

## **PATHOLOGY MCQ**

### 1) Hypertrophy

- a) occurs after partial hepatectomy
- b) increases function of an organ exponentially
- c) is triggered by mechanical and trophic chemicals
- d) occurs after denervation
- e) is usually pathological

### 2) 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

### 3) 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

### 4) Irreversible cell injury is characterised by

- a) dispersion of ribosomes
- b) cell swelling
- c) nuclear chromatin dumping
- d) lysosomal rupture
- e) cell membrane defects

### 5) 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

### 6) Smooth endoplasmic reticulum

- a) is the site of cell steroid production
- b) is the site of cell protein synthesis
- c)
- d)
- e) is the site of cellular cytochrome oxidases

7) Pinocytosis

- a) adds to the cell membrane
- b)
- c)
- d)
- e) involves the uptake of soluble macromolecules

8) Examples of hyperplasia include

- a)
- b)
- c)
- d) glandular epithelium of pubertal breasts
- e)

9) Ribosomes

- a) have 3 subunits
- b) have 30% DNA
- c) synthesise haemoglobin
- d)
- e)

10) Which of the following is not associated with atrophy

- a) decreased smooth endoplasmic reticulum
- b) decreased rough endoplasmic reticulum
- c)
- d)
- e) decreased autophagic vacuoles

11) In acute inflammation which event occurs first

- a) arteriolar dilatation
- b) arteriolar constriction
- c) oedema
- d) leucocyte migration
- e) blood flow stasis

12) 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

- 13) 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
- 14) 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) Serotonin is preformed in mast cells
- 15) 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
  - e)
- 16) In the triple response the reactive hyperemia is due to
- a) blushing
  - b) exercise
  - c) arteriolar dilation
  - d) inflammatory mediators
  - e) still present after sympathectomy
- 17) Vascular hyperemia
- a) is caused by inflammatory mediators
  - b) results in cyanosis
  - c) results in oedema
  - d) results in brown induration
  - e)
- 18) 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

- 19) Macrophages may secrete
- a) histamine
  - b) serotonin
  - c) prostaglandins
  - d) oxygen free radicals
  - e)
- 20) Which of the following cells cannot phagocytose
- a) neutrophils
  - b) eosinophils
  - c) macrophages
  - d) T-cells
  - e)
- 21) The most common peripheral circulating lymphocyte is
- a) B-cell
  - b) T-cell
  - c)
  - d)
  - e)
- 22) Granulocytes
- a)
  - b)
  - c)
  - d)
  - e)
- 23) Oncogenes
- a)
  - b)
  - c)
  - d)
  - e)
- 24) 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

- 25) 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
- 26) Mast cell
- a) may discharge independent of IgE
  - b) release lysosymes
  - c)
  - d)
  - e)
- 27) 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
- 28) Metastatic calcification occurs in
- a) old lymph nodes
  - b) gastric mucosa
  - c) atherosclerotic vessels
  - d) damaged heart valves
  - e)
- 29) Regarding chronic inflammation all of the following are true EXCEPT
- a) it can be caused by persistent infections
  - b) it primarily involves tissue destruction
  - c) it may contribute to the formation of atherosclerosis
  - d) it involves mononuclear inflammatory cells
  - e) it can be caused by exposure to toxic agents
- 30) Macrophages are derived from
- a) monocytes
  - b) T-cells
  - c) B-cells
  - d) Eosinophils
  - e) Plasma cells

- 31) White infarcts occur in
- a) small intestine
  - b) oesophagus
  - c) lung
  - d) kidney
  - e) sigmoid colon
- 32) 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
- 33) Pulmonary congestion is associated with
- a)
  - b)
  - c) haemosiderin deposition in macrophages
  - d)
  - e)
- 34) Regarding oedema
- a) infection does not cause pulmonary oedema
  - b) hereditary angioneurotic oedema involves skin only
  - c) facial oedema is a prominent component of anasarca
  - d) hepatic cirrhosis is the most common cause of hypoproteinemia
  - e) hypoproteinemia is the most common cause of systemic oedema
- 35) With respect to wound healing
- a)
  - b)
  - c) neutrophils proliferate at the wound margins at the same time as epithelial proliferation occurs
  - d)
  - e)
- 36) Which occurs first in fracture healing
- a) neutrophil invasion
  - b) procallus formation
  - c) woven bone ossification
  - d) lamellar bone ossification
  - e) collagen deposition

- 37) Subchondral necrosis
- a) is rarely idiopathic
  - b) associated with diving injuries
  - c) rarely involves ischaemia
  - d)
  - e)
- 38) 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
- 39) 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 epitheal spur forms on the first day
  - e)
- 40) 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
- 41) DIC is associated with
- a) thrombocytosis
  - b) a bleeding diathesis presentation in a patient with malignancy
  - c)
  - d)
  - e)

- 42) 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
- 43) 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
- 44) 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 Buerger's disease
  - d) varicosity development has no genetic component
  - e) 20% of venous thrombi commence in superficial veins
- 45) Post mortem features of clot include
- a) adherence to vascular walls
  - b) absence of red cells in supernatant
  - c)
  - d) lines of Zahn
  - e)
- 46) Air embolism
- a) is fatal as air is non-compressible so does not leave the heart
  - b)
  - c)
  - d) 200 ml is the lethal dose
  - e)
- 47) Amniotic fluid embolism
- a) is associated with a greater than 80 % mortality
  - b)
  - c)
  - d)
  - e)



- 48) Fat embolism syndrome is associated with
- a)
  - b)
  - c) mortality of greater than 20 %
  - d)
  - e) petechial rash, non-thrombocytopenic
- 49) 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
- 50) In transplant rejection the hyperacute rejection is
- a) cell mediated
  - b) prevented largely by cross-matching blood
  - c) controlled by immunosuppressive drugs
  - d)
  - e)
- 51) 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
- 52) 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
- 53) 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

- 54) Passive immunity is achieved by administering
- a) live virus
  - b) attenuated virus
  - c) adsorbed toxin
  - d) activated T-cells
  - e) all of the above
- 55) The majority of AIDS cases are reported from
- a) homosexual males
  - b) IV drug abusers
  - c) Haemophiliacs
  - d) Heterosexual contact
  - e) Recipients of blood products
- 56) The following are opportunistic AIDS infections EXCEPT
- a) PCP
  - b) Atypical mycobacterium
  - c) CMV
  - d) Mycoplasma pneumonia
  - e)
- 57) HIV is associated with
- a)
  - b)
  - c)
  - d) polyclonal hypergammaglobulinemia
  - e)
- 58) 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 its surface which allow binding to host endothelial cells
  - e) all of the above
- 59) Staph aureus can cause all of the following EXCEPT
- a) food poisoning
  - b) osteomyelitis
  - c) carbuncles
  - d) scarlet fever
  - e) scalded skin syndrome

- 60) Which of the following is NOT a DNA virus
- a) HSV
  - b) HBV
  - c) HIV
  - d) EBV
  - e) VZV
- 61) With respect to streptococcal infection
- a)
  - b)
  - c) may result in glomerulonephritis 3 weeks post infection
  - d)
  - e)
- 62) Non-thrombocytopenic purpura is associated with
- a) aplastic anemia
  - b) SLE
  - c) Meningococemia
  - d) HIV
  - e) EBV
- 63) With hepatitis B infection
- a)
  - b)
  - c) HbeAg is associated with viral replication
  - d)
  - e)
- 64) 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
- 65) 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

- 66) With hepatitis C infection
- a) Associated with sexual transmission primarily
  - b) More than 50 % become chronic
  - c) Transmission increases in pregnancy
  - d)
  - e)
- 67) With hepatitis E infection
- a) it is transmitted primarily parenterally
  - b) it accounts for a greater than 20 % mortality in pregnant mothers
  - c)
  - d)
  - e)
- 68) 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 serotonin and dopamine receptors
  - e) C.perfringens causes wound infections 10 days post operatively
- 69) All the following infections are associated with splenomegaly EXCEPT
- a) leprosy
  - b) toxoplasmosis
  - c) tuberculosis
  - d) typhoid fever
  - e) CMV
- 70) Bacterial endotoxin
- a) is exemplified by streptokinase
  - b) is the cause of the severe form of diphtheria
  - c) is the cause of gas gangrene
  - d) induces the production of TNF
  - e) is the outer cell wall of gram positive bacteria
- 71) 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

- 72) 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
- 73) In malaria
- a) plasmodium vivax causes severe anemia
  - b) parasites mature in red blood cells
  - c) inoculated sporozites immediately invade the spleen
  - d) plasmodium falciparum initially causes hepatomegaly
  - e) cerebral malaria is caused by parasites invading grey matter
- 74) Rickettsial infection
- a)
  - b)
  - c)
  - d) principally affects the endothelium
  - e)
- 75) 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
- 76) With electrical injury
- a) death is always due to thermal burn
  - b) dry skin is a good electrical conductor
  - c) ampere of the current is important
  - d) all body tissues conduct electricity
  - e)

- 77) Which of the following is an anti-oxidant
- a) vitamin D
  - b) vitamin B12
  - c) vitamin E
  - d) vitamin K
  - e) vitamin B6
- 78) Which deficiency causes diarrhoea, dermatitis and dementia
- a) pyridoxine
  - b) vitamin A
  - c) riboflavin
  - d) vitamin B1
  - e) niacin
- 79) Decreased levels of B12 are associated with all the following EXCEPT
- a) autoimmune gastritis
  - b) crohns disease
  - c) subacute combined degeneration of the cord
  - d)
  - e)
- 80) 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
- 81) Which is true of the pituitary gland
- a) anterior—LH—basophils
  - b) posterior—vasopressin—basophils
  - c) anterior—GH—basophils
  - d)
  - e)
- 82) Pituitary adenoma may cause
- a) graves disease
  - b) hypothyroidism
  - c) acromegaly
  - d)
  - e)

- 83) Which is true of the pituitary
- a) posterior—prolactin—acidophils
  - b) posterior—vasopressin—basophils
  - c) anterior—LH—basophils
  - d)
  - e)
- 84) The type of emphysema associated with smoking is
- a) panacinar
  - b) centriacinar
  - c) distal acinar
  - d) irregular
  - e) none of the above
- 85) 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
  - e)
- 86) Intrinsic asthma is commonly triggered by
- a)
  - b)
  - c) viral infections
  - d)
  - e)
- 87) TB pathogenicity is due to
- a)
  - b)
  - c)
  - d)
  - e)
- 88) 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

- 89) Chronic bronchitis is characterised by
- a) smooth muscle hypertrophy
  - b) leucocyte infiltration
  - c) mucus gland hypertrophy
  - d) increased size of goblet cells
  - e)
- 90) All the following cause compressive atelectasis EXCEPT
- a) pneumothorax
  - b) asthma
  - c) CCF
  - d) Peritonitis
  - e) Pleural effusion
- 91) 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
- 92) 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)
  - e)
- 93) 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
- 94) 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



- 95) 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
- 96) 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
- 97) 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 epithelium leads to emphysema
- 98) In bronchial asthma
- a) extrinsic asthma is initiated by diverse non-immune mechanisms
  - b) sub-epitheal 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
- 99) 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

- 100) Smoking is associated with all the following diseases EXCEPT
- a) spontaneous abortion
  - b) atherosclerosis
  - c) bladder carcinoma
  - d) chronic liver disease
  - e)
- 101) Smoking is associated with
- a)
  - b)
  - c)
  - d) particle deposition in alveolar macrophages
  - e)
- 102) 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
- 103) The commonest site of primary TB lesion in lung is
- a) apex
  - b) base
  - c) hilum
  - d) lower zone of upper lobe
  - e) peripherally
- 104) 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
  - e) sarcoplasm is resorbed by leukocytes
- 105) In compensated cardiac hypertrophy changes include
- a) diffuse fibrosis
  - b) hyperplasia
  - c) decreased sarcomeres
  - d) increased capillary density
  - e) increased capillary/myocyte ratio

- 106) In atherosclerosis the cells at the centre of the plaque are
- a) macrophages
  - b) foam cells
  - c) leukocytes
  - d) smooth muscle cells
  - e)
- 107) All of the following are major risk factors for atherosclerosis EXCEPT
- a) obesity
  - b) hyperlipidemia
  - c) smoking
  - d) hypertension
  - e) diabetes
- 108) 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
- 109) The commonest cause of fungal endocarditis is
- a) actinomycosis
  - b) as
  - c) as
  - d) candida
  - e) blatomycosis
- 110) 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
- 111) Septic shock may cause all of the following EXCEPT
- a) myocardial depression
  - b) vasoconstriction
  - c) DIC
  - d) ARF
  - e) ARDS

- 112) 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 uremia
  - d) haemorrhagic pericarditis is most commonly due to Klebsiella infection
  - e) fibrinous pericarditis is due to TB until proven otherwise
- 113) Shock results in
- a)
  - b)
  - c)
  - d) decreased capillary hydrostatic pressure
  - e)
- 114) 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
  - d)
  - e)
- 115) Acute endocarditis
- a) has a less than 20 % mortality
  - b) is caused by virulent micro-organisms
  - c) 30 % is caused bacteria
  - d)
  - e)
- 116) 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
- 117) 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

- 118) Thrombocytopenia
- 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
- 119) A young man presents with central chest pain presumed to be associated with vasoconstriction. The most likely cause of the pain is local
- a) hypoxia
  - b) decreased ATP
  - c) increased CO<sub>2</sub>
  - d) catecholamines acting on alpha 1 receptors
  - e) acetylcholine stimulation
- 120) An adult male with an ejection fraction of 80 % could be due to
- a) myocardial ischaemia
  - b) arrhythmia
  - c) thiamine deficiency
  - d)
  - e)
- 121) 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
- 122) Central pathophysiological feature of shock
- a) hypotension
  - b) decreased blood volume
  - c) cellular hypoxia at a tissue level
  - d) infection
  - e) cardiac failure
- 123) Malignant hypertension
- a) 75 % recover with no loss of renal function
  - b) is associated with abnormal renin levels
  - c)
  - d)
  - e) affects 1 to 5 % of sufferers

124) The cause of fluid retention peripherally with congestive cardiac failure is

- a) increased renin
- b) increased GFR
- c) increased angiotensin 2
- d) increased aldosterone
- e)

125) Rheumatic carditis is associated with

- a) Curschmann spirals
- b) Ito cells
- c) Aschoff bodies
- d) Nutmeg cells
- e) Reed-sternberg cells

126) Bradykinin

- a) causes smooth muscle dilatation
- b) kallikrein causes prohormone degradation to produce bradykinin
- c)
- d)
- e)

127) Diabetes is associated with

- a) carbuncles
- b) mucormycosis
- c)
- d)
- e) all of the above

128) 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 insulinitis
- e) twin concordance greater than 70 %

129) Which of the following is characteristic of type 1 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

130) Type 1 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

131) 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

132) 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

133) 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

134) 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

135) 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

136) Cirrhosis is associated with

- a)
- b) reorganised liver vasculature with scarring
- c)
- d)
- e)

137) 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

138) 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

139) 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
- e)

140) 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



141) Hypertensive renal disease

- a)
- b) 60 % of renovascular hypertension is due to fibromuscular hyperplasia
- c) malignant hypertension only arises if previous hypertension
- d) onion skinning correlates with degree of renal failure
- e)

142) The morphology of renal failure includes

- a)
- b)
- c)
- d)
- e)

143) 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

144) 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

145) 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 sequelae

146) Cushing syndrome is associated with

- a) osteoporosis
- b) general obesity
- c) hypotension
- d)
- e)

- 147) Macrocytic anaemia is associated with all the following except
- a) Hyperthyroidism
  - b) Neoplasm
  - c) Folate and B12 deficiency
  - d) Pregnancy
  - e) EBV
- 148) Myositis ossificans
- a) Morphologically resembles osteosarcoma
  - b) Resembles the repair process following a muscle tear
  - c)
  - d)
  - e)
- 149) Internal carcinoma is associated with which of the following skin disorders
- a)
  - b)
  - c)
  - d) acanthosis nigricans
  - e)
- 150) Hypothyroidism is associated with all of the following EXCEPT
- a) cretinism
  - b)
  - c)
  - d) decreased hair growth
  - e) cold intolerance
- 151) Which of the following reactions is cell mediated
- a) SLE
  - b) Arthus reaction
  - c) Anaphylaxis
  - d) Graft rejection
  - e) Goodpastures
- 152) Myelofibrosis
- a) causes decreased megakaryocytes
  - b) stimulates erythropoietin production
  - c) causes leukoerythroblastic anaemia
  - d)
  - e)

153) The commonest cause of thyroid carcinoma is

- a) medullary
- b) follicular
- c) papillary
- d) anaplastic
- e) squamous

154) Stress fractures

- a) do not incite a paracortical reaction
- b)
- c)
- d)
- e) result from repetitive stresses or abnormal axial loading