

Exam August 2001

1. pinocytosis
 - a. is a way of transporting large molecules into the cell
 - b. adds to the cellular membrane
 - c. is the same as exocytosis
 - d. is ingestion of small vesicles
 - e. is uptake of soluble macromolecules

2. which of the following is NOT a DNA virus
 - a. herpes simplex
 - b. polio virus
 - c. adenovirus
 - d. cytomegalovirus
 - e. varicella zoster

3. which cells are found in the core of atheroma
 - a. macrophages
 - b. lymphocytes
 - c. foam cells
 - d. smooth muscle cells
 - e. fibroblasts

4. which of the following infections is not associated with AIDS
 - a. atypical mycobacteria
 - b. mycoplasma
 - c. pneumocystis carinii
 - d. Cryptococcus
 - e. Herpes zoster

5. which of the following is true
 - a. bradykinin is formed by the action of kallikrein on a precursor molecule
 - b. x
 - c. xx
 - d. x
 - e. x

6. granulocytes
 - a. all contain granules
 - b. x
 - c. x
 - d. x
 - e. x

7. regarding malignant hypertension
 - a. it occurs in 1-5% of patients with hypertension
 - b. hyper-reninaemia is uncommon
 - c. it is associated with fibrinoid necrosis of capillaries
 - d. x
 - e. x

8. a 42 yo male presents with chest pain found to be due to coronary spasm. The best mechanism to explain this is the effect of
 - a. noradrenaline
 - b. adrenaline
 - c. alpha-1 receptor agonism
 - d. adenosine
 - e. x

9. fibro-fatty streaks
- has a low occurrence in third world countries
 - appear in the aortas of children as young as 1 year
 - are destined to become atherosclerotic plaques
 - x
 - e.
10. smooth endoplasmic reticulum
- is the site of steroid synthesis
 - is connected to the lipid bilayer of the cell wall
 - is involved in muscle contraction
 - is involved in protein synthesis
 - is necessary for mitosis
11. in chronic renal failure there is
- hyperplasia of nephrons
 - hypertrophy of nephrons
 - glomerular hyperplasia with dilation of tubules
 - slowing of filtrate through the loop of Henle
 - decreased pressure in the glomerulus
12. the clinical features of nephrotic syndrome include all of the following EXCEPT
- sodium & water retention
 - abnormal lipid levels
 - hypertension
 - massive proteinuria
 - generalised oedema
13. Regarding HIV
- proviral DNA transcription is independent of T-cell activation
 - colonisation of lymphoid tissue occurs late in the course of the infection
 - viral binding and entry to CD8+ cells depends on glycoproteins and co-receptors
 - lymph node presentation of HIV by T-cells causes ongoing infection of macrophages
 - monocytes can act as a reservoir of HIV infection
14. which of the following has the most significant combination of risk factors for AMI
- male sex, diabetes mellitus, smoker, obesity
 - male sex, smoker, family history, hypertension
 - smoker, family history, hypertension, hyperlipidaemia
 - male sex, hyperlipidaemia, hypertension, diabetes
 - x
15. an example of an antioxidant is
- vitamin A
 - vitamin E
 - thiamine
 - vitamin B6
 - vitamin D
16. carbon dust accumulates in
- alveolar macrophages
 - type I pneumocytes
 - type II pneumocytes
 - alveolar epithelium
 - mucus

17. all capillaries in the body have the following in common
- continuous epithelium
 - absent fenestrations
 - continuous basement membrane
 - x
 - x
18. acute heart failure is associated with
- reduced capillary pressure
 - raised right atrial pressure
 - x
 - x
 - x
19. in long standing heart failure, microscopic changes seen are
- haemosiderin-laden macrophages
 - oedema in the lower lung
 - x
 - x
 - x
20. emphysema associated with cigarette smoking is
- centriacinar
 - paraseptal
 - panacinar
 - bullous
 - irregular
21. compressive atelectasis is not associated with
- asthma
 - pulmonary oedema
 - diaphragm paralysis
 - tension pneumothorax
 - bronchogenic carcinoma
22. in tuberculosis the site of the Ghon focus is
- subpleural
 - lung apex
 - base of the lower lobe
 - hilum of the lung
 - lower part of the upper lobe
23. wound healing via primary intention is characterised by
- contraction
 - epithelial spurs bridging the wound in less than 24 hours
 - excessive granulation tissue
 - loss of skin appendages
 - x
24. acute pancreatitis
- usually results from intraductal activation of enzymes
 - x
 - x
 - x
 - x

25. non-thrombocytopaenic purpura is associated with
- meningococcaemia
 - HIV
 - Aplastic anaemia
 - SLE
 - Infectious mononucleosis
26. regarding type I diabetes mellitus
- associated organ-specific autoimmune disorders are common
 - a genetic susceptibility is not supported by evidence
 - x
 - x
 - x
27. type II diabetes mellitus is characterised by
- onset in early adulthood
 - 50% concordance between identical twins
 - Severe beta cell depletion
 - Normal or increased insulin levels
 - Increased severity during pregnancy
28. regarding chronic inflammation, which of the following is correct
- it completely resolves
 - it can begin insidiously
 - it always follows acute inflammation
 - x
 - x
29. macrophages
- have a half life of 3-4 days
 - produce toxic oxygen metabolites
 - x
 - x
 - x
30. which is correct regarding acute tubular necrosis
- it is associated with reduced renin levels
 - the recovery phase is associated with increased loss of sodium and potassium in the urine
 - ischaemic ATN has a better prognosis than nephrotoxic ATN
 - it is associated with an increased GFR resulting in greater sodium delivery to the distal tubules
 - oliguric ATN has a better prognosis than non-oliguric
31. squamous cell carcinoma of the lung
- is strongly associated with smoking
 - usually occurs in the peripheries of the lung
 - rarely metastasises
 - x
 - x
32. regarding hyperbilirubinaemia
- unconjugated bilirubin is easily excreted in the urine
 - unconjugated bilirubin causes jaundice
 - unconjugated bilirubin is tightly bound to albumin
 - unconjugated bilirubin crosses the adult BBB to cause kernicterus
 - x

33. heart failure is associated with
- vitamin B1 deficiency
 - vitamin B6 deficiency
 - vitamin A deficiency
 - vitamin E deficiency
 - zinc deficiency
34. acute endocarditis
- is caused by a virulent organism
 - usually occurs in abnormal valves
 - it has a mortality of <20%
 - 30% of cases are caused by bacteria
 - is confirmed by positive blood cultures in less than 50% of cases
35. type I hypersensitivity reaction
- can be prevented by stabilising mast cells
 - does not involve IgE
 - x
 - x
 - x
36. which of the following is NOT a DNA virus
- adenovirus
 - HSV-1
 - Rotavirus
 - HIV-1
 - CMV
37. clotting cascade – factors involved
- x
 - x
 - x
 - x
 - x
38. the most common trigger of non-atopic asthma is
- viral infection
 - x
 - x
 - x
 - x
39. the causes of conjugated hyperbilirubinaemia include
- Gilberts syndrome
 - Physiologic jaundice
 - Excess production of bilirubin
 - Decreased hepatic uptake
 - Cholestasis
40. dystrophic calcification is found in all of the following except
- hyaline change
 - phagocytosed debris
 - inspissated secretions in ducts
 - x
 - x

41. which associations are true of the pituitary cells and their hormones
- luteinising hormone: anterior: basophil
 - vasopressin: posterior: basophil
 - Prolactin: posterior: acidophil
 - x
 - x
42. in air embolism, the systemic effects are due to
- reduced cardiac output
 - x
 - x
 - x
 - x
43. the function of smooth endoplasmic reticulum includes
- involvement in muscle contraction
 - Protein synthesis
 - Steroid synthesis
 - Mitosis
 - x
44. fatty change is associated with
- anaemia
 - malnutrition
 - normal amounts of fat in cells
 - diabetes mellitus
 - oxidisation of fatty acids in the mitochondria
45. which of the following statements is correct regarding lobar pneumonia?
- Red hepatisation is followed by grey hepatisation
 - It is not usually due to pneumococcus
 - Infection is not transmitted via inhalation of organisms
 - it is more common in the young and elderly
 - it is associated with immunosuppression

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