chapter1

histology:microscopic anatomy cytology: study of cells phsyciology: study of diseases

^2. begin with subatomic partices: atom molecules macromolecules organelles tissues organs systems organisms 3 two organs in lymphatic and nervous system: lymphatic tonsils/spleen protects from disease nervous brain/-spinal cord direct stimuli 4definehomeostasis range of values where ife exists post increase rateofchange neg reversal trend 4 name and planes transverse horizontal, frontal coronal, saggital front, 5 three body cavities throacic pleura, heart pericardial, lung peritoneal 6 mediastium in pleura cavity seperate left and right lung reduces friction lung expans/recoils 7diff diagnostic ct computed tomography 3d images of body mri magnetic resonance imagery different organ dstructures^.

chapter2

1.whattypeofbondisbetweensrRa none sr is cation 4.reactwithonea-nother? to become more stable 5.twostrongchemicabonds ionic, covalent 6.twoweak hydrogen, van der wall 7. oilinwater oil is hydrop-hobic and nonpolar more attracted to self than water molecules 8. categories of lipids fat oils waxes fattyacids&glycerides

chapter3

^1definegeneralendothermic atp creates po4turns into adp 2. eicosanoids response to inflammation 1prostagl-andin2leutiotriem 3 sterol 6665 estrogen, testosterone, cholesterol, cortiso 4phosp-holipid phostphatethatbonds a diglyceride to a nonlipid 1glycolipid 2 lipoprotien 5basic protein primary-aa sequence secondary-pleat-edhelical tertiary-complex folidng quatenary-groups of 3d 6.cofact&coenzyme cof=mineral ce=vitamins 7.

chapter3 (cont)

denaturization change in structure of enzyme/changeintempPH yes, if not too much damage has been done 8.nucleic acid dna-doublehelix has agct RNA-singestrangded has u instead of t 9.metabolic turnover removal of chemical structures in a ce 1phospholipids in neuron 2. enzymes in liver 10.phosphorylation-&cellular energy phos is the adding of a phosphate E+adp+po4---atp 11.omega fatty is an unsaturated fatty acid named from the left 13. cellmembrane po4==po4c phospholi-pid=backbone protein=transport ch20=ID cholestrol=flexibility^.

chapter4

^1.cellularrespirationw/ooxygen anaerobic pyruvate can be used or lacticacid--atp for cell funx 2.protein-synthesis translation-mRna+rhiboso-mes+trna>protein transcription gene>mrna 3.movementcellm-embrane determiedby permeability diffusion is passive process and will move from high c to low con.

chapter4 (cont)

4.difftumors benign-c malignant spreads in 2diapedesis into bV diapedisis 5angioger stem cell=mesenchy replace damaged tis unequal concentratic to move 7. cellular di 2prophase-mvnt chro 3metaphase-chromo seperchromoso 5telc ensesis 8.epithelial c hement 4regeneratio protect skin stratified kidney simple, colum

chapter5

2.transitionalepithelium3l damage -urinarybladder, ellular and grand substan kocytes monocytes:phag ls,neutrophils,basophils:p cells that persist in adult itself 9.threeprocesses m ration 10. typesofmuscles

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chapter5 (cont)

straition,ic-disc,branch,-neuro sk x--ach smooxxx ache/e card--

chapter6

^1. list4f-uxnskin 1protect of tissue-s/organs 2excre-tions of salts/-water 3storagel-ipids 4detection of senses vitamind promotes absorp of calcium blood+liv-er>kid-ney>actie vit d>g-ut>ca2+ absorption 2.

chapter6 (cont)

layersofepidermis 1corneum-thick, thin skin 2lucid-eum-thick skin palm/sole 3granuloum-superificaltospin 4spinosum-superbasal 5basal-innermost epidermal layer 3.skincancer malignant melanoma,basal,squ-amous 4.abcd asym,bord,colo,diameter 5.2fxnegf 1duodenum, salivary glands 2accelerating production of keratin -stimulatin epidermal develop 6.stretch-marks exceeded elastin fibers 7.hairs vellus-peach terminal-coarse 8.sebaceous lubricate skin, waterp-roofskin,defenseagainstdisease 9.2sweatglands apocrine-secrete productintohairfollicle merocrine-se-crete onto skin 10.granulationtissue fibrobast>macro-phage>capillarynetwork cell 12.injuryrepairsequence 1invasionofmasscells 2bloodclotforms 3growthbasal cell 4basal cell adhere to 5phagocytic cell 6heali-ngscab 8.primarysecondaryintention 1w/sutureto ptob-ottom 2w/osuturebottomup^.

chapter7

1.6typesofbone 1long-femur 2short-scaphoid 3flat-scapulae 4irreg-ular-hyoid 5sesamoid-patella 6sutural-cranial 3.matrix comesfrom-bonemarrow, called hydroxyapatite 4.spongybone trabeculae 5.twoossification intracartilagenous-bonereplacescartilage intram-embranous-bonedevelopsfrommesenchymal/ fibrousct 6.homeost-asisbloodcalcium parathyroid pth and calitonin help regulate calcit-onin-thyroid-inhibit osteoc, stimul osteob (vbcl) pth-parathyroid-op-posite 7.6fractures 1transverse-breakshaft 2greenstick-bro-ken,bent 3displaced-misalignment 4spiral-twisted 5potts-twobreak 6cottes-distal displacedhardest 8.rickets&scurvy r-bone malasia looksfinebutflexibl scurvy-lossofbonemass/strength 9.tmj muscle-spasm>misalginment>pain> musclespasm 10.3sinuses 1frontal 2sphenoid 3ethenoid 1immunology 2lightenskullbone 3humidifier 11.fasle rib ribsnotattachedtosternum 8-12 12.mfpelvis apperance inlet illiac m-narrow, heart shaped, deep f-braod, oval, shallow.

chapter8

1.clubfoot congenitaltalipesequinovarus cx abnormal muscle devleopm tx cast,surgery 2.3typesofjoints norange-synarthoro-sis-fibriouscartildge-suture some-amp-fibrcart-syndesmasis&sy-mphasysis free-di-synovial-hip 4.3fxnsynovialfluid 1lubrication 2nutrientdistribution 3shockabsorption-cushionjointexposed-toshock 5.sprain/strain sp-ligament torn st-lig stretched 6.buni-on&bursa bunion-baseofbigtoe bursa-degenerativejoint disease bursistionoftoeisbunion 7.4typesofsynoviajoint 1hinge-monoaxia-l-anke 2pivot-mono-radial saddle-bi-carpometacarpal 4ball-soc-ket-triaxial-hip 8.probsivdisc slippeddisc-nucleuspomposis compressed, distortsanularfibrosis, partway vertebral canal herniated disc-nucleuspomposis breaksthru anular fibrosis portrudes vertebralcanal 9.3ligamentseblow 1radialcollateral 2ulnalcol 3anular 10.3ligh ip 1iliofemoral 2ishiofemora 3pubof-emoral 11.diseasesaffectjoint 1rheumatoid arthristis-autoimm-uneattacksjointcapsule 2gouty-uricacidinsynovialfluid 3osteoart-hritis-degenerativejointdisease.

chapter9

^1.neurotransmitt herine-cardiac/sm 1producesskeleta 3mainbodytemp 4 ncesexits 4.embry ll-tissue=myoblas fmuscletriad 2terr impulses run dow ca2+ and contrac oldfactinstrandtog mentproperalignm nduremusclecont 1achreleased 2pc 4cabindtotroponir myosin, leaveacti nbind 9.twitch-co ncrease immedia

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chapter9 (cont)

summation-stimb4therefractoryperiodends teatnus-maximumforce 11.cpaffectmusclecontraction -donates phosphate to adp creates atp atp help binds extend/staytogether for a contraction 12.causeparalysis botulism--noach chlostridium botolinum myatheniagravis-norecept-orache chlostridium tetani^.

chapter10

1.4waysorganizemusclefiber 1parallel-bicepsbrachi 2convergent-pectoralismuscle 3unipennate-extensordigitorium 4bipennate-rectusfemoris 2.3classesoflevers 1vload fulcrum vaf neckexten 2fvl$_{ap}$ ankleexten 3f^{afvl} bicep brachiflex 3.6eyemuscles 1inferior down niii 2anterior rectus up NVI 3medial middle nvii 4lateral lateral nvi 5inferior oblique rollupdown niii 6superioroblique rolldownlateral niv 4.herniacauseloc visercal org abnormally protruding thru an opening in muscular wall caux increased force, in pressure, weak cT 3loc inguinal,umbilical,ivdisc 5.retinaculum broad band of ct tendons pass under it hold tendons in place 6.hamstrings bicepfemoris,semimembranous,semitendenous quads vastusmedialis,vintermedialius,lateralis, rectusfemoris rotatorcuff supraspinatus,infraspinatus,teresminor,subscapularis 7.ischemia/hypoxia is-restrict/dec bloodflow to tissue hypdecrease o2 in tissue 9.organellemitosis centrioles location=olfactory / hippocampus 10.4structuralclassficiationsneurons 1multipolar 2bipolar 3unipolar 4anapolar 11.stepsneuralregneration 1invasionmacrophages 2formofneuraltubebyschwanncells 3regrowthofaxon 12.neurogliaCNS 1ependymalcells-produce csf 2astrocytes-producebbb 3oligodendrocytes-myelin 4microglial-phagocytosis.

chapter11

2.4ionchannels 1voltagegatedchanne-changetransmembranepotential 2mechanicalgatedchannel-changeinphysicaldistortionofmembranesurface 3leakchannel-alwaysopenbindtospecificfibers 4ligand-bindspecificchemicals 3.3diffbetwengradedresponse g /1localized 2rateofchange 3changesacrossmembranepotentia ap/1restingleakchann 2depolariz 3hyperpolar 4.hyperpolarization resetting for another ap, cell become neg, two ion mvm 5.summation summing (+)(-)fromdendritestoseeifreachesthreshodtostartap @ axon hillock 6.initialsegfx at axon hillock 7.refractoryperiodwneuron 8.saltatoryconduction jumping of ap from nodetonode bc no na under myelin occurs @ nodes of ranvier 9.typesofneurons afibers-largestmyelinatedaxon bodyposition bfibers-smaller myelinated pain cfibers-smallestunmyelinated pain 10.chemical&electricalsynapse c-neurotransmitter to sendmessages exneuromuscular jnx e-nosynaptic gap so the ionic flow exthe eye 11.neuromodulator n-modifiesthereleaseoftheneurotransmitters inhibits release stimulate ca2+ opiods= 1endorphins 2endomorphins 3dynorphins 4enkephalins substance p.

chapter12

^1.directandindirect d-ligandbinc
rotein channelopens in-ligandat
tor,activatesGprotein,gtp>adenc
>cAMPopensproteinchannel 2.3
nsmitters aminoacid:glycine,dire
neuropeptide:endomorphines,in
alamus purine:adenosine,indire
ynapticinhi/fac pi:when ca2+is ir
releases it lessens the amnt of r
pf: when there is aninfluxof ca2-
neurttransm is greater 4.spatial-
temporal-onesynapse 6.plexus i
networkingofnerves 4componen
sions,cords adv:overlappingfxn
sbrachialplexus c4-c8,t1 1supra
subscapularis 2dorsalc5 thalam
cc5-c7omohyoid 4pectoralc5,t1
8.segmentslumbarplexus t12,l1-
2obtulatoradductorhips 3sapher
L2-l4 9.neuralcircuits 1converga
3serial 4parallel 5reverbation 1(
spindle fxmuscletone -intrafusua
rents-sensoryneurons 11.

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