PATHOLOGY

The Normal Cell

1. What is the function of the smooth endoplasmic reticulum
    a. protein synthesis
    b. steroid synthesis
    c. mitosis

2. Pinocytosis
    a. is a way of transporting large molecules
    b. adds to cellular membrane

3. Mitochondria repeat – read bloody alberts, we still haven't

4. Regarding SER
    a. For protein synthesis
    b. Contains electron chain thingy enzymes
    c. For lipid synthesis
    d. Extracellular pathway through cell

5. Ribosomes
    a. have 3 subunits
    b. have 30% DNA
    c. synthesise haemoglobin

6. Which cell type is found predominantly in the periarteriolar sheaths in the white pulp of the spleen & (somewhere in lymph nodes)
    a. B lymphocyte
    b. Neutrophil
    c. Mast cell
    d. T lymphocyte
    e. Macrophages

7. Smooth endoplasmic reticulum
    a. is the site a cell steroid production
    b. is the site of cell protein synthesis
    is the site of cellular cytochrome oxidases
8. Pinocytosis
    a. adds to the cell membrane
    b. involves the uptake of soluble macromolecules

9. Which cell organelle has no basement membrane
    a. mitochondrium
    b. RER
    c. lysosome
    d. centriole
    e. lysozyme

10. Regarding Mitochondria
    a. are self replicative
    b. are present in RBC
    c. responsible for protein synthesis
    d. have no membrane

11. Regarding centrioles
    a. are responsible for spindle formation in mitosis

12. Which substance is not subject to passive diffusion
    a. PO4
    b. Na
    c. K+
    d. H20
    e. Cl

13. Regarding ribosomes
    a. There are 3 subunits
    b. they are 65% DNA
    c. They synthesize haemoglobin
    d. They contain 30% DNA

14. What is the function of the smooth endoplasmic reticulum; which is incorrect
    a. steroid synthesis
    b. drug detoxification / cytochrome P450
    c. protein synthesis
    d. role in carbohydrate metabolism

Cell Injury & Adaptation

1. Regarding dystrophic calcification; which is correct
    a. causes organ dysfunction
    b. multiple myeloma is a cause
    c. associated with hypercalcaemia

2. Regarding atrophy; all are correct except
    a. persistance of residual bodies
    b. decreased myofilaments
    c. decreased rough endoplasmic reticulum
    d. decreased autophagic vacuoles
    e. decreased smooth endoplasmic reticulum

3. Which of the following is an example of hypertrophy
    a. increase in liver size after partial hepatectomy
    b. increased size of female breast
    c. increased respiratory epithelium in response to vitamin A deficiency
    d. increase in size of female uterus during pregnancy
    e. ?? endometrial

4. Hyperplasia
    a. Increased mitotic bodies
    b. Due to increased function demands
    c. Distractor

5. Regarding atrophy, all are correct except
    a. Persistance of residual bodies
    b. Decrease myofilaments
    c. Decrease rough endoplasmic reticulum
    d. Decreased autophagic vacuoles
    e. Decreased smooth endoplasmic reticulum

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    c. Increase respiratory epithelium in response to Vitamin A deficiency
    d. Increase in size of female uterus in pregnancy
7. ??endometrialRepeat Q regarding wound healing and time frames…'What occurs at the same time?'
    a. Neutrophils and basal epithelial mitoses
    b. Tensile strength and granulation tissue
    c. Neutrophils and granulation tissue

8. Which is an example of hypertrophy?
    a. the pregnant uterus
    b. tissue with a high capillary to myocyte ratio
    c. the breast at puberty
    d. the liver post hepatectomy

9. Which of the following is not associated with atrophy
    a. decreased smooth endoplasmic reticulum
    b. decreased rough endoplasmic reticulum
    c. decreased autophagic vacuoles

10. Examples of hyperplasia include
    a. glandular epithelium of pubertal breasts

11. Hypertrophy
    a. occurs after partial hepatectomy
    b. increases function of an organ exponentionally
    c. is triggered by mechanical and trophic chemicals
    d. occurs after dennervation
    e. is usually pathological

12. All the following are features of apoptosis EXCEPT
    a. cell swelling
    b. chromatin condensation
    c. formation of cytoplasmic blebs
    d. lack of inflammation
    e. phagocytosis of apoptotic bodies

13. Dystrophic calcification
    a. is formed only in coagulative necrosis
    b. does not occur on heart valves
    c. rarely causes dysfunction
    d. is rarely found on mitochondria
    e. is formed by crystalline calcium phosphate mineral

14. Irreversible cell injury is characterised by
    a. dispertion of ribosomes
    b. cell swelling
    c. nuclear chromatin dumping
    d. lysosomal rupture
    e. cell membrane defects

15. Metaplasia
    a. can be caused by vitamin B12 deficiency
    b. preserves mucus secretion in the respiratory tract
    c. is typically an irreversible process
    d. is the process that occurs in Barrett's oesophagitis
    e. is an increase in the number and size of cells in a tissue

16. Dysplasia
    a. is a feature of mesenchymal cells
    b. inevitably progresses to cancer
    c. is characterised by cellular pleomorphism
    d. is the same as carcinoma in situ
    e. is not associated with architectural abnormalities

17. Metastasis
    a. unequivocally prove malignancy
    b. is the most common presentation of melanoma
    c. is proven by lymph node enlargement adjacent to a tumor
    d. of breast is usually to supraclavicular nodes
    e. all of the above

18. Metastatic calcification occurs in (repeat)

Tissue Renewal & Repair

1. With regard to wound healing
    a. neutrophils proliferate at the wound margins at the same time as epithelial proliferation occurs

2. With regard to wound healing
    a. Neutrophils proliferate at the wound margins at the same time as epithelial proliferation occurs

3. Platelets
    a. contain alpha and beta granules
    b. are biconcave discs
    c. contain a nucleus
    d. are found in the plasma at levels of 200-500 per microlitre
    e. are the main source of thrombin

4. Macrophages may secrete
    a. histamine
    b. seretonin
    c. prostaglandins
    d. oxygen free radicals

5. Which of the following cells cannot phagocytose
    a. neutrophils
    b. eosinophils
    c. macrophages
    d. T-cells

6. The most common peripheral circulating lymphocyte is
    a. B-cell
    b. T-cell

7. Mast cell
    a. may discharge independent of IgE
    b. release lysosymes

8. Metastatic calcification occurs in
    a. old lymph nodes
    b. gastric mucosa
    c. atherosclerotic vessels
    d. damaged heart valves

9. Concerning the repair of a well opposed, clean surgical incision
    a. dermal appendages destroyed by the incision usually recover
    b. new collagen begins to accumulate after the first week
    c. granulation tissue does not occur
    d. there is an initial inflammatory response
    e. 15% of original tissue strength is attained after 1 week

10. With respect to wound healing
    a. neutrophils proliferate at the wound margins at the same time as epitheleal proliferation occurs

11. Which occurs first in fracture healing
    a. neutrophil invasion
    b. procallus formation
    c. woven bone ossification
    d. lamellar bone ossification
    e. collagen deposition

12. Subchondral necrosis
    a. is rarely idiopathic
    b. associated with diving injuries
    c. rarely involves ischaemia

13. In bone fracture healing
    a. woven bone forms in the periosteum of the medullary cavity
    b. osteoblasts lay down woven bone over the procallous to repair the fracture line
    c. PTH acts directly on osteoclasts to increase absorption
    d. Haematoma at the fracture site plays little role in the development of procallous
    e. Inadequate immobilisation aids the formation of normal callous

14. In healing by primary intention
    a. there is a large tissue defect
    b. the tissue defect cannot be reconstituted
    c. it involves excessive granulation tissue
    d. an epitheleal spur forms on the first day

Acute & Chronic Inflammation

1. Which occurs first in acute inflammation
    a. arteriolar dilation
    b. arteriolar constriction
    c. oedema
    d. leucocyte margination
    e. stasis of blood flow

2. Regarding chronic inflammation
    a. is characterised by hyperaemia, oedema and leucocyte infiltration
    b. monocytes use the same chemotactic pathway as neutrophils
    c. is always preceded by acute inflammation
    d. most frequently results in resolution

3. The first thing to occur in acute inflammation is
    a. vasodilation
    b. increased permability
    c. diapedesis
    d. vasoconstriction
    e. stasis

4. Regarding chronic inflammation
    a. monocytes have a half life of 5 days
    b. frequently follows acute
    c. frequently resolves
    d. characterised by increased vascular permeability and oedema

5. Factor C5a
    a. is chemotactic for neutrophils
    b. stimulates arachidonic acid metabolism
    c. same factors that are chemotactic for neutrophils as for macrophages

6. Mast cells
    a. are derived from thymus
    b. can degranulate without IgE
    c. are only found in mucosal membranes

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    a. monocytes have a half live of 5 days
    b. frequently follows acute
    c. frequently resolves
    d. characterised by increased vascular permeability and oedema

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    a. is chemotactic for neutrophils
    b. stimulates arachodonic acid metabolism
    c. same factors that are chemotactic for neutrophils as for macrophages

9. Bradykinin
    a. formed from pre kallikrein
    b. causes vasodilation

10. What is released by macrophages
    a. O2 radicles

11. Mast cells
    a. Predominantly in circulation
    b. Originate in thymus
    c. Can degranulate without IgE stimulation

12. Which is not chemotactic
    a. Histamine
    b. C5a
    c. Leukotriene B4
    d. Bacterial polypeptides
    e. Cytokines

13. phagocytosis
    a. occurs in 2 steps
    b. C5a is an opsonin
    c. IgM is a potent opsonin
    d. Bacterial killing occurs by mainly O2 dependant mechanisms
    e. Doesn't occur without opsonisation

14. Regarding Chronic inflammation
    a. Freq follows acute inflammation
    b. Characterised by oedema, statis, etc
    c. Frequently resolves
    d. Chemotactic factors for monocytes same as for neutrophils

15. Regarding fatty change - which is incorrect
    a. May result from protein malnutrition
    b. Fatty acids are oxidised in the mitochondria
    c. May result from diabetes mellitus
    d. May represent unmasking of normal cell fat content

16. Which of the following is an example of an oxygen dependent process?
    a. Halogenation
    b. MBP

17. What is the correct order of events in acute inflammation
    a. v/c, v/d, margination, ……

18. Question regarding Complement pathway….need to know about C3a and C5a effects, and also what initiates the classic and alternative pathways

19. In acute inflammation which event occurs first
    a. arteriolar dilatation
    b. arteriolar constriction
    c. oedema
    d. leucocyte migration
    e. blood flow stasis

20. The first vascular response to injury is
    a. slowing of the circulation
    b. venular dilation
    c. recruitment of vascular beds
    d. capillary engorgement
    e. arteriolar vasoconstriction

21. Leucocytes move into the tissues from the vasculature (extravasation)
    a. by the action of actin and myosin
    b. predominantly as monocytes on the first day post injury
    c. in response to C3b
    d. in response to the Fc fragment of IgG
    e. largely in the arterioles

22. Regarding chemical mediators of inflammation
    a. histamine is derived from plasma
    b. C3b is within macrophages
    c. The kinin system is activated in platelets
    d. Nitric oxide is preformed in leukocytes
    e. Seretonin is preformed in mast cells

23. Chronic inflammation is
    a. always preceded by acute inflammation
    b. characterised by hyperemia, oedema and leukocyte infiltration
    c. most frequently results in resolution
    d. the factors underlying monocyte infiltration are the same as for acute inflammation

24. In the triple response the reactive hyperemia is due to
    a. blushing
    b. excersise
    c. arteriolar dilation
    d. inflammatory mediators
    e. still present after sympathectomy

25. Vascular hyperemia
    a. is caused by inflammatory mediators
    b. results in cyanosis
    c. results in oedema
    d. results in brown induration

26. Macrophages are derived from
    a. monocytes
    b. T-cells
    c. B-cells
    d. Eosinophils
    e. Plasma cells

27. With respect to the changes in acute inflammation, which occurs first
    a. Arteriolar dilatation
    b. Arteriolar constriction
    c. Edema
    d. Leucocyte margination
    e. Stasis of blood flow

28. Regarding chronic inflammation
    a. Is characterised by hyperaemia, edema, and leucocyte infiltration
    b. Monocytes use the same chemotactic pathway as neutrophils
    c. Is always preceded by acute inflammation

29. Most frequently results in resolutionThe first thing to occur in acute inflammation is
    a. Vasodilation
    b. Increase permeability
    c. Diapedesis
    d. Vasoconstriction
    e. Stasis

30. What is released by macrophages
    a. oxygen free radicals
    b. eicosanoids

Fluid & Haemodynamics

1. Non inflammatory oedema
    a. has a high protein content
    b. is caused by low levels of aldosterone
    c. has a SG > 1.012
    d. is associated with high ANP
    e. is caused by raised plasma oncotic pressure

2. Non thrombocytopaenic purpura is associated with
    a. meningococcaemia
    b. HIV
    c. Aplastic anaemia
    d. SLE
    e. Infectious mononucleosis

3. Chronic pulmonary oedema is characterised by
    a. haemosidderin loaded macrophages

4. DIC
    a. in a patient with malignancy presents as a bleeding diathesis
    b. is due to activation of the fibrinolytic system

5. Non thrombocytopaenic purpura is associated with
    a. meningococcaemia
    b. HIV
    c. Aplastic anaemia
    d. SLE
    e. Infectious mononucleosis

6. Cause of increased vascular permeability
    a. Venular endothelium contraction
    b. Basement membrane contraction
    c. Insertion of something pino-like into somewhere stupid, probable distractor
    d. None of the above

7. Non-inflamm causes of oedema
    a. SG > 0.012
    b. Commonest cause increased hydrostatic

8. What isn't cause of oedema? (probably a phys question)
    a. Increased lymph flow
    b. Increased venous pressure
    c. Increased interstitial colloid pressure

9. amniotic fluid embolus
    a. increased in primps
    b. occurs in 1/5000 births
    c. increased in prolonged labour
    d. mortality >80%
    e. 20% get DIC

10. Factor VIII (lordy!)
    a. Bound to large vWF
    b. Joins with inactive factor V to activate thrombin
    c. Useful in haemophilia B
    d. 50% of normal activity gives mild disease
    e. monitored by PT

11. Regarding clotting cascade
    a. Tissue thromboplastins activation intrinsic cascade
    b. Thrombin can activate prothrombin
    c. Clot retraction is independent of platelets
    d. Increased plasminogen activator extends thrombus
    e. Thrombomodulin can bind and activate thrombin

12. Passive hyperaemia caused by(what the fuck?)
    a. Exercising muscle
    b. Inflammatory mediator release
    c. Arteriolar dilatation
    d. Blushing
    e. Portal hypertension

13. Post mortem features of clot include
    a. Lines of Zahn
    b. The absence of RBC's in supernatant
    c. Adherence to vascular walls

14. What best defines the pathophysiology underlying shock and the resultant
    a. Widespread tissue hypoxia as a result of decreased blood volume/effective blood volume
    b. Lactic acid production
    c. Low cardiac output
    d. Decrease blood volume
    e. Cellular hypoxia resulting from impaired tissue perfusion

15. White infarcts
    a. May be transiently red
    b. Occur in the untestine
    c. Result from venous occlusion
    d. Are always septic
    e. Occur predominantly in the liver

16. Central pathophysiological feature of shock
    a. hypotension
    b. decreased blood volume
    c. cellular hypoxia at a tissue level
    d. infection
    e. cardiac failure

17. Septic shock may cause all of the following EXCEPT
    a. myocardial depression
    b. vasoconstriction
    c. DIC
    d. ARF
    e. ARDS

18. Shock results in
    a. decreased capillary hydrostatic pressure

19. The process of blood coagulation involves
    a. prothrombin activator converting fibrinogen to fibrin
    b. alpha 2 macroglobulin
    c. the action of antithrombin 3 to promote clotting
    d. the action of plasmin on fibrin
    e. the removal of peptides from each fibrinogen molecule

20. DIC is associated with
    a. thrombocytosis
    b. a bleeding diathesis presentation in a patient with malignancy

21. With respect to the clotting cascade
    a. the alternative pathway is stimulated by Ag-Ab interaction
    b. C3bBb inhibits the final common pathway
    c. As
    d. As
    e. C5a initiates arachadonic acid metabolite release from neutrophils

22. With regard to embolism
    a. arterial emboli most often lodge in the viscera
    b. pulmonary emboli are rarely multiple
    c. amniotic fluid emboli are associated with the highest mortality
    d. all emboli consist of either gas or solid intravascular mass
    e. most pulmonary emboli produce signs of respiratory distress

23. Regarding the veins of the lower limb
    a. thrombosis in the superficial veins is a common source of emboli
    b. phlegmasia alba dolens is associated with iliofemoral vein thrombosis
    c. dermatitis is a common consequence of Buergers disease
    d. varicosity development has no genetic component
    e. 20% of venous thrombi commence in superficial veins

24. Post mortem features of clot include
    a. adherence to vascular walls
    b. absence of red cells in supernatant
    c. lines of Zahn

25. Air embolism
    a. is fatal as air is non-compressible so does not leave the heart
    b. 200 ml is the lethal dose

26. Amniotic fluid embolism
    a. is associated with a greater than 80 % mortality

27. Fat embolism syndrome is assocoated with
    a. mortality of greater than 20 %
    b. petechial rash, non-thrombocytopenic

28. Non-inflammatory oedema
    a. has a high protein content
    b. has a SG of greater than 1.012
    c. is caused by low levels aldosterone
    d. is caused by elevated oncotic pressure
    e. is associated with elevated levels of ANP

29. Regarding oedema
    a. infection does not cause pulmonary oedema
    b. hereditory angioneurotic oedema involves skin only
    c. facial oedema is a prominent component of anasacra
    d. hepatic cirrhosis is the most common cause of hypoprotenemia
    e. hypoprotenemia is the most common cause of systemic oedema

30. Pulmonary congestion is associated with
    a. haemosiderin deposition in macrophages

31. Which of the following factors is part of the intrinsic pathway of coagulation?
    a. VIIa
    b. Calcium
    c. II
    d. Plasmin
    e. X

32. Which are features of a clot at post mortem?
    a. lines of Zahn
    b. adherence to vascular walls
    c. Supernatant resembling chicken fat
    d. absence of red cells in the supernatant

33. Which is a feature of non-inflammatory causes of oedema (there's are table)
    a. Aldosterone level low
    b. Right atrial pressure high
    c. protein is high
    d. SG < whatever that ridiculous number is

34. Regarding air embolism, What amount is required to produce symptoms
    a. 10ml
    b. 20ml
    c. 100ml
    d. 1000ml
    e. 1ml

35. The most common haemodynamic mechanism of pulmonary edema is
    a. Lymphatic obstruction
    b. Decrease oncotic pressure
    c. Increase oncotic pressure
    d. Increase hydrostatic pressure

36. Which is most likely to cause thrombocytopaenic purpura
    a. Henoch Schonlein purpura
    b. AIDS

Diseases of Immunity

1. Regarding HIV; which is correct
    a. the decrease in CD8+ T cells is greater than the decrease in CD4+ T cells
    b. are able to mount antibody response to new antigen
    c. increased delayed type hypersensitivity
    d. causes polyclonal hypergammaglobulinaemia
    e. increased chemotaxis

2. Hyperacute rejection
    a. can be decreased by prior cross match of blood
    b. associated with the action of fibroblasts

3. Which is an AIDS defining illness
    a. Salmonella enteritis
    b. Hodgkins lymphoma
    c. Invasive cervical carcinoma
    d. EBV

4. Which is NOT more common in HIV
    a. mycoplasma pneumonia
    b. atypical mycobacteria
    c. HSV
    d. CMV

5. hyperacute graft rejection
    a. 1 – 4 days
    b. decreased with cross matching
    c. cell mediated
    d. spares vascular endothelium

6. Hyperacute transplant rejection is due to
    a. Vasculitis
    b. Fibrosis
    c. Immune-complex deposition
    d. Fibroblasts
    e. Fibrinoid necrosis in arterial walls

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    a. Salmonella enteritis
    b. Hodgkins lymphoma
    c. Invasive cervical carcinoma
    d. EBV

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    b. Are able to mount antibody response to new antigen
    c. Increased delayed type hypersensitivity
    d. causes polyclonal hypergammaglogulinaemia
    e. Increased chemotaxis

9. What are the histological changes of acute graft rejection?
    a. vasculitis
    b. fibrosis
    c. mononuclear cells

10. Regarding the rhesus blood group system
    a. Rh neg people are D and E negative
    b. Has very few spontaneous agglutinins within this system
    c. 50% Caucasians are Rh Pos
    d. can't get reactions if Rh Neg people are given antigen

11. IgM:
    a. is a Dimer
    b. comprises 40% of normal circulating antibodies
    c. is antiviral
    d. is an extremely effective agglutinin

12. T lymphocytes
    a. contain CD3 proteins
    b. are the basis for type 2 hypersensitivity
    c. differentiate into antibody producing plasma cells
    d. are capable of cytotoxic activity
    e. are activated in the presence of soluble antigens

13. In transplant rejection the hyperacute rejection is
    a. cell mediated
    b. prevented largely by cross-matching blood
    c. controlled by immunosuppressive drugs

14. All the following are type 1 hypersensitivity primary mast cell mediators EXCEPT
    a. histamine
    b. tryptase
    c. heparin
    d. platelet activating factor
    e. eosinophil chemotactic factor

15. Type 2 hypersensitivity
    a. involve cell mediated immune responses
    b. explain the tuberculin skin test
    c. involve IgE on mast cells
    d. explain many transfusion reactions
    e. include serum sickness as an example

16. A man with type B blood
    a. has the commonest blood type
    b. cannot have a child with type O blood
    c. cannot have a child with type AB blood
    d. cannot have a child with type A blood
    e. none of the above

17. Passive immunity is achieved by administering
    a. live virus
    b. attenuated virus
    c. adsorbed toxin
    d. activated T-cells
    e. all of the above

18. The majority of AIDS cases are reported from
    a. homosexual males
    b. IV drug abusers
    c. Haemophilliacs
    d. Heterosexual contact
    e. Recipients of blood products

19. The following are opportunistic AIDS infections EXCEPT
    a. PCP
    b. Atyoical mycobacterium
    c. CMV
    d. Mycoplasma pneumonia

20. HIV is associated with
    a. polyclonal hypergammaglobulinemia

21. Which of the following reactions is cell mediated
    a. SLE
    b. Arthus reaction
    c. Anaphylaxis
    d. Graft rejection
    e. Goodpastures

Neoplasia

1. Regarding the oral contraceptive pill, it is protective against
    a. venous thrombosis
    b. breast carcinoma
    c. cervical carcinoma
    d. ovarian carcinoma
    e. hepatic adenoma

2. The most common type of thyroid cancer is
    a. medullary
    b. anaplastic
    c. follicular
    d. papillary
    e. squamous

3. Oncogene expression
    a. proto-oncogene regulation

4. Skin stigmata of internal malignancy
    a. Acanthosis nigrans

5. To which 2 organs do tumours most commonly spread to haematogenously
    a. Lungs & brain
    b. Liver & lungs

6. Regarding the oral contraceptive pill - it is protective against
    a. Venous thrombosis
    b. Breast carcinoma
    c. Cervical carcinoma
    d. Ovarian carcinoma
    e. Hepatic adenoma

7. Internal carcinoma is associated with which of the following skin disorders
    a. acanthosis nigricans

8. The commonest cause of thyroid carcinoma is
    a. medullary
    b. follicular
    c. papillary
    d. anaplastic
    e. squamous

9. Mesothelioma is associated with all, EXCEPT
    a. bronchial carcinoma
    b. siderosis
    c. pneumoconiosis
    d. pleural plaques
    e. fibrosis

10. Which is a skin manifestation of malignancy
    a. acanthosis nigrans
    b. melanoma

Infectious Disease

1. TB's pathogenicity
    a. Type IV hypersensitivity reaction
    b. Decreased antibody response
    c. Ability to replicate in caseous necrosis
    d. Expanding granuloma causing necrosis

2. Secondary syphillus
    a. Lesions spare palms and soles
    b. Popular lesions on genitals
    c. Infectious because they contain spirochetes
    d. Occurs 5 – 12 months post primary infection

3. Ashkoff bodies
    a. Rheumatic carditis
    b. Etc

4. Hep B
    a. HBeAG = active replication
    b. Surface antigen occurs after symptoms
    c. Anti-HBe something something
    d. IgG = recent infection

5. Which of the following is not transmitted by anthropods
    a. scrub typhus
    b. endemic typhus
    c. pediculosis
    d. Q fever
    e. Rocky mountain spotted fever

6. Aschoff bodies are classically seen in
    a. rheumatic fever
    b. non-Hodgkins lymphoma
    c. AML

7. Regarding Hepatitis E
    a. mortality of 20% in pregnant females
    b. incubation of 5 days
    c. faecal oral transmission

8. Staph can cause
    a. food poisoning, tonsilitis, Scarlet fever

9. All of the following are DNA viruses except
    a. CMV
    b. HIV
    c. VZV
    d. HSV
    e. EBV

10. Which is the most common peripheral site for TB
    a. sub pleural
    b. above fissure of upper lobe

11. Regarding Hepatitis E
    a. mortality of 20% in pregnant females
    b. incubation of 5 days
    c. faecal-oral transmission

12. What is an RNA virus
    a. HIV

13. What is a cause of non-thrombocytopenic purpura
    a. Menincococcal

14. Most common cause of fungal endocarditis
    a. Repeat

15. All of the following are DNA viruses except
    a. CMV
    b. HIV
    c. VZV
    d. HSV
    e. EBV

16. Rickettsial infections
    a. Involve the endothelial cells

17. Regarding Hepatitis E infection, which is true?
    a. pregnant women have a 20% mortality
    b. It has a parenteral mode of transmission

18. Rickettsia…which is true?
    a. endothelial cell option…they love this bloody question!!

19. What is true regarding polio virus?
    a. it is an RNA paramyxovirus
    b. it lives in the dorsal root ganglion
    c. it causes a viraemia and then spreads to the spinal cord and brainstem
    d. it causes symptoms in 40% of people

20. Staph aureus
    a. has enterotoxins which stimulate emetic receptors in the abdominal viscera
    b. has a lipase which degrades lipids on the skin surface
    c. has a capsule that allows it to attach to artificial materials
    d. has receptors on it's surface which allow binding to host endothelial cells
    e. all of the above

21. Staph aureus can cause all of the following EXCEPT
    a. food poisoning
    b. osteomyelitis
    c. carbuncles
    d. scarlet fever
    e. scalded skin syndrome

22. Which of the following is NOT a DNA virus
    a. HSV
    b. HBV
    c. HIV
    d. EBV
    e. VZV

23. With respect to streptococcal infection
    a. may result in glomerulonephritis 3 weeks post infection

24. Non-thrombocytopenic purpura is associated with
    a. aplastic anemia
    b. SLE
    c. Meningococcemia
    d. HIV
    e. EBV

25. With hepatitis B infection
    a. HbeAg is associated with viral replication

26. In hepatitis B
    a. Anti-HBs appears soon after HbsAg
    b. Infection does not play a role in hepatocellular carcinoma
    c. HbsAg appears soon after overt disease
    d. The majority of cases of persistent infection result in cirrhosis
    e. Acute infection causes sub-clinical disease in 65% of cases

27. Hepatitis C
    a. is acquired by faecal-oral transmission
    b. has it's highest prevelance in heamodialysis patients
    c. transmission by sexual contact is at a high rate
    d. exposure confers effective immunity to subsequent infection
    e. causes chronic hepatitis at a higher rate than hepatitis B

28. With hepatitis C infection
    a. Associated with sexual transmission primarily
    b. More than 50 % become chronic
    c. Transmission increases in pregnancy

29. With hepatitis E infection
    a. it is transmitted primarily parenterally
    b. it accounts for a greater than 20 % mortality in pregnant mothers

30. Clostridium species
    a. are all spore producing
    b. C.tetani produces an endotoxin which causes muscle spasm
    c. Vaccination against C.tetani has not significantly reduced the incidence of tetanus
    d. C.botulinum toxin blocks seretonin and dopamine receptors
    e. C.perfringens causes wound infections 10 days post operatively

31. All the following infections are associated with splenomegaly EXCEPT
    a. leprosy
    b. toxoplasmosis
    c. tuberculosis
    d. typhoid fever
    e. CMV

32. Bacterial endotoxin
    a. is exemplified by streptokinase
    b. si the cause of the severe form of diptheria
    c. is the cause of gas gangrene
    d. induces the production of TNF
    e. is the outer cell wall of gram positive bacteria

33. In aseptic meningitis
    a. the glucose in the CSF is raised
    b. the most commonly identified agent is an enterovirus
    c. there is a more fulminant course than bacterial meningitis
    d. there is no brain swelling
    e. microscopically there is a large infiltration of leukocytes

34. In infectious disease
    a. bacterial endotoxin is inner cell wall mucoprotein
    b. exotoxin molecular mechanisms are mostly unknown
    c. microbes propagating in the gut lumen are accessible to IgA antibodies
    d. macrophages in bronchi play a major role in protecting the lungs from infection
    e. bacterial adhesins which bind bacteria to host cells have a broad range of host cell specificity

35. In malaria
    a. plasmodium vivax causes severe anemia
    b. parasites mature in red blood cells
    c. innoculated sporozites immediately invade the spleen
    d. plasmodium falciparum initially causes hepatomegaly
    e. cerebral malaria is caused by parasites invading grey matter

36. Ricketsial infection
    a. principally affects the endothelium

Environmental Pathology

1. Which deficiency causes diarrhoea, dermatitis and dementia
    a. pyridoxine
    b. vitamin B1
    c. niacin
    d. vitamin A
    e. riboflavin

2. A deficiency of which can cause heart failure
    a. pyridoxine
    b. vitamin D
    c. Vitamin C
    d. Zinc
    e. Thiamine

3. A question on scurvy and its effects

4. Which of the following is NOT associated with B12 deficiency
    a. Crohn's disease
    b. Autoimmune gastritis
    c. Subacute degeneration of the spinal cord
    d. Megaloblastic anaemia

5. Smoking is related to all the following except
    a. chronic liver disease
    b. ca lung
    c. ca larynx
    d. ca oesophagus
    e. ca bladder

6. Which tissue is the most sensitive to radiation injury
    a. haematopoeitic
    b. mucosal cells
    c. thyroid

7. A deficiency of which can cause heart failure
    a. Pyridoxine
    b. Vitamin D
    c. Vitamin C
    d. Zinc
    e. Thiamine

8. Cigarette smoking doesn't increase risk of
    a. Spont abortion
    b. Chronic liver diease
    c. Oesophageal cancer
    d. Pancreatic cancer

9. In pure Fe deficiency anaemia
    a. Decreased plt counts
    b. Decreased TIBC
    c. Decreased transferrin saturation
    d. Increased ferritin

10. Regarding electrical injuries
    a. Death usually assoc with extsensive burns
    b. Lightning doesn't cause thermal injury
    c. All body compartments conduct electricity
    d. Amperage not important

11. Regarding electrical/hyperthermic injuries, which is correct
    a. All body tissues conduct equally
    b. Amperage is not important
    c. Massive skin burns may cause death
    d. Dry skin is a good electrical conductor

12. Thiamine deficiency
    a. Myocardial ischaemia
    b. Vitamin B6 deficiency
    c. B12 deficiency
    d. Arrythmia

13. A deficiency of which can cause heart failure
    a. Pyridoxine
    b. Vitamin D
    c. Vitamin C
    d. Zinc
    e. Thiamine

14. Which is not a cause of megaloblastic anaemia
    a. Pregnancy
    b. Folate/B12 deficiency
    c. EBV infection
    d. Neoplasms
    e. Hyperthyroidism

15. In iron deficiency
    a. Increased serum ferritin
    b. Decreased transferrin saturation
    c. Decreased total iron binding capacity

16. Heroin overdose can give all, EXCEPT
    a. coma
    b. pulmonary edema
    c. acute myocardial infarction due to vasospasm
    d. miosis
    e. confusion

17. Deficiency of which of the below causes diarrhea, dermatitis and dementia ?
    a. riboflavin
    b. niacin
    c. Vitamin A
    d. Pyridoxine
    e. Vitamin B1

18. Which is true of Iron?
    a. it is absorbed in the stomach
    b. it has increased absorption in the presence of Vitamin C
    c. it causes pulmonary fibrosis

19. Which of the following tissues is the most susceptible to radiation injury
    a. GI mucosa
    b. CNS
    c. Lymph and haemopoetic
    d. Bone
    e. Lungs

20. With electrical injury
    a. death is always due to thermal burn
    b. dry skin is a good electrical conductor
    c. ampage of the current is important
    d. all body tissues conduct electricity

21. Which of the following is an anti-oxidant
    a. Vitamin D
    b. vitamin B12
    c. vitamin E
    d. vitamin K
    e. vitamin B6

22. Which deficiency causes diarrohea, dermatitis and dementia
    a. pyridoxine
    b. vitamin A
    c. riboflavin
    d. vitamin B1
    e. niacin

23. Decreased levels of B12 are associated with all the following EXCEPT
    a. autoimmune gastritis
    b. crohns disease
    c. subacute combined degeneration of the cord

24. Regarding Iron which of the following is INCORRECT
    a. absorption is increased by vitamin C
    b. most is found in myoglobin
    c. most is absorbed in the duodenum
    d. women have smaller iron stores than men
    e. transferrin is usually 33% saturated

Blood Vessels

1. Cells in centre of atheromatous plaque
    a. Repeat

2. Atherosclerosis
    a. Predominantly affects large and medium sized arteries
    b. Characterised by thickening of the media of arteries

3. Which combination represents the major risk factors for atherosclerosis
    a. Hypertension, male gender, age, family history
    b. Hypertension, sedantary lifestyle, obesity, and family history
    c. Increased lipids, Cigarette smoking, hypertension, dibetes mellitus

4. Regarding Atherosclerosis:
    a. The severity of lesions cannot be predicted elsewhere (?? Or some weird statement similar to this)
    b. coronary arteries have the worst lesions
    c. lesions in Thoracic aorta more common than in abdo aorta
    d. there are 2 components: cells and CT matrix

5. The major Risk factors for atherosclerosis are:
    a. hypertensive, hypercholersterolaemia, smoking and sedentary life
    b. hypertensive, diabetes, smoking and hyperchoesterolaemia
    c. hypertensive, male sex, smoking and hypercholesterolaemia
    d. hypertension, obesity, male and family history

6. In atherosclerosis the cells at the centre of the plaque are
    a. macrophages
    b. foam cells
    c. leukocytes
    d. smooth muscle cells

7. All of the following are major risk factors for atherosclerosis EXCEPT
    a. obesity
    b. hyperlipidemia
    c. smoking
    d. hypertension
    e. diabetes

8. Which risk factors have the greatest association with atherosclerosis
    a. hypertension, diabetes, smoking , hyperlipidemia
    b. hypertension, male, family history
    c. hypertension, obesity, sedentary lifestyle
    d. hypertension, female, OCP
    e. age, family history, sex

9. Malignant hypertension
    a. 75 % recover with no loss of renal function
    b. is associated with abnormal renin levels
    c. affects 1 to 5 % of sufferers

10. regarding atherosclerosis
    a. coronary arteries equally affected as renal arteries
    b. exclusively affects medium and large arteries
    c. increased incidence in hypothyroidism
    d. decreased incidence in nephrotic syndrome

11. Regarding hypertensive crisis
    a. 75% will recover if treated promptly
    b. 1-5 % of hypertensive patients will develop
    c. (onion skinning was not an option)

12. Regarding the plaque in atherosclerosis; which is correct
    a. mixture of cells and connective tissue matrix
    b. rarely causes microemboli
    c. coronary arteries are the most affected
    d. thoracic aorta is more affected than the abdominal aorta

13. Which combination represents the major risk factors for atherosclerosis
    a. hypertension, male, age, family history
    b. hypertension, sedentary lifestyle, obesuty, family history
    c. hyperlipidaemia, smoking, hypertension, diabetes mellitus

The Heart

1. Regarding consequences after an MI; which is correct
    a. loss of contractility in less than 60 seconds
    b. collaterals do not flow for 4-6 hours
    c. 50% recanalise spontaneously
    d. ischaemia occurs after 60 minutes

2. What is the most common histological change seen in MI less than 24 hours
    a. pallor and oedema
    b. haemorrhage
    c. hyperaemic border
    d. liquefactive necrosis

3. A man who has chest pain and is thought due to coronary artery vasoconstriction; this is most likely due to
    a. hypoxia
    b. Ach
    c. Decreased ATP in cells
    d. The action of catecholamines on alpha 1 receptors
    e. Increased CO2

4. A patient with a normal blood pressure post MI has an associated
    a. increased cardiac output
    b. increased systolic filling pressure
    c. increased right atrial pressure

5. In compensated cardiac hypertrophy, changes include
    a. diffuse fibrosis
    b. ventricular dilation
    c. an increased capillary to myocyte ratio
    d. decreased sarcomeres
    e. hyperplasia

6. A common cause of fungal endocarditis is
    a. Actinomyces
    b. Candida
    c. Aspergillus

7. What is the most common histological change seen in myocardial infarction less than 24 hrs duration
    a. pallor and oedema
    b. haemorrhage
    c. hyperaemic border
    d. liquefactive necrosis

8. With regards to acute coronary occlusion
    a. collaterals do not flow for 4-6 hrs
    b. striking loss of contractility within 60 secs
    c. 50% recannalize spontaneously
    d. ischaemia occurs after 60 mins

9. Aschoff bodies are classically seen in
    a. rheumatic fever
    b. non-Hodgkins lymphoma
    c. AML

10. High output failure in (repeat, thiamine)
    a. Vit B12 def
    b. Atrophic gastritis

11. Regarding cardiac stuff (tricky – wording likely to be pretty average)
    a. Asymptomatic have little change of catastrophic cardiac event
    b. Chronic obstructing lesions have increased flow leading to increased chance of damage/fissure etc
    c. Mild to moderate obstructions have higher risk of something
    d. Mural thrombus rarely embolises
    e. Predominant cause of cell death is apoptosis

12. In compensated hypertensive heart disease
    a. Interstitial fibrosis
    b. Left ventricular dilatation
    c. Increased capillary

13. In AMI
    a. Striking loss contractility with 60 seconds

14. Another AMI
    a. ATP depletion starts in seconds
    b. Irreversible damage in 20mins
    c. ATP depletion X% in Ymins (wrong probably)
    d. Spont recanalisation in 2 hours in 50%

15. A man is brought to the ED with heart failure & has a cardiac index of 8l. Which is most likely to cause this

16. A man who has chest pain and is thought due to coronary artery vasoconstriction, this is likely to be due to
    a. Hypoxia
    b. ACh
    c. Decrease ATP in cells
    d. The action of catecholamines on alpha 1 receptors
    e. Increase CO2

17. Infective endocarditis
    a. Is most commonly caused by Staph aureus
    b. Is most commonly caused by streptococci

18. Regarding Bradykinin, which is correct?
    a. it is formed from prekallikrein
    b. it causes smooth muscle vasodilation

19. What is the key microscopic feature of Rheumatic fever?
    a. Aschoff bodies
    b. Curshmans spirals
    c. Reed-Sternberg cells

20. Repeat MI question from 2 tables regarding:
    a. ATP and time frame in an MI
    b. Anatomy of blood supply in an infarct:
    c. option was : ‘atrial damage as well as left lateral ventricle damage)

21. What is true regarding hypertensive heart disease?
    a. it causes pulmonary fibrosis

22. Regarding the changes to myocardium after MI
    a. pallor at 24 hours
    b. wavy fibres are found centrally
    c. decreased contractility after 5 minutes
    d. liquefactive necrosis is typical

    sarcoplasm is resorbed by leukocytes

23. In compensated cardiac hypertrophy changes include
    a. diffuse fibrosis
    b. hyperplasia
    c. decreased sarcomeres
    d. increased capillary density
    e. increased capillary/myocyte ratio

24. Endocarditis in IV drug abusers typically
    a. involves the mitral valve
    b. is caused by candida albicans
    c. does not cause fever
    d. has a better prognosis than other types of endocarditis
    e. is caused by staph aureus

25. The commonest cause of fungal endocarditis is
    a. actinomycosis
    b. candida
    c. blatomycosis

26. With regard to MI
    a. gross necrotic changes are present within 3-5 hours
    b. irreversible cell injury occurs in less than 10 minutes
    c. fibrotic scarring is completed in less than 2 weeks
    d. death occurs in 20 % of cases in less than 2 hours
    e. is most commonly caused by occlusion of the left circumflex coronary artery

27. Regarding pericarditis
    a. constrictive pericarditis only rarely follows suppurative pericarditis
    b. primary pericarditis is usually bacterial in origin
    c. serous pericarditis may be due to ureamia
    d. haemorrhagic pericarditis is most commonly due to Klebsiella infection
    e. fibrinous pericarditis is due to TB until proven otherwise

28. Patient who has a normal blood pressure post MI must have
    a. increased cardiac output
    b. increased systolic filling pressure
    c. increased right atrial pressure

29. Acute endocarditis
    a. has a less than 20 % mortality
    b. is caused by virulent micro-organisms
    c. 30 % is caused bacteria

30. Congestive cardiac failure may be caused by
    a. vitamin A deficiency
    b. niacin deficiency
    c. vitamin D deficiency
    d. thiamine deficiency
    e. vitamin C deficiency

31. Following myocardial infarction
    a. ATP is down to 50% at 10 minutes
    b. Irreversible cell injury occurs within 5 minutes
    c. ATP depletion begins at 2 minutes
    d. Microvascular injury occurs within 30 minutes
    e. Wavy fibres are present within 20 minutes

32. A young man presents with central chest pain presumed to be assoc with vasoconstriction. Most likely cause of pain is local
    a. hypoxia
    b. decreased ATP
    c. increased CO2
    d. catecholamines acting on alpha 1 receptors
    e. acetylcholine stimulation

33. An adult male with an ejection fraction of 80 % could be due to
    a. myocardial ischaemia
    b. arrhythmia
    c. thiamine deficiency

34. The cause of fluid retention peripherally with congestive cardiac failure is
    a. increased renin
    b. increased GFR
    c. increased angiotensin 2
    d. increased aldosterone

35. Rheumatic carditis is associated with
    a. Curschmann spirals
    b. Ito cells
    c. Aschoff bodies
    d. Nutmeg cells
    e. Reed-sternberg cells

36. Bradykinin
    a. causes smooth muscle dilatation
    b. kallikrein causes prohormone degredation to produce bradykinin

Blood Cell Disorders

1. Myelofibrosis
    a. causes leukoerythroblastic anaemia
    b. casues a decrease in megakaryocytes
    c. stimulates erythropoetin production

2. Myelofibrosis repeat
    a. Leukoerythroblastic anaemia

3. Thromboctopenia
    a. occurs commonly in HIV
    b. causes spontaneous bleeding at levels of less than 90,000/mm
    c. occurs with hyposplenism
    d. is related to platelet survival in paroxysmal nocturnal haemoglobinuria
    e. is not associated with megaloblastic anaemia

4. Macrocytic anaemia is associated with all the following except
    a. Hyperthyroidism
    b. Neoplasm
    c. Folate and B12 deficiency
    d. Pregnancy
    e. EBV

5. Regarding pernicious anaemia
    a. it is associated with low B12

The Lung

1. In lobar pneumonia
    a. it is more common in the young and elderly
    b. get a change from red to grey hepatisation
    c. not usually associated with a productive cough
    d. rarely caused by streptococcus

2. Regarding nonatopic (intrinsic) asthma
    a. is mainly triggered by viral respiratory illnesses
    b. is associated with atopy
    c. decreases vagal afferent responsiveness

3. Which type of emphysema is most commonly associated with smoking and chronic bronchitis
    a. centrilobular
    b. panacinar
    c. irregular
    d. paraseptal
    e. bullous

4. The black colour seen in chronic smokers lungs is due to
    a. pigment in alveolar macrophages

5. Regarding resorption atelectasis; which is correct
    a. involves oxygen absorption

6. Which type of emphysema is most commonly associated with smoking and chronic bronchitis
    a. centiacinar
    b. panacinar
    c. irregular
    d. paraseptal

7. Chronic pulmonary oedema is characterised by
    a. haemosidderin loaded macrophages

8. All cause compressive atelectasis EXCEPT
    a. asthma
    b. pleural effusion
    c. ascites
    d. pneumothorax

9. Which is the most common form of emphysema in smokers
    a. centriacinar
    b. panacinar
    c. irregular
    d. paraseptal

10. The black colour seen in chronic smokers lungs is due to
    a. pigment in alveolar macrophages

11. Emphysema due to smoking causes
    a. Centrilobular

12. Most characteristic COAD changes
    a. Increased thickness of mucous layer
    b. Decreased goblet cell number
    c. Increase in smooth muscle thickness

13. Black pigment in lungs repeat

14. Coal causes all except repeat
    a. Steatorrhea
    b. Can progress to cirrhosis
    c. Accumulation starts somewhere central and obscure in cytoplasm
    d. Is irreversible
    e. Not caused by protein malnutrition

15. Which type of empysema is most commonly associated with smoking and chronic bronchitis
    a. Centriacinar
    b. Panacinar
    c. Irregular
    d. Paraseptal

16. Regarding squamous cell carcinome
    a. Has a 5 year survival of 60%
    b. Is commonly associated with cigarette smoking
    c. Is most commonly seen in females
    d. Is most commonly peripheral

17. The type of emphysema most commonly associated with smoking is
    a. Centrilobular
    b. Paraseptal
    c. Panacinar
    d. Bullous
    e. Irregular

18. What happens to particles 1-5 micrometers in diameter
    a. Deposited in nose
    b. Lodge in trachea and bronchi
    c. Phagocytosis by pulmonary alveolar macrophages

19. The pathogenicity of M. Tb is due to
    a. Impaired antibody response/cell mediated
    b. Hypersensitivity response to products of Tb bacteria
    c. Due to expanding granuloma
    d. Due to caseous necrosis
    e. Direct host cell killing by the bacillus

20. Obstructive atelectasis
    a. The mediastinum moves away from lesion
    b. involves the reabsorption of air
    c. Is caused by pleural fluid

21. Regarding non atopic asthma
    a. Is mainly triggered by viral respiratory illnesses

22. Regarding the use of steroids in Asthma
    a. they inhibit cytokines
    b. cause bronchodilation
    c. given nocte because of diurnal variation

23. All of the below are changes seen in Asthma EXCEPT:
    a. Charcot cells
    b. Hurschmann's spirals

24. All of the below are changes seen in Chronic Bronchitis EXCEPT:
    a. smooth muscle hypertropohy
    b. mucus gland hypertrophy
    c. decreased goblet cell number

25. Regarding the pathogenicity of TB…it is due to:
    a. increasing granuloma
    b. hypersensitivity reaction
    c. caseous necrosis
    d. poor antibody response

26. Repeat Q about causes of Atelectasis:
    a. obstructive
    b. oxygen resorption
    c. Asthma
    d. Ca Lung

27. ABG to interpret:
    This was a crappily worded question that I think they will have ditched for the future, I think there were 2 correct options as well…but, nevertheless…suggests you should learn clinical ABG interpretation and related pathology. Is covered better in Ganong
    An ABG shows: ph 7.5, PCO2 50, HCO3 – 10 (ie: a metabolic alkalosis)
    a. may be due to diuretics
    b. pyloric stenosis is the most common cause

28. The type of emphysema associated with smoking is
    a. panacinar
    b. centriacinar
    c. distal acinar
    d. irregular
    e. none of the above

29. Squamous cell lung carcinoma
    a. has a 5 year survival rate of 60%
    b. is most commonly associated with smokers
    c. is commonest peripherally
    d. is commonest in females

30. Intrinsic asthma is commonly triggered by
    a. viral infections

31. TB pathogenicity is due to

32. Lobar pneumonia
    a. is more common in the young and the elderly
    b. involves morphological changes of red to grey hepatisation
    c. not usually associated with a productive cough
    d. is associated with immunosuppression
    e. rarely caused by streptococcus

33. Chronic bronchitis is characterised by
    a. smooth muscle hypertrophy
    b. leucocyte infiltration
    c. mucus gland hypertrophy
    d. increased size of goblet cells

34. All the following cause compressive atelectasis EXCEPT
    a. pneumothorax
    b. asthma
    c. CCF
    d. Peritonitis
    e. Pleural effusion

35. Which is not true of bronchogenic cysts
    a. they may become dysplastic
    b. they occasionally cause pneumothorax
    c. they have an epithelial layer
    d. they may contain mucus
    e. they are often associated with bronchioles

36. Chronic bronchitis major morphological change involves
    a. leukocyte infiltration
    b. decreased goblet cell number
    c. smooth muscle hypertrophy
    d. increased mucosal gland depth (REID index)

37. In males the relative risk of cigarette smoking causing a cancer is highest for
    a. lung
    b. larynx
    c. oesophagus
    d. pancreas
    e. lip, oral, and pharynx

38. Cessation in cigarette smoking causes a prompt reduction in the risk of
    a. lung cancer
    b. stroke
    c. cancer of the bladder
    d. MI
    e. COPD

39. Regarding bronchogenic carcinoma
    a. it most often arises around the hilum of the lung
    b. distant spread occurs solely by lymphatic spread
    c. metastasis are most common to the liver
    d. small cell carcinoma is the most common type
    e. surgical resection is often effective for small cell carcinoma

40. In emphysema
    a. a deficiency of alpha 1 antitrypsin is protective
    b. centriacinar destruction leads to obstructive overinflation
    c. the protease—antiprotease mechanism is the most plausible explanation of the disease
    d. smokers have an increased number of macrophages in the bronchi
    e. elastase activity is unaffected by oxygen free radicals

41. In chronic bronchitis
    a. the hallmark is hypersecretion of mucus in the large airways
    b. there is a marked increase in goblet cells in the main bronchi
    c. infection is a primary cause
    d. cigarette smoke stimulates alveolar leukocytes
    e. dysplasia of the epitheleum leads to emphysema

42. In bronchial asthma
    a. extrinsic asthma is initiated by diverse non-immune mechanisms
    b. sub-epitheleal vagal receptors in respiratory mucosa are insensitive to irritants
    c. IgG plays a role
    d. Bronchial wall smooth muscle is atrophic
    e. Primary mediators include eosinophilic and neutrophilic chemotactic factors

43. In bacterial pneumonia
    a. patchy consolidation of the lung is the dominant feature of bronchopneumonia
    b. a lobar distribution is a function of anatomical variations
    c. Klebsiella pneumonia is a common virulent agent
    d. Alveolar clearance of bacteria is achieved by lymphocytes
    e. The nasopharynx is inconsequential in defending the lung against infection

44. Smoking is associated with all the following diseases EXCEPT
    a. spontaneous abortion
    b. atherosclerosis
    c. bladder carcinoma
    d. chronic liver disease

45. Smoking is associated with
    a. particle deposition in alveolar macrophages

46. In pulmonary tuberculosis
    a. the Ghon complex is a parenchymal peri-hilar lesion
    b. bacilli establish themselves in sites of low oxygen tension
    c. liquefactive necrosis precedes granuloma formation
    d. Langhans cells occur in coalescent granulomas
    e. Primary TB causes more damage to lungs than secondary TB

47. The commonest site of primary TB lesion in lung is
    a. apex
    b. base
    c. hilum
    d. lower zone of upper lobe
    e. peripherally

Liver & Biliary Tract

1. Conjugated hyperbilirubinaemia results from
    a. Gilberts syndrome
    b. Physiologic jaundice
    c. Excess production of bilirubin
    d. Decreased hepatic uptake
    e. Cholestasis

2. Regarding jaundice
    a. unconjugated produces bilirubin in the urine
    b. conjugated produces kernicterus in adults
    c. unconjugated does not colour the sclera
    d. in unconjugated, bilirubin is tightly bound to albumin

3. Repeat on bilirubin combinations
    a. Unconjugated tightly bound to albumin

4. Regarding hepatitis C
    a. Has a high association with sexual transmission
    b. Transmission increases in pregnancy
    c. Greater than 50% become chronic

5. Conjugated hyperbilirubinaemia results from
    a. Gilberts syndrome
    b. Physiologic jaundice
    c. Excess production of bilirubin
    d. Decreased hepatic uptake
    e. Cholestasis

6. Regarding hepatic failure
    a. Occurs with loss of functional liver capacity of approximately 60%
    b. Encephalopathy is a result of increased ammonia formation
    c. The liver is the predominant site of synthesis of albumin

7. Regarding liver failure
    a. has a 20-40% mortality
    b. can be caused by tetracyclines
    c. rarely results in cirrhosis
    d. not associated with ascites

8. With regard to jaundice:
    a. Unconjugated BR is tightly bound to albumin
    b. Unconjugated BR does not colour the sclera
    c. Conjugated BR is tightly bound to albumin
    d. conjugated BR causes kernicterus in adults
    e. unconjugated hyperBRaemia will result in BR in the urine

9. What is the cause of fatty liver?
    a. protein malnutrition
    b. is usually due to unmasking a normal cell constituent

10. Regarding the morphology of Cirrhosis
    a. there is disrupted vascular architecture
    b. it is reversible if cryptogenic
    c. the left lobe is most often affected

11. With regards to jaundice
    a. Conjugated bilirubin causes kernicterus in adults
    b. Unconjugated bilirubin does not colour sclera
    c. Unconjugated bilirubin is tightly bound to albumin
    d. Unconjugated bilirubin produces bilirubin in urine
    e. Conjugated bilirubin is tightly bound to albumin

12. In cirrhosis
    a. fibrosis is confined to the delicate bands around central veins
    b. nodularity is uncommon
    c. vascular architecture is preserved
    d. the Ito cell is a major source of excess collagen
    e. the left lobe of the liver is most affected

13. Cirrhosis is associated with
    a. reorganised liver vasculature with scarring

14. Oesophageal varices
    a. occur in one third of all cirrhosis patients
    b. account for more than 50 % of episodes of haematemesis
    c. are most often associated with hepatitis C cirrhosis
    d. have a 40 % mortality during the first episode of rupture
    e. lie primarily in the middle portion of the oesophagus

Pancreas

1. Which of the following may occur in acute pancreatitis
    a. hypercalcaemia
    b. glycosuria

2. In acute pancreatitis
    a. trypsin activates the bradykinin system
    b. less than 5% are idiopathic
    c. 35% of patients with gall stones develop pancreatitis
    d. gall stones are present in 80% of cases

3. Chronic pancreatitis causes
    a. Hypercalcaemia
    b. Hypermagnesiumaemia
    c. Steatorrhoea
    d. Hypoglycaemia

4. Acute pancreatitis
    a. Affects intraperitoneal fat only
    b. Alcohol and gallstones cause 60%
    c. Backflow of bile is a sig risk factor
    d. Intraductal activation of enzymes is important
    e. Proteases, trypsin etc released from Alpha islet cells

5. In acute pancreatitis
    a. Less than 5% are idiopathic
    b. 35% of patients with gallstones develop pancreatitis
    c. Gallstones are present in 80% of cases
    d. Trypsin plays a central role in the activation of the kinin system

6. Which of the following may occur in acute pancreatitis
    a. Hepercalcaemia
    b. Glycosuria

7. All are true about chronic pancreatitis, EXCEPT
    a. 10% develop pseudocysts
    b. diabetes may develop
    c. is associated with pancreatic carcinoma
    d. alcohol is the main etiologic factor

8. Regarding acute pancreatitis, all are ACUTE effects EXCEPT:
    a. DM
    b. pseudocyst
    c. ARDS
    d. low platelets

9. Regarding acute pancreatitis:
    a. the pathogenesis is to do with trypsin activation
    b. 80% of cases are due to alcohol

10. Regarding pancreatitis
    a. the second most common cause is infectious agents
    b. trypsin is implicated as an activator of the kinin system
    c. the chronic form is usually due to gallstones
    d. duct obstruction is not the mechanism in alcoholic pancreatitis
    e. elastase is the only pancreatic enzyme that acts to limit pancreatitis

11. In acute pancreatitis
    a. fat necrosis occurs in other intra-abdominal fatty deposits
    b. trauma is the precipitating cause in 30 % of cases
    c. alcohol is directly toxic to the Islets of Langerhans
    d. Kallikrein converts trypsin to activate the complement system
    e. Erythromycin has been implicated in severe cases

12. In pancreatitis,
    a. trypsin activates the bradykinin system

Renal System

1. Regarding acute tubular necrosis
    a. non-oliguric renal failure follows a more benign course

2. In the diagnosis of renal hypertension
    a. 60% of cases are due to fibromuscular dysplasia
    b. malignant hypertension only occurs in patients with previous hypertension
    c. onion skinning is proportional th the degree of renal failure
    d. associated with immune suppression

3. Morphological features of chronic renal failure include
    a. glomerular hyperplasia with dilation of tubules
    b. slowing of filtrate through loop of Henle
    c. decreased pressure in the glomerulus

4. Regarding acute tubular necrosis
    a. non-oliguric renal failure follows a more benign course
    b. (casts blocking tubule was not an option)

5. ATN
    a. Casts in lumen blah blah

6. Acute glomuleronephritis (tricky)
    a. Occurs post 1 – 4 weeks impetigo
    b. Due to toxic effect of streptolysin on basement membrane
    c. Due to Group B alpha-haemolytic strep.
    d. Leads to renal failure ?usually ?mostly - related to prognosis

7. In chronic renal failure morphology includes

8. In the diagnosis of renal hypertension
    a. 60% cases of renovascular hypertension are due to fibromuscular dysplasia
    b. Malignant hypertension only occurs in patients with previous hypertension
    c. Onion skinning is proportional to the degree of renal failure

9. Ischaemic ATN
    a. Is associated with tubular cast obstruction

10. Which of the following is true in Nephrotic syndrome
    a. Albumin lost, other globulins unaffected
    b. Hypertension
    c. Alteration to serum lipid levels
    d. Sodium and water excretion

11. In chronic renal failure, morphology includes
12.
13. Regarding Acute Renal failure, which is true?
    a. A Strep B infection may occur 3 -4 weeks beforehand
    b. May have abnormal renal parenchyma secondary to Strep

14. Which of the following is NOT a nephrotoxic cause of ATN?
    a. erythromycin
    b. contrast
    c. CCL4
    d. Aminoglycosides
    e. Lead

15. What are pathological changes of ATN?
    a. casts in lumen

16. Concerning acute tubular necrosis
    a. cephalosporins are not a causative agent
    b. nephrotoxic causes are associated with a poor prognosis
    c. casts are found in the loop of Henle
    d. rhabdomyolysis is not a cause
    e. ischaemic tubular necrosis is uncommon after haemorrhagic shock

17. Regarding acute tubular necrosis
    a. it is associated with hyperkalemia not hypokalemia in recovery
    b. non-oliguric has a better recovery
    c. it is associated with ischaemic cortical cells
    d. 80 % are associated with anuria

18. Ischaemic tubular necrosis is associated with
    a. maintenance stage with polyuria
    b. predominantly proximal necrosis
    c. intact basement membranes
    d. tubular cast obstruction
    e. distal necrosis only

19. Hypertensive renal disease
    a. 60 % of renovascular hypertension is due to fibromuscular hyperplasia
    b. malignant hypertension only arises if previous hypertension
    c. onion skinning correlates with degree of renal failure

20. The morphology of renal failure includes

21. Regarding the hepatorenal syndrome
    a. it is irreversible
    b. one loses the ability to concentrate urine
    c. urine has a high sodium concentration
    d. the urine is hyperosmolar
    e. the favoured theory of it's generation involves increased renal blood flow

22. Urolithiasis
    a. presence of hypercalcemia implies renal insufficiency
    b. a patient with leukemia is likely to make cystine calculi
    c. calcium is the major component of 35% of calculi
    d. struvite stones are made up of magnesium-ammonium-phosphate
    e. the commonest cause of calcium oxalate stones is hypercalciuria

23. In pyelonephritis
    a. 85 % of infections are caused by G-ve bacteria
    b. uretral obstruction makes haematogenous infection less likely
    c. uretral obstruction allows bacteria to ascend the ureter into the pelvis
    d. infection is less likely during pregnancy
    e. papillary necrosis and perinephric abscess are common seqelae

Endocrine

1. Which is correct for the pituitary gland
    a. LH – anterior – basophil
    b. VP – posterior – basophil
    c. Prolactin – posterior – acidophil

2. Which is characteristic of Type 2 diabetes
    a. early insulinitis
    b. it is not affected by pregnancy
    c. get a decrease in peripheral insulin receptors
    d. 50% concordance in twins

3. Pituitary adenomas cause
    a. Graves' disease
    b. Hypothyroidism
    c. Acromegaly

4. The pathogenesis of Type 1 diabetes includes
    a. decreased insulin sensitivity
    b. abnormal glucokinase activity
    c. auto immune insulinitis
    d. no antibodies found at diagnosis

5. Which is correct for the pituitary gland
    a. LH: anterior: basophil
    b. VP: posterior: basophil
    c. Prolactin: posterior: acidophil

6. Cushings disease is associated with
    a. osteoporosis
    b. hair loss
    c. general obesity

7. Which is more common in people with diabetes mellitus
    a. mucomycoses
    b. TB
    c. Gas gangrene
    d. Carbuncles
    e. All of the above

8. Diabetes mellitus type 2
    a. have a decreased no of receptors
    b. is worse in pregnancy
    c. is not familial

9. Cushings disease
    a. Increased neutrophil discharge from bone marrow
    b. Generalised obesity
    c. Hair loss
    d. Osteoporosis

10. Regarding glucocorticoids (physiology ques)
    a. Neutrophils something bone marrow
    b. Decrease capillary permeability

11. Regarding type II diabetes
    a. Is due to decreased insulin receptors

12. Which is true of the pituitary gland
    a. anterior—LH—basophils
    b. posterior—vasopressin—basophils
    c. anterior—GH—basophils

13. Pituitary adenoma may cause
    a. graves disease
    b. hypothyroidism
    c. acromegaly

14. Which is true of the pituitary
    a. posterior—prolactin—acidophils
    b. posterior—vasopressin—basophils
    c. anterior—LH—basophils

15. Diabetes is associated with
    a. carbuncles
    b. mucormycosis
    c. all of the above

16. Pathogenesis of type 1 diabetes is associated with
    a. decreased insulin sensitivity
    b. abnormal glucokinase activity
    c. no antibodies found at diagnosis
    d. auto-immune insulitis
    e. twin concordance greater than 70 %

17. Which of the following is characteristic of type 11 diabetes
    a. early insulinitis
    b. not affected by pregnancy
    c. decreased peripheral receptor sensitivity
    d. less than 50 % concordance in twins
    e. 90 % of patients displaying antibodies to insulin receptors within 1 year of diagnosis

18. Type 11 diabetes is characterised by
    a. onset in early adulthood
    b. 50 % concordance in twins
    c. severe beta cell depletion
    d. islet cell antibodies
    e. normal or increased blood insulin levels

19. In type 1 diabetes
    a. associated organ-specific auto-immune disorders are common
    b. a genetic susceptibility is not supported by evidence
    c. Finnish children have a 70 fold increase compared with Korean children
    d. Influenza and varicella viruses are suspected as initiators of the disease
    e. Children who ingest cows milk early in life may have a lower incidence

20. Cushing syndrome is associated with
    a. osteoporosis
    b. general obesity
    c. hypotension

Musculoskeletal System

1. Which of the following is a disturbance of bone mineralisation
    a. ricketts
    b. osteoporosis
    c. osteopetrosis
    d. Paget's disease
    e. HPOA

2. Myositis ossificans in skeletal muscle
    a. follows resolution of a muscle tear
    b. resembles osteosarcoma in the elderly
    c. resembles bone

3. Which of the following is a disturbance of mineralization homeostasis
    a. Ricketts
    b. Osteoporosis
    c. Osteoporosis
    d. Pagets disease
    e. HPOA

4. Osteomalacia
    a. Decreased PTH
    b. Decreased osteiod matrix deposition
    c. Increased Ca absorption from gut
    d. (1,25)2DH3-calciferal deficiency

5. Stress fractures
    a. Do not incite a periostial reaction
    b. Result from repetitive stressors or abnormal axial loading

6. Hypothyroidism is associated with all of the following EXCEPT
    a. cretinism
    b. decreased hair growth
    c. cold intolerance

7. Myelefibrosis
    a. causes decreased megakaryocytes
    b. stimulates erythropoetin production
    c. causes leukoerythroblastic anaemia

8. Stress fractures
    a. do not incite a paracortical reaction
    b. result from repetitive stresses or abnormal axial loading

9. Myositis ossificans
    a. Morphologically resembles osteosarcoma
    b. Resembles the repair process following a muscle tear