**ბიოსამედიცინო ინჟინერია**

**2019-2020 სასწავლო წლის სამაგისტრო გამოცდის საკითხები**

**I sainformacio teqnologiebi**

**1.1. risi gakeTeba ar SeiZleba Font dialoguri fanjridan?**

1. Sriftis feris Secvla
2. zeda indeqsis dayeneba
3. striqonebs Soris intervalis dayeneba
4. asoebs Soris manZilis gazrda

1**.2. saidan regulirdeba mindvris zomebi?**

1. Page Layout menius Page Setup jgufis Margins brZanebiT
2. Page Layout menius Page Setup jgufis Size brZanebiT
3. Insert / Header and Footer brZanebiT
4. Home/Paragraph/Bullets and Numbering…brZanebiT

**1.3. rogor moiniSneba teqstSi mTliani striqoni?**

1. striqonis gaswvriv marcxena mindvris areSi dawkapunebiT
2. striqonze orjeradi dawkapunebiT
3. striqonze samjeradi dawkapunebiT
4. striqonis Sesabamisi konteqsturi meniudan

**1.4. CamoTvlilTagan romeli brZanebiT gadainomreba dokumentis gverdebi?**

1. Home /Paragraph/ Bullets and Numbering…
2. Insert /Text/ Object…
3. Insert /Heather&Footer/ Page Numbers…
4. Insert / Pages/Page Break

**1.5. saxazavis romeli markeri gansazRvravs abzacis pirveli striqonis pozicias?**

1. marcxena zeda markeri
2. marcxena qveda samkuTxa markeri
3. marcxena qveda kvadratuli markeri
4. marjvena markeri

**1.6. romeli sabrZanebo RilakiT xdeba abzacebis markireba?**

1. Home/Paragraph/Bullets
2. Home/Font/Italic
3. Home/Clipboard/Format Painter
4. Home/Paragraph/Justify

**1.7. romeli brZanebiT xdeba suraTis Casma teqstSi?**

1. Edit / Replace…
2. View / Views/ Outline
3. Insert /Illustrations/ Picture
4. Tools / Merge Documents…

**1.8. moqmedebaTa romeli mimdevrobiT aris SesaZlebveli zeda kolon­titulis Casma**

1. Insert CanarTis Text jgufis Quiick Parts Rilakis gaaqtiurebiT;
2. Insert CanarTis Header anf Footer jgufis Page number Rilakis gaaqtiurebiT;
3. Insert CanarTis Header anf Footer jgufis Footer Rilakis gaaqtiurebiT;
4. Insert CanarTis Header anf Footer jgufis Header Rilakis gaaqtiurebiT

**1.9. rogor unda moviqceT, raTa SesaZlebeli iyos dokumentSi Casmuli TariRisa da drois avtomaturi ganaxleba?**

1. Date and Time dialogur fanjaraSi CavrToT Update automatically CamrTveli
2. Date and Time dialogur fanjaraSi davawkapunoT Default Rilakze
3. TariRi da dro CavsvaT kolontitulebSi
4. dokumenti SevinaxoT HTML formatSi

**1.10. Excel-is ujredSi Setanili ricxviTi monacemebi ganTavsdeba:**

1. ujredis marcxena kidesTan
2. ujredis marjvena kidesTan
3. ujredis centrSi
4. ujredis zeda kidesTan

**1.11. risTvis gamoiyeneba formulis zoli/striqoni (Formula Bar)?**

1. moniSnuli ujris (ujraTa diapazonis) SigTavsis daTvalierebisa da redaqtirebisaTvis
2. grafikuli obieqtebis Casasmelad
3. swrafi gaSvebis panelis sxva adgilze gadatanisTvis
4. monacemTa kopirebisaTvis

**1.12. ris gakeTeba ar SeiZleba Format Cells dialoguri fanjridan?**

1. ujraSi teqstis ramdenime striqonze ganTavseba
2. monacemTa centrireba horizontaluri da vertikaluri mimarTulebiT
3. moniSnuli aris Sida da gare CarCos gakeTeba
4. gansxvavebuli simbolos Casma

**1.13. romeli simbolo gamoiyeneba ujredis absoluturi misamarTis aRsaniSnad?**

1. &
2. %
3. $
4. @

**1.14. ras niSnavs Canaweri $D$32?**

1. D32 ujraSi Cawerilia absoluturi misamarTi
2. D32 ujraSi Cawerilia fardobiTi misamarTi misamarTi
3. D32 ujraSi Cawerilia Sereuli misamarTi
4. D32 ujraSi Cawerilia wrfivi misamarTi

**1.15. ras niSnavs Secdoma #### :**

1. maTematikuri formula mimarTavs teqstur cvlads
2. formuliT miRebuli gamoTvlis Sedegi ar eteva ujredSi da saWiroa Sesabamisi svetis siganis gafarToeba
3. argumenti ar ekuTvnis funqciis gansazRvris ares
4. formula sworad ar aris Cawerili

**1.16. romeli mimarTva ar aris sworad Cawerili:**

1. A5:C8
2. Sheet2!A1:C5
3. Sheet1:Sheet3!D2
4. D6-D7

**1.17. funqciaAVERAGE gamoiTvlis:**

1. misi argumentebis saSualo ariTmetikuls
2. mis argumentebs Soris udidesisa da umciresis saSualo ariTmetikuls
3. misi argumentebis saSualo geometriuls
4. argumentebis absolutur mniSvnelobaTa saSualo ariTmetikuls

**1.18. moniSnul A1 da A2 ujredebSi weria ricxvebi 5 da 7. CarCos markeri mausiT CamovwieT A10-e ujredamde.ra moxdeba?**

1. araferi
2. A1-A10 ujredebSi rigrigobiT Caiwereba ricxvebi 5 da 7
3. A1-A10 ujredebSi Caiwereba ricxvebi: 5, 7, 9, ... , 23
4. A9 da A10 ujredebSi Caiwereba, Sesabamisad, 5 da 7

**1.19. rogor ganixilavs Excel-i ujredSi Caweril wesier wilads 5/23:**

1. Sesabamisi aTwiladis saxiT
2. rogorc TariRs: 23 maisi
3. 15 niSnad ciframde damrgvalebuli Sesabamisi aTwiladis saxiT
4. rogorc wesier wilads 5/23

**1.20. rogori tipis mniSvneloba unda hqondes IF funqciis pirvel arguments:**

1. ricxviTi
2. teqsturi
3. samisamarTo
4. logikuri

**1.21. romeli moqmedebis SesrulebiT ar daemateba slaidi prezentacias?**

1. Home / Slides jgufis Slide Layout brZanebiT.
2. Home / Slides jgufis New Slide brZanebiT,
3. struqturis ares slaidis CanarTidan aqtiuri slaidis konteqs­tu­ri menius New Slide brZanebis arCeviT,
4. klaviaturis Ctrl M klaviSTa kombinaciT;

**1.22. amocanaTa panelis romeli CanarTidan ganisazRvreba slaidis animaciis sqema**

1. Disign/Themes jgufis Sesabamisi brZanebiT
2. Transition/Transition to This Slide jgufis Sesabamisi brZanebiT
3. Animation/Animations jgufis Sesabamisi brZanebiT
4. View /Presentation Views/ Note Page

**1.23. romeli brZanebiT xdeba xmovani da dinamiuri failebis Camateba**

1. Insert / Duplicate Slide
2. Insert /Media / Video & Audio
3. Insert / Sound...
4. Insert /Text/ Object...

**1.24. romeli brZanebiT xdeba slaidebis dalagebis reJimis CarTva?**

1. View /Presentation Views/ Slide Sorter
2. View /Master Views /Slide Master
3. View /Presentation Views/ Note Page
4. View/Normal

**1.25. standartulad satitulo slaidi Sedgeba:**

1. mxolod saTauris Title arisgan
2. saTauris Title da qvesaTauris – Subtitle teqsturi areebisgan.
3. mxolod qvesaTauris – Subtitle teqsturi arisgan
4. Office Theme -idgan

**II. kompiuteris arqiteqtura**

**2.1. kompiuteris romeli mowyobiloba gamoiyeneba gamoTvlebis Sesasru­leb­lad?**

1. procesori
2. monitori
3. vinCesteri
4. fleS-mexsiereba

 **2.2. ras niSnavs termini "mudmivi mexsiereba"?**

1. informaciis matarebelze Cawerili informacia aRar iSleba
2. informaciis matarebelze Cawerili informacia Tu ar wavSaleT, mudmivad Seinaxeba
3. informaciis matarebelze Cawerili informacia kompiuteris gamorTvis Semdeg ar iSleba da misi gamoyeneba kompiuteris momaval CarTvazec SeiZleba
4. imitom, rom programebis garda maTze monacemebis Cawerac SeiZleba

**2.3. dabali donis draiveri uzrunvelyofs**

1. Sesabamisi mowyobilobis diagnostikas
2. Sesabamisi mowyobilobis minimalur reJimSi funqcionirebas
3. operaciuli sistemis CatvirTvas
4. Sesabamisi mowyobilobis Cveulebriv reJimSi funqcionirebas

**2.4. kompiuterSi maRali donis draiveris CatvirTvis SemTxvevaSi**

1. dabali donis draiveri rCeba operatiul mexsierebaSi
2. dabali donis draiveri waiSleba operatiuli mexsierebidan da igi wyvets funqcionirebas
3. dabali donis draiveri waiSleba operatiuli mexsierebidan, magram agrZelebs funqcionirebas
4. dabali donis draiveris funqcionireba ar aris damokidebuli maRali donis draiveris CatvirTvaze.

**2.5. operaciuli sistemis daniSnulebaa**

1. kompiuteris aparaturis funqcionireba da diagnostika
2. periferiuli mowyobilobebis marTva
3. momxmarebelTan dialogis uzrunvelyofa
4. kompiuteris aparaturis funqcionireba da momxmarebelTan

dialogi

**2.6. programa muSaobis dros imyofeba:**

1. procesorSi;
2. operatiul mexsierebaSi;
3. monitorSi;
4. disze;

**2.7. sistemuri programuli uzrunvelyofa ar Seicavs Semdegi tipis programebs:**

1. eleqtronul cxrilebs;
2. operaciul sistemebs;
3. momsaxure donis programuli uzrunvelyofis utilitebs;
4. mowyobilobaTa draiverebs;

**2.8. romeli operaciuli sistema ar aris mravalamocaniani?**

1. Linux
2. MS Winduws XP
3. Ms Dos
4. MS Winduws 7

**2.9. operatiuli mexsierebis mTavari maxasiaTebelia**

1. fasi
2. mexsierebis tipi da moculoba
3. mikroqsemis konstruqcia
4. mikrosqemis zoma

**2.10. procesoris ZiriTadi maxasiaTebeli ar aris:**

1. integrirebis xarisxi
2. mexsierebis moculoba da *Cash* mexsierebis moculoba
3. taqturi sixSire
4. damuSavebuli monacemebis moculoba

**2.11. romeli klaviSi ar anTebs naTuras klaviaturaze**

1. Num Lock
2. Print Screen
3. Caps Lock
4. Scroll Lock

**2.12. romeli parametriT ar ganisazRvreba ekranis gamosaxulebis xarisxi:**

1. ekranuli gamosaxulebis Sesabamisi failis siZveliT
2. ekranuli wertilebis raodenobiT
3. ekranis ferebis raodenobiT
4. ekranuli mexsierebis moculobiT

**2.13. romeli mowyobiloba uzrunvelyofs informaciis miReba-gadacemas Sor manZilze?**

1. modemi
2. skaneri
3. strimeri
4. displei

**2.14. ganmarteT ra igulisxmeba gansazRvrebaSi: "operaciuli sistema aris mravalamocaniani"?**

1. gulisxmobs erTdroulad mxolod ori programis muSaobas
2. gulisxmobs erTdroulad ramdenime programis muSaobas
3. aseTi gansazRvreba saerTod ar arsebobs
4. erTi da imave operaciuli sistemiT ramdenime momxmarebeli sargeblobs ise, rom yvelas Tavisi parametrebi aqvs

**2.15. Cash-mexsierebaSi monacemebi itvirTeba**

1. diskuri mowyobilobebidan da ZiriTadi operatiuli mexsierebidan.
2. mudmivi mexsierebidan.
3. ZiriTadi operatiuli mexsierebidan
4. mudmivi mexsierebidan da ZiriTadi operatiuli mexsierebidan

**2.16.** dinamikuri mexsiereba, statikur mexsierebasTan SedarebiT, gamoirCeva

1. ufro maRali RirebulebiT
2. integraciis ufro maRali xarisxiT
3. ufro maRali swrafqmedebiT
4. ufro maRali saimedoobiT

**2.17. DDR-mexsiereba warmoadgens**

1. statikur asinqronul operatiul mexsierebas
2. statikur sinqronul operatiul mexsierebas
3. dinamikur asinqronul operatiul mexsierebas
4. dinamikur sinqronul operatiul mexsierebas

**2.18. procesoris ZiriTadi maxasiaTebeli ar aris**

1. procesoris registrebis Tanrigianoba
2. sistemuri (FSB) saltis sixSire
3. sistemuri (FSB) saltis Tanrigian
4. damisamarTebadi mexsierebis moculoba

**2.19. HyperThreating-teqnologia gamoiyeneba**

1. erTbirTvian procesorebSi
2. orbirTvian procesorebSi
3. mravalprocesorul sistemebSi
4. nebismier maTganSi

**2.20. programa draiveris daniSnulebaa**

1. mowyobilobaTa marTva
2. mexsierebis Semowmeba
3. informaciis ganawileba mexsierebaSi
4. procesoris programuli marTva

**2.21. romeli ar aris ugamtaro tipis mowyobiloba:**

1. infrawiTeli
2. radiosixSiruli
3. **Bluetooth** mxardaWera
4. **USB** mxardaWera

**2.22. ra daniSnuleba aqvs *FSB* saltes?**

1. procesoris sistemuri saltis komponentebTan damakavSirebeli salte
2. kontroleri, romelic periferiul interfeiss sistemur saltesTan akavSirebs
3. Tanamedrove universaluri mimdevrobiTi salte
4. universaluri asinqronuli mimReb-gadamcemi mikrosqema

**2.23. kompiuteris cvlad mexsierebas miekuTvneba**

1. vinCesteri
2. skaneri
3. operatiuli mexsiereba
4. kompaqt-diski

**2.24. rodis Seasrulebs procedura POSTkompiuteris testirebas?**

1. operaciuli sistemis CatvirTvis Semdeg
2. operaciuli sistemis CatvirTvamde
3. rogorc operaciuli sistemis CatvirTvamde, ise operaciuli sistemis CatvirTvis Semdeg
4. testireba damokidebulia momxmareblis mier dayenebul parametrebze

**2.25. ra aris skaneri?**

1. eleqtronuli aslis gadamRebi mowyobiloba
2. sabeWdi mowyobiloba
3. informaciis Sor manZilze gadasacemi mowyobiloba
4. saxazavi mowyobiloba