

## **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

- 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

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

20) Which of the following cells cannot phagocytose

- a) neutrophils
- b) eosinophils
- c) macrophages
- d) T-cells

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)

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)

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 epithelial 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)

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)

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)

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)

62) Non-thrombocytopenic purpura is associated with

- a) aplastic anemia
- b) SLE
- c) Meningococcemia
- 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 its highest prevalence in haemodialysis 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)

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

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)

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

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)

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

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
- 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) blatomyosis
- 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 ureamia
  - 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)
- 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)
- 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
- 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)
- 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

- 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)

- 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)
- 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

- |           |           |            |              |
|-----------|-----------|------------|--------------|
| 1. E (C)  | 41. B     | 81. A      | 121. A,E (A) |
| 2. A      | 42. E     | 82. B,C    | 122. A,C     |
| 3. E      | 43. C     | 83. C      | 123. E       |
| 4. E      | 44. B     | 84. B      | 124. D       |
| 5. D      | 45. A     | 85. B      | 125. C       |
| 6. A      | 46. - ?D  | 86. C      | 126. B       |
| 7. E      | 47. A     | 87. -      | 127. E       |
| 8. D      | 48. E     | 88. B      | 128. D       |
| 9. C      | 49. A (D) | 89. C      | 129. B (?C)  |
| 10. E     | 50. -     | 90. B      | 130. - (E)   |
| 11. B     | 51. D     | 91. A      | 131. C       |
| 12. E     | 52. D     | 92. D      |              |
| 13. B (A) | 53. E     | 93. E      |              |
| 14. D (E) | 54. D     | 94. A (D)  |              |
| 15. D     | 55. A (D) | 95. A      |              |
| 16. C & E | 56. D     | 96. C      |              |
| 17. C     | 57. D     | 97. A      |              |
| 18. A ?E  | 58. E     | 98. E      |              |
| 19. D     | 59. D     | 99. A      |              |
| 20. D     | 60. C     | 100. D     |              |
| 21. B     | 61. C     | 101. D     |              |
| 22. -     | 62. C     | 102. D     |              |
| 23. -     | 63. C     | 103. E     |              |
| 24. C     | 64. E     | 104. A     |              |
| 25. A ?E  | 65. E     | 105. A     |              |
| 26. A     | 66. B     | 106. B     |              |
| 27. E ?   | 67. B     | 107. A     |              |
| 28. B     | 68. A     | 108. E     |              |
| 29. - (B) | 69. A     | 109. D     |              |
| 30. A     | 70. D     | 110. D     |              |
| 31. D     | 71. B     | 111. A (B) |              |
| 32. D     | 72. D (E) | 112. C     |              |
| 33. C     | 73. B     | 113. D     |              |
| 34. C     | 74. D     | 114. B     |              |
| 35. C     | 75. C     | 115. B     |              |
| 36. A     | 76. C,D   | 116. D     |              |
| 37. B     | 77. C     | 117. D (A) |              |
| 38. B (A) | 78. E     | 118. A     |              |
| 39. D     | 79. A     | 119. A     |              |
| 40. E     | 80. B     | 120. C     |              |

132. B  
133. A  
134. C  
135. D  
136. B  
137. D  
138. C  
139. B  
140. D  
141. -  
142. -



- 143. D
- 144. D
- 145. A
- 146. A
- 147. E
- 148. A
- 149. D
- 150. D
- 151. D
- 152. C
- 153. C
- 154. E