’ysak, banka ichida sodir bo’layotgan hodisa tabiatning qanday hodisasiga misol bo’ladi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Uyingizda choy damlash uchun suv qaynatiladi. Doimo suv qaynatadigan idish tubiga e’tibor bersangiz, suvda erimaydigan toshsimon quyqani ko’rasiz. Bu usulda suvning qanday qattiqligini yo’qotish mumkin.( Javobingizni ostiga chizing, javobda bittasini tanlang)

Doimiy qattiqlik, vaqtinchalik qattiqlik, kalsiyli qattiqlik, umumiy qattiqlik.

**Oltinchi savol:** X.K.Ersted kashf etgan element qaysi mineral tarkibida mavjud?(javoblarda bir nechtasini tanlang)

1-korund, 2-apatit, 3-kuprit, 4-boksit, 5- nefelin, 6-kinovar, 7-kaolin, 8-gematit

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12-Variant**

**Birinchi savol:**Hisoblang. 23 + (- 3)2 – (-2)2 + (-1)5

**Ikkinchi savol:** funksiyaninganiqlanishsohasigategishliengkichik natural sonni toping.

**Uchinchi savol:**ABC uchburchak AC=8 sm, AB = 12 smbo`lsauchburchakyuzini toping?

**Toʻrtinchi savol:** Alyuminiy sulfat eritmasidan elektr toki o’tkazilganda katod va anodda qanday moddalar ajraladi? ( javobingizni ostiga chizing)

Javob: alyuminiy, SO2, vodorod, kislorod, suv

**Beshinchi savol:** Qaysi reaksiyalarda rangsiz gaz ajraladi?( bir nechta javob olinishi mumkin)

1. Zn+ H2SO4 (suyul) =
2. Cu+ H2SO4=
3. Na+ HCl=
4. CuO+ HCl=

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** 2 mol glyukozani oksidlanishi uchun zarur bo’lgan kislorod miqdorini aniqlang. (masala to’liq yechilgan bo’lishi kerak)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**13-Variant**

**Birinchi savol:** Hamshira doktor qabuliga kirgan mijozlarning boʻyini (sm) oʻlchab yozib bordi. Tushlikkacha hamshira daftarida quyidagi yozuvlar bor edi. Shu tanlanmada 175 sm ning nisbiy chastotasini toping. 175; 180 ;164; 175 ;178; 183 ; 175; 164; 172; 181

**Ikkinchi savol:** 2𝑥 2 + 4𝑥 − 7 = 0 tenglamaning ildizlari 𝑥1 va 𝑥2 boʻlsa, 𝑥1 + 𝑥2 ning qiymatini toping.

**Uchinchi savol:** Rombni dioganallari tomonlari bilan hosil qilgan burchaklar nisbati 2:7. Rombni katta burchagini toping.

**Toʻrtinchi savol:** Mineral o’g’itlar asosiy tarkibida qanday elementlar mavjud?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Qaysi metallar kislotalar eritmalaridan vodorodni siqib chiqara olmaydi?

Mis, natriy, oltin, kumush, rux, qo’rg’oshin, magniy, temir ( javoblar bir nechtasini tanlashingiz mumkin)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** CuSO4 eritmasi orqali 6 A tok 30 minut davomida o’tkazilganda katodda qancha mis ajraladi ? Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14-Variant**

**Birinchi savol:** 𝑦 = 9 va 𝑦 = 2𝑥 2 − 23𝑥 + 30 funksiyalarning grafiklari A(x1 ; y1) va B(x2 ; y2) nuqtalarda kesishsin. 2𝑥1 · 5𝑥2 ning qiymatini toping (𝑥1 > 𝑥2). Javobingizni butun songacha yaxlitlang.

**Ikkinchi savol:** 11𝑥 + 29 < 37 tengsizlikning eng katta butun yechimini toping.

**Uchinchi savol:** 16 ta nasos 11 soat davomida 528 m3 suvni kanaldan tortib chiqaradi. 7 ta shunday nasos 3 soatda necha kub metr suvni tortib chiqaradi?

**Toʻrtinchi savol:** Akarisid nimalarga qarshi ishlatiladigan pestisid hisoblanadi? (belgilang)

1. Zararli hasharotlarga
2. Kapalaklarga
3. Zararli kemiruvchilarga
4. Begona o’tlarga

**Beshinchi savol:** Inson organizmining 20% i suyak, suyakning 20% esa kalsiy fosfatga to’g’ri keladi. O’zingizning massangizni bilgan holda organizmingizda necha kilogram kalsiy fosfat va qancha kalsiy bo’lishini hisoblang.

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** G.Devi kashf etgan elementlar qaysi minerallar tarkibida mavjud? (javoblarda bir nechtasini tanlang)

1-korund, 2-apatit, 3-gips, 4-boksit, 5- nefelin, 6-ohaktosh, 7-kaolin, 8-magnezit

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15-Variant**

**Birinchi savol:** 𝑦 = 2 va 𝑦 = 15𝑥 2 − 17𝑥 + 4 funksiyalarning grafiklari A(x1 ; y1) va B(x2 ; y2) nuqtalarda kesishsin. 5𝑥1 · 2𝑥2 ning qiymatini toping (𝑥1 > 𝑥2). Javobingizni butun songacha yaxlitlang.

**Ikkinchi savol:** 6(𝑥 − 2) − 4(𝑥 + 1) < 12(x − 3) − 37 tengsizlikning eng kichik butun yechimini toping.

**Uchinchi savol:** Teng yonli trapetsiyaning perimetri 138cm, o‘rta chizig‘i 53cm. Trapetsiyaning yon tomoni uzunligini aniqlang(sm).

**Toʻrtinchi savol:** G’o’za bargini to’kish uchun ishlatiladigan modda tarkibida 50% kalsiy, 15% uglerod, 35% azot bo’lsa, birikma formulasini toping.

Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** To’q qizil rangli kristall modda bo’lib, suvda juda yaxshi eriydi. Tibbiyotda ishlatiladi. Kuchli oksidlovchilik xossasiga ega bo’lgan modda tarkibidagi Sheele kashf qilgan elementning massa ulushini aniqlang.

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Tabiatda qimmatbaho komponentlarni o’z ichiga olaigan suyuq, qattiq va gazsimon aralashmalar mavjud. Inson asrlar davomida hayotida aralashmalardan foydalanib kelishgan. Siz hayotingizda uchraydigan sof moddalarni javoblar ichidan tanlang: **Kislorod, dengiz suvi, havo, osh tuzi, yodlangan osh tuzi, ichimlik sodasi, neft, qazib olingan ko’mir, distillangan suv.** ( agar javoblar ichidan 4 tasi tanlansa 1 ball, 3 tasi tanlansa 0,5 ball, undan kam tanlansa 0 ball)

Javob : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**16-Variant**

**Birinchi savol:** y = 17 va y = 2x 2 – 24x+ 5 funksiyalarning grafiklariA(x1 ; y1) va B(x2 ; y2) nuqtalarda kesishsin. 8x1 + 2x2 ning qiymatini toping (x1 > x2). Javobingizni butun songacha yaxlitlang.

**Ikkinchi savol:** 3(x − 2) − 6(x + 1) < 12(x − 3) − 7 tengsizlikning eng kichik butun yechimini toping.

**Uchinchi savol:** 13 ta nasos 10 soat davomida 390 m3 suvni kanaldan tortib chiqaradi. 5 ta shunday nasos 6 soatda necha kub metr suvni tortib chiqaradi?

**Toʻrtinchi savol:** Quyidagilarning qaysi birida limon kislotasi bor? 1. mandarin, 2. apelin, 3. Olma, 4. Nok, 5. Limon, 6. Behi, 7. Ananas (javoblar ichidan bir nechtasini tanlang)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Suyuq holatdagi metal va suyuq holatdagi metallmaslarni belgilang. (Javoblaringizni ostiga chizing)

Vodorod, mis, simob, brom, qalay, rux, xlor, fransiy

**Oltinchi savol:** Havoga nisbatan zichligi 1,256 ga teng bo’lgan gazni aniqlang. U qanday gaz?

Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**17-Variant**

**Birinchi savol:** To‘g‘ri burchakli parallelepipedning uchta o‘lchovi bo‘yicha sirtini toping? 10sm,22 sm,16sm.

**Ikkinchi savol:** Tenglamalar sistemasini yeching.

**Uchinchi savol:** Yuzalari 21m2 va 84m2 bo‘lgan ikkita to‘g‘ri burchakli uchburchak o‘xshash. Agar birinchi uchburchakning bir kateti 6 sm bo‘lsa, ikkinchi uchburchakning katetlarini toping?

**To‘rtinchi savol:** Amadeo Avogadro qonuni qattiq va suyuq holatdagi moddalar uchun amal qiladimi? (Javob ha yoki yo’q bilan belgilansin)

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Samolyotsozlikda eng ko’p ishlatiladigan qotishma qaysi? (belgilang)

1. Duralyuminiy
2. Nikelin
3. Ferronixrom
4. Babbitlar

**Oltinchi savol:** Tarkibida 4% kremniy tutgan po’lat qanday xususiyatga ega?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**18-Variant**

**Birinchi savol:** Tenglamani yeching: .

**Ikkinchi savol:** Funksiyaning eng kichik qiymatini toping: .

**Uchinchi savol:** Parallelogramning diagonallari 11 va 27 bo’lsa, qo’shni tomonlari kvadratlari yig’indisini toping.

**Toʻrtinchi savol:** Elektrolitlar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ moddalar.

**Beshinchi savol:** Tibbiyotda surgi dori sifatida ishlatiladigan modda qaysi?

1. Ichimlik sodasi
2. Glauber tuzi
3. Taxir tuz
4. Kalsit

**Oltinchi savol:** AgNO3 eritmasi orqali 12 A tok 10 minut davomida o’tkazilganda katodda qancha kumush ajraladi ? Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**19-Variant**

**Birinchi savol:**. Tenglamani yeching: .

**Ikkinchi savol:**. Hisoblang: .

**Uchinchi savol:**.Parallelogramning diagonallari 11 va 29 bo’lsa, qo’shni tomonlari kvadratlari yig’indisini toping.

**Toʻrtinchi savol:** Natriy ioni alangani qanday rangga bo’yaydi? (belgilang)

1. **Qizil**
2. **Binafsha**
3. **Ko’k**
4. **Sariq**

**Beshinchi savol:** “Baliqlar suvda erigan kislorod bilan nafas oladi”. “ Suv molekulasi tarkibida kislorod bo’ladi” ushbu gaplarda ishlatilgan kislorod so’zlarini ma’nosi bir xilmi? Javobingizni izohlang.

Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** ishqor eritmalariga fenolftalein qo’shilganda eritma rangi pushti rangga kiradimi?

(Javob ha yoki yo’q bilan belgilansin) Javob:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**20-Variant**

**Birinchi savol:** Zavod mashina ishlab chiqarish buyurtmasini 20 kunda bajarishi kerak edi. Lekin zavod har kuni rejalashtirilganidan tashqari 1ta mashina ortiq ishlab chiqarganligi sababli, muddatidan bir kun oldin buyurtmani bajaribgina qolmasdan, balki qoshimcha 4 ta ortiq mashina ishlab chiqargan. Zavod buyurtma bo‘yicha nechta mashina ishlab chiqarishi kerak edi?

**Ikkinchi savol:** Teng yonli uchburchakning perimetri 51 sm gateng. Asos yon tomonidan 6 sm ga uzun. Shu uchburchak yon tomonining asosiga nisbatini toping.

**Uchinchi savol:**Kvadrat tenglamani yeching: x2+7x+6=0

**To‘rtinchi savol:** 250 gramm tuzni necha gramm suvda eritganda 20% li eritma hosil bo’ladi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beshinchi savol:** Neytrallanish reaksiyalarida asosan ishqorlar hosil bo’ladimi?

Javob: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Oltinchi savol:** Tuproqda qaysi elementning yetishmasligi o’simliklarning o’sishi, rivojlanishi va hosildorligiga salbiy ta’sir ko’rsatadi? (belgilang)

1. Kaliy
2. Marganes
3. Mis
4. temir

**JAVOBLAR:**

**1-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 120 | -2 | 10 |  |  |  |

**2-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 100 |  | 60 |  |  |  |

**3-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 34 | 2 | 3 |  |  |  |

**4-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 2800 | -3;2 | 9 |  |  |  |

**5-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 65 | 10 | 12 |  |  |  |

**6-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 3 | 24 | 42 |  |  |  |

**7-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 20 | -25 |  |  |  |  |

**8-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 2800 | -3;2 | 9 |  |  |  |

**9-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 2800 | -60 | 9 |  |  |  |

**10-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 85 | 6 | 600 |  |  |  |

**11-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 37 | 12 | 6000 |  |  |  |

**12-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 12 | 1 | 24 |  |  |  |

**13-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
|  | -2 | 1400 |  |  |  |

**14-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 105 | 0 | 63 |  |  |  |

**15-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
|  | 6 | 16 |  |  |  |

**16-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
|  | 3 | 90 |  |  |  |

**17-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 1464 cm2 | (4;1),(1;4) | 12 |  |  |  |

**18-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 3 | 11 | 38 |  |  |  |

**19-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 0 | 3 | 40 |  |  |  |

**20-Variant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** |
| 460 |  | -6;-1 |  |  |  |

**Kimyo Javoblari:**

**1- variant**

4. dengiz suvi, havo, yodlangan osh tuzi, neft, qazib olingan ko’mir

5. 350 gr tuz va 150 suv olishi kerak.

6. kislotani suyultirish kerak.

**2-variant**

4. Diffuziya

5. Zn(OH)2, BaSO4, AgCl, CaCO3

6. g’orlar ohaktosh va marmardan hosil bo’lganligi uchun, vaqtlar o’tgan sari marmar va ohaktoshlar yemirilib, karbonat angidrid hosil bo’ladi. Karbonat angidiridning massasi havodan og’ir bo’lganligi uchun pastda to’dalanadi, itning bo’yi past bo’lganligi uchun u tepaga sakrab sakrab o’lib qoladi.

**3-variant**

4. 500 gr sutda

5. mis kuporosi, kaliy xlorid, mochevina

6. kumush

**4-variant**

4. vodorod

5. a-1,2,5,7 b-3,4,6

6. a va c javob lar to’g’ri

**5-variant**

4. yo’q

5. manfiy zaryadga ega, Tomson kashf qilgan

6. 75%

**6-variant**

4. 40 gramm yod

5. ha

6. fosfor va oltingugurt

**7-variant**

4. talk, ginozen, magniy oksid, titan

5. gazlar uchun

6. fenolftalein indikatori qo’shilgan.

**8-variant**

4. a va b javoblar

5. lakmus, metiloranj, fenolftalein, indicator qog’oz

6. natriy, rux, qo’rg’oshin, magniy, temir

**9-variant**

4. suvni yumshatish, suvni tiniqlashtirish, suvni zararsizlantirish, suvni rangsizlantirish, suvni chuchuklashtirish.

5. Yara-chaqalarni, zararli mikroblarni o’ldiraman degani

6. 20 ta proton, 20 ta elektron, 20 ta neytron

**10-variant**.

4. 50% Cu

5. sirka kislota

6. yo’q

**11-savol**

4. daryo, dengiz, ko’llardagi suvlarning bug’lanib, yomg’ir va qorga aylangan holda yog’ishi

5. vaqtinchalik qattiqlik

6. 1,4,5,7

**12-savol**

4. alyuminiy, vodorod va kislorod

5. a va c javoblar to’g’ri.

6. C6H12O6 + 6 O2 = 6 CO2+ 6 H2O

1 mol--------6 mol

2 mol--------X = 12 mol javob: 12 mol O2

**13-savol**

4.azot, fosfor, kaliy

5. mis, oltin, kumush

6. 3,58 gramm mis

**14-savol**

4**.** B

5. 2,8 kg kalsiy fosfat va 1,084 kg ca.

6. 2,3,6,8

**15-savol**

4. Javob: CaCN2- kalsiy sianamid

5. KMnO4 tarkibidagi Mn ning massa ulushi 34,8 %

6. Kislorod, osh tuzi, ichimlik sodasi, distillangan suv.

**16-savol**

**4.**  mandarin, apelin, Limon, ananas

5. simob, fransiy, brom

6. vodorod xlorid - zaharli, bo’g’uvchi gaz

**17-savol**

4. yo’q

5. Javob A.

6. oson magnitlanish xususiyatiga ega

**18-savol**

4. elektr tokini o’tkazadigan moddalar

5. Javob B.

6. 8 gramm Kumush

**19-savol**

4. sariq rangga

5. 1-gapda kislorod molekulasi haqida, 2-gapda kislorod atomi haqida gap ketyapti.

6. Ha

**20- savol**

4. 1000 gr suvda

5. yo’q

6. Javob C