

Exam October 1999

1. Regarding the hepatorenal syndrome
 - a. It is irreversible
 - b. The ability to concentrate urine is lost
 - c. The urine is high in sodium
 - d. The favoured theory is an increase in renal blood flow
 - e. The urine is hyperosmolar

2. Regarding platelets
 - a. They are the main source of thrombin
 - b. They number 200-500 per microlitre
 - c. They contain a nucleus
 - d. They are biconcave discs
 - e. They contain alpha and beta granules

3. The most common type of thyroid cancer is
 - a. Medullary
 - b. Anaplastic
 - c. Follicular
 - d. Papillary
 - e. Squamous

4. 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 a high ANP
 - e. Is caused by raised plasma oncotic pressure

5. Ischaemic tubular necrosis is characterised by
 - a. Casts blocking the tubules
 - b. Distal necrosis only
 - c. An intact basement membrane
 - d. Predominantly proximal necrosis
 - e. A maintenance stage consisting of polyuria

6. post myocardial infarction:
 - a. ATP is down to 50% at ten 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 seen within 20 minutes

7. which is true of chronic inflammation
 - a. macrophages have a half life of 5 days
 - b. it commonly follows acute inflammation
 - c. it most frequently results in resolution
 - d. it is characterised by increased vascular permeability and oedema
 - e. x

8. congestive heart failure can be caused by
 - a. vitamin A deficiency
 - b. niacin deficiency
 - c. vitamin D deficiency
 - d. thiamine deficiency
 - e. vitamin B2 deficiency

9. which deficiency causes diarrhoea, dermatitis and dementia
- pyridoxine
 - vitamin B1
 - niacin
 - vitamin A
 - riboflavin
10. which of the following is an antioxidant
- vitamin D
 - vitamin K
 - Vitamin A
 - Vitamin B2
 - Vitamin E
11. regarding iron, which is incorrect
- absorption is increased by vitamin C
 - most is found in myoglobin
 - it is mostly absorbed in the duodenum
 - transferrin is usually 33% saturated
 - women have smaller iron stores than men
12. which is characteristic of type II diabetes
- early insulinitis
 - it is not affected by pregnancy
 - there is a decrease in peripheral insulin receptors
 - there is a 50% concordance in twins
 - Normal or increased insulin levels
13. regarding lobar pneumonia
- it is more common in the young and elderly
 - there is a change from red to grey hepatisation
 - it is not associated with a productive cough
 - it is rarely caused by streptococci
 - it is associated with immunosuppression
14. chronic bronchitis is characterised by
- an increase in the size of goblet cells
 - smooth muscle hypertrophy
 - leukocyte infiltration
 - mucous gland hypertrophy
 - x
15. in the triple response, reactive hyperaemia
- is due to exercise
 - is due to blushing
 - is due to arteriolar dilation
 - is due to inflammatory mediators
 - is still present with sympathectomy
16. all cause compressive atelectasis EXCEPT
- pneumothorax
 - heart failure
 - bronchial asthma
 - peritonitis
 - x

17. myelofibrosis
- causes leukoerythroblastic anaemia
 - causes a decrease in megakaryocytes
 - stimulates erythropoietin production
 - x
 - x
18. which associations are true of the pituitary
- vasopressin + posterior + basophilic
 - prolactin + posterior + acidophilic
 - LH + anterior + basophilic
 - X
 - X
19. regarding acute endocarditis
- it has a mortality of <20%
 - it is caused by virulent organisms
 - 30% of cases are caused by bacteria
 - It usually occurs in abnormal valves
 - it is confirmed by positive blood cultures in less than 50% of cases
20. metastatic calcification occurs in
- damaged heart valves
 - old lymph nodes
 - atherosclerotic vessels
 - gastric mucosa
 - x
21. a man with type B blood
- has the commonest blood type
 - cannot have a child with type O
 - cannot have a child with type AB
 - cannot have a child with type A
 - none of the above
22. regarding DNA
- production can be decreased by folate deficiency
 - x
 - x
 - x
 - x
23. which is not true of bronchogenic cysts
- they become dysplastic
 - they occasionally cause spontaneously pneumothorax
 - they have an epithelial layer
 - they are formed by abnormal detachment of a fragment of primitive foregut
 - they are the most common form of congenital respiratory cysts
24. squamous cell lung cancer
- is usually peripheral
 - has a 65% 5 year survival rate
 - has an increased incidence among females
 - is commonly associated with smoking
 - metastasises widely at an early stage

25. regarding air embolism
- it does not leave the heart because air is compressible
 - 200mL is the lethal dose
 - 100mL is the lethal dose
 - 300mL is the lethal dose
 - 50mL is the lethal dose
26. which is not a DNA virus
- varicella zoster
 - CMV
 - Hepatitis B
 - Herpes simplex
 - HIV
27. which tissue is most susceptible to radiation
- gastrointestinal mucosa
 - CNS
 - Haematopoietic
 - Lymphatic
 - thyroid
28. which hypersensitivity reaction is cell mediated
- anaphylaxis
 - Arthus reaction
 - Goodpasture's syndrome
 - SLE
 - Graft rejection
29. regarding subchondral necrosis
- it is rarely idiopathic
 - it is associated with diving injuries
 - it rarely involves ischaemia
 - x
 - x
30. in healing by primary intention
- there is a large tissue deficit
 - the tissue deficit cannot be reconstituted
 - an epithelial spur forms in the first day
 - it involves extensive granulation tissue
 - x
31. vascular hyperaemia
- is caused by inflammatory mediators
 - results in cyanosis
 - results in oedema
 - results in brown induration
 - x
32. regarding jaundice
- unconjugated produces bilirubin in the urine
 - conjugated causes kernicterus in adults
 - unconjugated does not colour the sclera
 - in unconjugated, bilirubin is tightly bound to albumin
 - x

33. non-thrombocytopaenic purpura is associated with
- meningococcaemia
 - HIV
 - Aplastic anaemia
 - SLE
 - Infectious mononucleosis
34. Rickettsial infections
- Primarily involve the endothelial cells
 - Are spread via the airborne route
 - x
 - x
 - x
35. a patient with a normal blood pressure post myocardial infarction has an associated
- increased cardiac output
 - increased systolic filling pressure
 - increased right atrial pressure
 - x
 - x
36. which of the following are found in the core of atheroma
- macrophages
 - smooth muscle cells
 - leukocytes
 - foam cells
 - x
37. shock results in
- decreased capillary hydrostatic pressure
 - x
 - x
 - x
 - x
38. thrombocytopaenia
- occurs commonly in HIV
 - causes spontaneous bleeding at levels of $90\ 000/\text{mm}^3$
 - occurs with hyposplenism
 - is related to platelet survival in PND
 - is not associated with megaloblastic anaemia
39. in the diagnosis of renal hypertension
- x
 - x
 - onion skinning is proportional to the degree of renal failure
 - x
 - x
40. regarding amniotic fluid embolus
- it carries a greater than 80% mortality
 - x
 - x
 - x
 - x

41. in hepatitis B infection
- X
 - HBeAg is associated with viral replication
 - X
 - X
 - X
42. regarding hepatitis C
- it has a high association with sexual transmission
 - transmission increases in pregnancy
 - x
 - greater than 50% of infections become chronic
 - x
43. which of the following organelles are bound by a single unit membrane
- centrioles
 - x
 - x
 - mitochondria
 - lysosomes
44. in compensated cardiac hypertrophy, changes include
- diffuse fibrosis
 - hyperplasia
 - an increased capillary to myocyte ratio
 - decreased sarcomeres
 - increased capillary density
45. macrocytic anaemia occurs in all of the following EXCEPT
- pregnancy
 - folate/B12 deficiency
 - EBV infection
 - Neoplasia
 - Hyperthyroidism
46. in chronic renal failure, morphology includes
- glomerular hyperplasia with dilation of tubules
 - slowing of filtrate through the loop of Henle
 - decreased pressure in the glomerulus
 - x
 - x
47. cirrhosis
- x
 - x
 - x
 - results in changes of the vascular channels
 - x
48. regarding changes after a myocardial infarction
- pallor occurs at 24 hours
 - wavy fibres are found centrally
 - decreased contractility occurs after 5 minutes
 - liquefactive necrosis is typical
 - sarcoplasm is resorbed by leukocytes

49. regarding streptococcal infection
- x
 - x
 - x
 - x
 - results in glomerulonephritis 3 weeks post infection
50. intrinsic asthma
- decreases vagal afferent responsiveness
 - is associated with atopy
 - is mainly triggered by respiratory viral illness
 - x
 - x
51. pituitary adenomas cause
- Grave's disease
 - Hypothyroidism
 - X
 - Acromegaly
 - X
52. in transplant rejection, the hyperacute rejection is
- cell mediated
 - prevented largely by prior crossmatching of blood
 - controlled by immunosuppressive drugs
 - x
 - x
53. which occurs first in fracture healing
- neutrophil invasion
 - formation of a procallus
 - woven bone ossification
 - x
 - x
54. the pathogenesis of type I diabetes includes
- decreased insulin sensitivity
 - abnormal glucokinase activity
 - autoimmune insulinitis
 - no antibodies found at diagnosis
 - x
55. myositis ossificans in skeletal muscle
- resembles osteosarcoma
 - resembles bone
 - x
 - x
 - occurs after injury

1. e	2. b	3. d	4. d	5. a
6. a	7. ?	8. d	9. c	10. c/e
11. b	12. ?e/?c	13. b	14. d	15. ?
16. c	17. a	18. c	19. b	20. d
21. e	22. a	23. a	24. d	25. c
26. e	27. c	28. e	29. b	30. c
31. a	32. d	33. a	34. a	35. ?
36. d	37. a	38. ?a	39. c	40. ?
41. b	42. d	43. e	44. a	45. c
46. ?	47. d	48. a	49. e	50. c
51. d	52. b	53. ?	54. c	55. a/b/e