

Pathology

2

Workbook

Answers

2010

Unit 1

1. Disturbances to homeostasis may cause disease. T/F
2. Negative/positive feedback mechanisms are more common in the body.
3. Which of the following is an increase in the number of cells in a structure
- a. atrophy
 - b. hypertrophy
 - c. hyperplasia
 - d. metaplasia
4. An acute condition is a condition with
- a. rapid onset and short term effects
 - b. slow onset and long term effects
 - c. neither of the above
5. A labelling of the disease based on the presenting signs and symptoms
- a. diagnosis
 - b. epidemiology
 - c. histology
 - d. pathology
6. A sign / symptom is an objective analysis of the effect of the patient
7. Hypoxia causes disease by which of the following methods
- a. excesses and deficiencies of nutrients
 - b. the reduction in oxygenation of a cell or tissue
 - c. chemicals with unpaired electrons that damage cells
 - d. damage to the cell from ultraviolet or ionising radiation
8. There are 46 chromosomes in each normal body cell

9. For the majority of the cell lifespan, the DNA is in the form of **chromatin / chromosomes**.
10. Which of the following is not found in DNA.
- a. adenine
 - b. guanine
 - c. baltosine
 - d. thymine
11. The nucleotides join together in a strand, by linking the phosphate of one nucleotide to the **sugar / phosphate** of the next nucleotide.
12. Hydrogen bonds are able to connect the nitrogenous bases of DNA together. T/F
13. **Transcription / translation** is described as interpreting the mRNA strand into instructions for amino acid placement.
14. Define a codon. a group of three bases that allows the placement of a specific amino acid
15. **Uracil / thymine** is found in mRNA.
16. Chromosomes with the centromere in the middle or nearly in the middle are called
- a. metacentric chromosomes
 - b. sub-metacentric chromosomes
 - c. acrocentric chromosomes
17. A **sub-region / sub-band** is not part of the location description for genes within chromosomes.
18. The physical manifestation of a genetic trait is the **genotype / phenotype**.
19. Define an allele an altered form of a gene
20. Co-dominance occurs when more than one allele is able to produce proteins. T/F

21. All genes within the DNA function to make proteins. T / F
22. Autosomal **recessive** / **dominant** conditions require both alleles to be defective to cause disease.
23. Familial hypercholesterolemia is characterised by a decreased level of **HDL** / **LDL** receptors on target cells.
24. Cystic fibrosis affects **exocrine** / **endocrine** glands.
25. Describe why respiratory infections commonly occur in patients with cystic fibrosis.
the build up of mucous provides a hospitable environment for the bacteria
26. People with cystic fibrosis have **increased** / **decreased** sodium chloride in their sweat.
27. Muscular dystrophy is due to a genetic defect causing an increase in the formation of dystrophin. **T** / **F**
28. Duchennes muscular dystrophy causes progressive weakness of the postural muscles but is not fatal (life threatening). **T** / **F**
29. Down Syndrome is a condition that is due to each cell containing three copies of the
a. **twenty first chromosomes**
b. twenty second chromosomes
c. twenty third chromosomes
30. Down syndrome is most commonly diagnosed by **amniocentesis** / **x ray**.
31. Which of the following is not a feature of a patient with Down syndrome
a. a small nose with a flattened bridge
b. a constantly opened mouth, with the tongue protruding
c. **large hands with no palmar crease**
d. short stature and a protruding abdomen

e. reduced ability to learn and memorise

32. A cleft **lip** / **palate** occurs in the midline of the face.

33. Talipes is another name for a congenital dislocation of the hip.

T / **F**

34. **Achondroplasia** / **osteogenesis** imperfecta is related to poor strength of bones and pathological fractures.

Unit 2

1. **Meiosis** / **mitosis** causes the division of non sex cells.
2. Describe the function of telomeres. to protect the ends of the chromosomes and to shorten during cell division which regulates the number of divisions a cell can perform
3. Dysfunctional gene function causes altered protein production. T / F
4. A phaeochromocytoma is a tumour of the adrenal **medulla** / cortex.
5. A disturbance of the genetic code may alter **transcription** / transformation.
6. Which of the following is a common genetic defect
 - a. substitution of base pairs
 - b. deletion of base pairs
 - c. addition of base pairs
 - d. all of the above
 - e. none of the above
7. Substitution of base pairs causes a
 - a. frame-shift mutation
 - b. single point mutation
 - c. rotational mutation
8. Oncogenes abnormal cell **growth** / death.
9. Suppression of a tumour suppressor gene **increases** / decreases the chance of cancerous mutation.
- 10 **Malignant** / **benign** tumours are more able to move around the body and cause further disease.

11. Metastasis is the process of the cancer cells being able to move through the tissues of the body and to migrate to other areas of the body.
12. Which of the following allows a cancer cell to move through the body via the blood stream
- a. haematogenous spread
 - b. lymphogenous spread
 - c. direct seeding
13. More people die from the **primary** / **secondary** tumours.
14. Describe why cancers that affect the bones will often cause bone pain _____
stretching of the periosteum which is richly supplied with receptors and afferent neurons
15. Anaplastic cells are characterised by having
- a. little (or no) differentiation
 - b. a moderate amount of differentiation
 - c. a large degree of differentiation
16. Normal cells **do** / **do not** exhibit contact inhibition.
17. Which of the following indicates that a cancer has metastasised to a distant location
- a. Mx
 - b. M0
 - c. M1
18. Cachexia is characterised by weight **gain** / **loss**.
19. Tumour angiogenesis factor (TAF) causes the production of new blood vessels to supply nutrients to the neoplasm. T / F
20. **Free radicals** / **antioxidants** may cause cancer.

21. Chemotherapy only targets cells that are cancerous.

T ☒ F

22. Which of the following lesions is benign

- ☒ a. endochondroma
- b. osteosarcoma
- c. chondrosarcoma
- d. fibrosarcoma

23. The cortical bone and periosteum of a bone affected by a bone lesion form the

- a. capsule
- b. reactive zone
- ☒ c. anatomic compartment

24. Benign bone tumours usually don't metastasise.

☐ T ☒ F

25. Osteochondroma is formed from cells of the

- ☒ a. growth plate
- b. diaphysis
- c. articular cartilage

26. Which of the following is a classification of an osteosarcoma.

- a. panosteal
- ☒ b. parosteal
- c. palosteal

27. An osteosarcoma is a painful lesion but does not lead to pathological fractures.

T ☐ F ☒

Unit 3

1. Antigen cause disease.
2. Which of the following is a worm that invades the body
 - a.
 - b. protozoa
 - c. fungi
 - d. bacteria
 - e. viruses
3. Describe why the skin and mucous membranes are vulnerable to pathogens entering the body.
They are exposed to the exterior and therefore more likely to be in contact with pathogens

4. Inflammation is an example of a specific defence mechanism of the body.
5. Fomites are inanimate objects that may harbour infective organisms that can then be transmitted to another person. T / F ☐
6. Kinesiologists are legally allowed to diagnose conditions. T /
7. The time between the infection and the onset of ability to transmit the disease to another person is the
 - a. incubation period
 -
 - c. infective (transmission) period
8. Which of the following is not true.
 -
 - b. some viruses contain an enzyme called reverse transcriptase
 - c. some viruses can remain in a dormant state for long periods of time
 - d. some virus particles are expelled from the cell via exocytosis

9. Chicken pox is caused by the
- a. Epstein Barr virus
 - b. herpes varicella - zoster virus**
 - c. paramyxovirus
10. The symptoms of chicken pox include all of the following except:
- a. fever
 - b. cold like symptoms such as a runny nose and cough
 - c. photosensitivity
 - d. small flat and pink skin lesions (that are described as maculopapular lesions)
 - e. swelling of the parotid salivary glands**
11. The virus that causes shingles resides in the **ventral** / **dorsal** root ganglion of affected nerves.
12. The symptoms of shingles includes tingling of affected skin but not pain. T / **F**
13. Infectious mononucleosis is transmitted by saliva. **T** / F
14. The immune cells most associated with infectious mononucleosis are the **B cells** / T cells.
15. Koplik spots are indicative of **measles** / polio.
16. Rubella (German measles) may cause:
- a. atrial septal defects only
 - b. ventricular septal defects only
 - c. both atrial and ventricular septal defects**
 - d. neither atrial nor ventricular septal defects
17. The incubation period of Mumps (infectious parotitis) is commonly
- a. 2 - 3 days
 - b. 2 - 3 weeks**

c. 2 - 3 months

18. The polio virus incubates in the **urinary** / **digestive** tract.

19. Poliomyelitis may cause paralysis of the muscles innervated by affected neurons. ☐ T / ☐ F

20. The **Salk** / **Sabin** vaccine uses live viruses that have been weakened (attenuated) by passing them through tissue of other organisms.

21. Bacteria are described as **prokaryocytes** / **eukaryocytes**.

22. A bacterium referred to as a coccus is

- ☐ a. sperical
- b. rod like
- c. spiral shaped
- d. comma shaped

23. The way that **viruses** / **bacteria** multiply is called binary fission.

24. Which of the following is not a term used to classify bacteria

- a. Gram positive
- ☐ b. Gram neutral
- c. Gram negative

25. Most bacteria are **aerobic** / **anaerobic**.

26. One important requirement for bacterial multiplication is an appropriate temperature. ☐ T / ☐ F

27. Micro-organisms are normally present in all of the following locations except

- a. skin
- b. intestine
- c. gastrointestinal tract

d. urinary bladder

28. **Exotoxins** **endotoxins** are a part of the cell wall of the bacteria.

29. A **vector** / **fomite** is a living organism that can transfer bacteria from one surface to another.

30. In antibiotic resistance, bacteria may be able to **thin** / **thicken** their gel capsule as a guard against the antibiotic.

31. Which of the following is not a type of diptheria

- a. faucical diptheria
- b. nasopharyngeal diptheria
- c. laryngeal diptheria
- d. bronchial diptheria**

32. The formation of a pseudomembrane occurs in **diptheria** / **tetanus**.

33. The micro-organism responsible for tetanus most commonly enters the body through

- a. an open wound of the skin**
- b. the mucous membrane lining the respiratory system
- c. the digestive system

34. Describe the characteristic sound of the cough in pertussis _____
several short coughs followed by a long inspiratory whoop

35. Whooping cough is very contagious in the early stages of the condition.

T / F

36. Epistaxis and subconjunctival haemorrhage may occur in whooping cough due to the

- a. the pressure of coughing**
- b. bacterial toxin released by the pathogen
- c. decreased blood supply of the face due to vascular spasm

37. Osteomyelitis is an infection of the

- a. spinal cord
- b. bone marrow**
- c. skeletal muscles
- d. synovial joints

38. Necrotic bone tissue separates from normal bone tissue to form a devascularised fragment called

a _____ sequestrum

39. Complications of osteomyelitis includes all of the following except:

- a. fracture
- b. loosening of prosthetic (artificial joints)
- c. necrosis of bones leading to fractures
- d. chronic infections
- e. pus collecting between the bone tissue and its pericardium**

40. Candidiasis is due to a

- a. virus
- b. bacterium
- c. yeast like fungus**
- d. protozoan

41. The incidence of candidiasis is **increased** / **decreased** in diabetic patients.

42. Identify the vector that transmits the larvae responsible for malaria.

_____ the female *Anopheles* mosquito

43. Upon entering the body, the malaria parasites pass to the

- a. brain
- b. heart
- c. lung
- d. liver**
- e. spleen

44. One effect of malaria is red blood cell **destruction / formation**.

Unit 4

1. Low body temperature is described as **hypothermia** / **hyperthermia**.
2. In deep sea diving the pressure experienced by the body **increases** / **decreases** with the depth of the dive.
3. Oxygen narcosis is the result of oxygen entering the blood supply of the brain as a result of spending too long diving at depth. T **F**
4. Which of the following is a factor affecting the ability of the individual to withstand extremes in temperature.
 - a. environmental factors
 - b. physiological factors
 - c. activity related factors
 - d. all of the above**
 - e. none of the above
5. The conversion of aqueous water to gaseous water vapour using heat is the process of
 - a. radiation
 - b. convection
 - c. conduction
 - d. evaporation**
6. The loss of potassium and fluid causes involuntary **contraction** / **relaxation** of muscles.
7. Heat stroke is described as an increased core body temperature with an increased ability to remove heat from the body T **F**
8. Diversion of blood to the skin and away from muscles is the cause of heat exhaustion. **T** / F
9. Frostbite cause damage to the tissue because the cells become **frozen** / **dehydrated**.

10. Which of the following is most likely to cause an abscess.

- ☒ a. liquification necrosis
- b. coagulation necrosis
- c. caseous necrosis

11. ☒ Moist / dry gangrene results from venous obstruction.

12. The ☒ epidermis / dermis is avascular.

13. The reticular region is a part of the ☒ dermis / subcutaneous layer.

14. Which of the following is not a cause of burns

- a. excessive levels of temperature
- b. electricity
- c. friction
- d. chemicals
- ☒ e. creams

15. The old terminology of burns used to include all of the following except

- a. first degree
- b. second degree
- c. third degree
- ☒ d. fourth degree

16. The rule of fives is used to estimate the amount of skin involvement in burns and results from a division of the body into segments each of which covers 5% of the body. T / ☒ F

17. Which type of ultraviolet radiation is the most dangerous but due to the protective effects of the ozone layer, doesn't reach the earth's surface in significant amounts.

- a. UVA
- b. UVB
- ☒ c. UVC

18. Melanin is derived from **tyrosine** / alanine.
19. **Freckles** / **lentigo** do not produce melanin in response to UV radiation.
20. Moles (nevi) are benign malignant neoplasms of melanocytes. T / **F**
21. Dysplastic nevi are usually **larger** / smaller than surrounding nevi.
22. A mole that undergoes change does not need to be assessed as this occurs periodically with no harm. T / **F**
23. There has been an increased incidence of skin cancer over the last several decades, due to a thickening of the ozone layer of the atmosphere. T / **F**
24. Cumulative exposure as well as intense episodic exposure can cause skin cancer. **T** / F
25. Which of the following is not a form of skin cancer
- a. malignant melanoma
 - b. basal cell carcinoma (BCC)
 - c. squamous cell carcinoma (SCC)
 - d. transitional cell carcinoma (TCC)**
26. **Basal** / squamous cell carcinoma is most associated with continued exposure over a long time.
27. Malignant melanomas generally do not metastasise. T / **F**
28. Which of the following colours is not associated with melanomas
- a. blue
 - b. red
 - c. green**
 - d. white

29. Basal cell carcinoma (BCC) generally affects patients in the age range of 55 – 75 years. ☒ T / ☐ F
30. Nodular ulcerative BCC occurs less commonly than superficial BCC. ☐ T / ☒ F
31. Intraepidermal SCC ☒ **can** / ☐ **can not** become invasive SCC.
32. The main signs of a malignant melanoma are often referred to as A, B, C, D, and E. ☐ T / ☒ F
33. Which of the following suggestions would not be appropriate to reduce the risk of skin cancer
- ☒ a. increase sun exposure from 10 AM to 3 PM
 - b. when out in the sun to wear protective clothing
 - c. apply liberal and repeated coats of suntan lotion if outside
 - d. to watch for other changes in their skin or pre-existing moles
 - e. go for follow up checks regularly from a dermatologist
34. Which of the following are benign lesions that form as outgrowths of the skin and are usually found in the neck, axilla (armpit) or groin.
- a. keratoacanthoma
 - b. solar keratosis
 - ☒ c. skin tags
 - d. dermatofibroma
35. The **parenchyma** / ☒ **stroma** comprises the supporting tissue of the structure.
36. Contact inhibition occurs when cells stop migrating when they meet another cell. ☐ T / ☒ F
37. Which of the following stages of wound repair occurs when the healing has completed and the scab is able to be removed
- a. inflammatory phase
 - ☒ b. maturation phase
 - c. migratory phase
 - d. proliferative phase

38. A keloid scar occurs when there is a deficient production of collagen in scar tissue. T ☒ F
39. First aid management indicates that you should not pop a blister. ☐ T ☒ F
40. Which of the following occurs due to increased weight bearing on the affected skin and a reduction of blood supply due to crushing of the blood vessels.
- a. callus
 - b. corn
 - c. ☒ decubitis ulcer
41. Some wounds may be treated with moist dressings. ☐ T ☒ F
42. Medihoney has been found to be a sterile substance. ☐ T ☒ F

Unit 5

1. **Rashes** / **lesions** are defects of skin due to trauma or pathology.
2. Which of the following is a nonpalpable lesion.
 - a. patch
 - b. papule
 - c. plaque
3. Which of the following is filled with pus.
 - a. vesicle
 - b. bulla
 - c. pustule
4. **Cellulitis** / **miliaria** is caused by infection from streptococcal (pyogenes or aureus) bacteria.
5. **Contact** / **atopic** dermatitis is due to physical contact with an irritant.
6. **Type I** / **type II** herpes simplex causes oral cold sores and lesions around the mouth.
7. Genital herpes may be transmitted without the patient being aware of the infection. T / F
8. State the virus most associated with causing warts human papilloma virus.
9. Which of the following skin lesions does not feature in pityriasis rosea.
 - a. macules
 - b. papules
 - c. bulla
10. Ross River fever is transmitted by **mosquitos** / **rats**.
11. Acne is a common skin condition that is caused by **increased** / **decreased** sebaceous secretion.

12. The lesions of acne vulgaris are most commonly located on the
☐ a. face, neck and upper back
b. legs, arms and lower back
c. abdomen and chest
13. A cluster of boils is called a **faruncle** ☐ **carbuncle**.
14. Erysipelas is characterised by **white** ☐ **red** patches of skin due to destruction of cells.
15. **Dermatophytosis** ☐ **impetigo** features lesions that form golden honey coloured crusts.
16. Which of the following fungal infections affects the scalp
a. tinea corporis
☐ b. tinea capitis
c. tinea pedis
d. tinea cruris
- 17 ☐ **Hives** **scabies** are a localised swelling of the skin in response to an allergic reaction.
18. Mites are most active at night leading to night time skin irritation and itchiness. ☐ T / F
19. Nits are arthropods that live on the hair of the scalp and lay eggs called lice. T ☐ F
20. Variable sized patches of skin depigmentation are referred to as
☐ a. vitiligo
b. albinism
c. melasma
21. Folliculitis is an infection of the follicle of the hair by a
a. virus
b. fungus
☐ c. bacterium

22. Which of the following is a condition in which there is hair loss in one area only

- a. alopecia totalis
- b. alopecia areata
- c. traction alopecia

23. All sebaceous cysts are very painful due to the retained sebum.

T

F

Unit 6

1. Which of the following is not a part of the central nervous system
 - a. brain
 - b. spinal cord
 - c. sympathetic nervous system

2. Hydrocephalus is an enlargement of the head of a child due to a
 - a. blocked CSF pathway
 - b. fracture of the skull bones
 - c. viral infection of the meninges

3. The most internal layer of meninges is the
 - a. dura mater
 - b. arachnoid
 - c. pia mater

4. **Viral** / **bacterial** meningitis is most likely to cause long lasting neurological damage.

5. Meningitis may cause a deep red rash of the skin. T / F

6. Which of the following is not a blood vessel supplying the brain
 - a. anterior cerebral artery
 - b. brachial artery
 - c. vertebral / basilar artery

7. Vertebral-basilar insufficiency syndrome is caused by decreased flow of blood into the basilar artery. T / F

8. Which of the following signs and symptoms is not indicative of increased ICP
 - a. headache
 - b. nausea, vomiting, drowsiness and decreasing level of consciousness
 - c. tachycardia with hypotension

- d. papilloedema
9. Which of the following causes of bleeding within the cranial cavity is usually due to a rupture of the veins between the brain and the meninges
- a. epidural haemorrhage
 - ☒ b. subdural haematoma
 - c. subarachnoid haemorrhage
10. Ischaemic / ☒ haemorrhagic strokes are due to rupturing of an aneurysm.
11. Which of the following is an indication of a cerebrovascular accident (stroke)
- a. sudden alteration in vision
 - b. sudden onset and severe headache
 - c. loss of consciousness
 - d. unilateral fixed and dilated pupil of the eye
 - ☒ e. all of the above
 - f. none of the above
12. A TIA is a type of brain tumour. ☐ T ☒ F
13. A benign brain tumour may be fatal. ☒ T ☐ F
14. Bitemporal hemianopia is resultant from pressure applied to the
- a. eye
 - ☒ b. optic chiasm
 - c. thalamus
 - d. occipital lobes
15. An increased perception of pain is referred to as paraesthesiae / ☒ hyperalgesia.
16. Fibromyalgia is due to a decreased amount of substance P in the pain pathway. ☐ T ☒ F
- ☐

17. An **upper / lower** motor neuron lesion affects the tract passing from the cerebral cortex to the spinal cord.
18. Motor neuron disease becomes fatal due to lack of which functions
- a. breathing movements
 - b. limb movement
 - c. eye movement
19. Parkinsons disease is associated with **increased / decreased** dopamine in the brain.
20. The pill rolling tremor is indicative of **Parkinsons disease / multiple sclerosis**.
21. The demyelination of Multiple sclerosis occurs in the **central / peripheral** nervous system.
22. Which of the following investigations is not used to identify multiple sclerosis
- a. CT
 - b. MRI
 - c. lumbar puncture
 - d. intravenous pyelogram
23. All patients with epilepsy experience convulsions. T ☐ F ☐
24. Which of the following was previously called petit mal epilepsy
- a. absence seizures
 - b. atonic seizures
 - c. myoclonic seizures
 - d. tonic / clonic seizures
25. Alzheimers disease affects **short / long** term memory early in the course of the condition.
26. Which of the following are associated with Alzheimers disease
- a. neurofibrillary tangles

- b. senile plaques
- c. either neurofibrillary tangles or senile plaques
- d. neither neurofibrillary tangles nor senile plaques

Unit 7

1. Which of the following does not have any actual pain receptors:
 - a. meninges
 - b. brain**
 - c. blood vessels
 - d. cranial nerves

2. Tension headache are commonly caused by spasm of the **suboccipital / subparietal** muscles.

3. The migraine headache usually affects only one side of the head. **T / F**

4. A migraine may be accompanied by a sensitivity to light called **photophobia / phonophobia**.

5. Which of the following old classifications is the current description of a migraine with an aura
 - a. classic migraine**
 - b. common migraine
 - c. cranial migraine

6. Scintillating scotoma is defined as which of the following
 - a. flashing lights
 - b. shimmering zigzag lines around an area of lost vision**
 - c. teichopsia
 - d. blind spots in the visual field

7. The **prodromal / postdromal** stage is the first stage of a migraine with an aura.

8. The prodromal stage is caused by an increase in neuronal functioning. **T / F**

9. The visual symptoms of an aura are from disruption to the visual cortex in the
 - a. frontal lobes of the brain
 - b. parietal lobes of the brain
 - c. occipital lobes of the brain**

- d. temporal lobes of the brain
10. In the prodromal stage there is a **raised** / **lowered** level serotonin in the blood.
11. Which of the following is not true regarding migraines
- a. females suffer from migraines more than males
 - b. all patient experience the same signs and symptoms of a migraine**
 - c. the greatest incidence of migraine headaches is between the ages of 20 - 35 years
 - d. each episode of a migraine may not present with the same signs and symptoms
12. A cluster headache association is associated with **REM** / **NREM** sleep.
13. Which of the following is not considered a trigger for migraines
- a. tyramine
 - b. histamine
 - c. melanin**
 - d. nitrite
14. Describe why a lumbar puncture might be performed on a patient complaining of a migraine.
for CSF analysis to rule out meningitis
15. In a patient with spina bifida vera a **meningocele** / **meningomyelocele** allows the meninges and spinal cord to protrude.
16. State the substance obtained via amniocentesis for spina bifida to diagnose a neural tube defect.
alpha fetoprotein (AFP)
17. Which of the following is the least common location of a disc herniation
- a. L1 - L2**
 - b. L4 - L5
 - c. L5 - S1
18. Spinal stenosis indicates a **narrowed** / **dilated** vertebral canal.

19. State the nerve that derives from C3 - 5 and functions to controls the diaphragm to allow breathing. _____
20. Which of the following indicates a complete paralysis of one side of the body
- a. quadriplegia
 - b. paraplegia
 - c. hemiparesis
 - d. hemiplegia**
21. **Polyneuropathy** / **mononeuropathy** involves many nerves.
22. Identify where the pain (or altered sensation) of sciatica is felt. _____
_____ **the back, buttocks and down the thigh and leg to the foot** _____
23. Which of the following cranial nerves is most commonly affected by the virus that causes shingles
- a. CNI
 - b. CNII
 - c. CN III
 - d. CN IV
 - e. CN V**
24. Bells palsy affects **cranial nerve VI** / **cranial nerve VII**
25. Cranial nerve X defects can cause voice disturbances due to compression or alteration of the _____ **recurrent laryngeal** _____ nerve that innervates the larynx

Unit 8

1. Foreign objects can be lodged in the **internal** / **external** ear canal.
2. During diving, the pressure applied to the body **increases** / **decreases**.
3. Bleeding or fluid loss from the ear may indicate a skull fracture. **T** / F
4. Otitis externa is a common **bacterial** / **viral** infection in the external auditory canal of swimmers
5. The pain of otitis externa is made **better** / **worse** by movement of the ear.
6. Acute otitis media may be caused by babies being fed in the **supine** / **prone** position.
7. Fluid may move from the nasal cavity into the middle ear cavity via the _____
auditory (Eustachian) tubes.
8. Glue ear is a common name for which of the following conditions:
 - a. mastoiditis
 - b. labyrinthitis
 - c. meningitis
 - d. chronic otitis media**
9. **Objective** / **subjective** vertigo is the perception that a person is spinning within the room.
10. Benign paroxysmal positional vertigo is due to the dislodging of otoliths from the vestibule of the inner ear. **T** / F
11. Menieres disease related to an increase in the volume and pressure of
 - a. perilymph
 - b. endolymph**
 - c. both perilymph and endolymph

- d. neither perilymph nor endolymph
12. Horizontal flickering of the eyes is called nystagmus
13. Which of the following is not a type of deafness
- a. conductive deafness
 - b. conjugate deafness**
 - c. sensorineural deafness
14. An acoustic neuroma affects which of the following
- a. Cranial nerve II
 - b. Cranial nerve IV
 - c. Cranial nerve VI
 - d. Cranial nerve VIII**
15. Presbycusis is a form of **deafness** / **blindness** that occurs as people age.
16. The degree of eye injury is commensurate with the
- a. size of object causing the trauma
 - b. degree of penetration
 - c. amount of force applied by the object on the cornea
 - d. all of the above**
17. Describe why both eyes should be covered for a patient who has a penetrative injury of the eye.
- due to conjugate gaze, when one eye moves - so too does the other eye
18. The bleeding of a subconjunctival haemorrhage occurs **anteriorly** / **posteriorly** to the cornea.
19. Which of the following is not experienced by a patient with a corneal abrasion
- a. pain
 - b. grittiness in the eye during blinking
 - c. redness
 - d. decreased lacrimation**

e. photophobia

20. Conjunctivitis is not caused by

- a. viral infection of the eye
- b. bacterial infection of the eye
- c. fungal infection of the eye**

21. Hyphaema is described as bleeding in the **anterior** / **posterior** chamber of the eye.

22. Glaucoma is a condition characterised by **increased** / **decreased** intraocular pressure.

23. **Open** / **closed** angle glaucoma is due to decreased drainage of aqueous humour by the canal of Schlemm.

24. Glaucoma may lead to blindness by compression of the **optic disc** / **macula lutea**.

25. Cataracts affect the

- a. lens**
- b. cornea
- c. macula
- d. none of the above

26. Which of the following is associated with the formation of sorbitol

- a. galactose
- b. maltose
- c. glucose**
- d. glycogen

27. Describe why elevated amounts of the substance in the previous question may cause cataracts

The sorbitol is osmotically attractive and attracts water into the lens, altering the cellular structure and function of the lens and causes the opaque changes seen as a cataract

28. Age related changes to the lens means that accommodation increases with age.

T / F

29. An involuntary flickering of the eyes in either a horizontal or vertical direction is described as
- a. diplopia
 - b. strabismus
 - c. astigmatism
 - d. nystagmus**
30. The eyeball is shorter than normal in patients with **myopia** / **hypermetropia**.
31. The **retina** / **lens** may be detached following trauma to the eye region.
32. Macular degeneration primarily affects the **rods** / **cones**.
33. Pale yellow spots (called drusen) are associated with
- a. dry macular degeneration**
 - b. wet macular degeneration
 - c. either dry or wet macular degeneration
 - d. neither dry nor wet macular degeneration
34. Swelling of the optic disc is due to increased pressure of the CSF in the cranial cavity applying pressure to the exterior of the optic nerve. **T / F**
35. Colour blindness is due to a lack of function of one or more types of **cones**.
36. Which of the following conditions is an infection of the sebaceous glands within the eyelids
- a. blepharitis
 - b. dacrocystitis
 - c. ectropion
 - d. hordeolum (stye)**
 - e. pterygium

37. Which of the following is not a cause of rhinitis

- a. viral infection
- b. changes in humidity, temperature or stressors
- c. inhaled allergens (such as pollen / moulds / dust mite excretions)
- d. trauma

38. Post nasal drip may be experienced by the individual as

- a. constant coughing or cleaning of the throat
- b. hoarseness of the voices
- c. alteration in the tone of the voice
- d. odour to the breath
- e. all of the above

39. Sinusitis is an inflammation of the membranes of the paranasal sinuses.

T / F

40. Identify one symptom from the obstruction of sinus drainage in sinusitis_____

increased pressure of the sinus

perception of pain over the affected area

a feeling that the head is exploding

a feeling that the head is heavy and dropping forward

associated phenomena (such has runny eyes, headache, tenderness over the sinus)

41. An x ray cannot be used to diagnose this condition because a mucous filled sinus will appear the same as an air filled sinus.

T / F

Unit 9

1. Hormones are secreted from the **endocrine / exocrine** glands.
2. **Insulin / glucagon** functions to raise the blood glucose levels.
3. Diabetes insipidus is due to a decrease or absence of **anti-diuretic hormone (ADH)**
4. Which of the following is not a type of diabetes insipidus (DI)
 - a. nephrogenic DI
 - b. neurogenic DI
 - c. nasogenic DI
5. **PIH / PRH** inhibits the secretion of prolactin.
6. Excessive levels of growth hormone secreted in childhood causes **gigantism / acromegaly**.
7. Which of the following bones is not commonly enlarged in patients with acromegaly
 - a. frontal bone
 - b. mandible
 - c. phalanges
 - d. scapula
8. Pituitary dwarfism is due to decreased secretion of **growth hormone / oxytocin**.
9. Increased secretion of the thyroid hormones is often referred to as hyperthyroidism. **T / F**
10. Specific hyperthyroidic conditions include
 - a. Graves disease
 - b. thyroid tumour (usually called a toxic adenoma of the thyroid)
 - c. pituitary tumour (causing elevations in TSH levels)
 - d. all of the above
 - e. none of the above

11. **Myxedema** / **Graves disease** is an autoimmune disorder in which auto-antibodies bear physical similarity to the structure of TSH.
12. A goiter is due to an increased size of the **thyroid** / **thymus**.
13. **Hyperparathyroidism** / **hypoparathyroidism** causes pathological fractures.
14. Khvoshteks sign involves tapping the cheek to stimulate the
- a. **facial nerve**
 - b. trigeminal nerve
 - c. olfactory nerve
 - d. glossopharyngeal nerve
15. Elevated cortisol levels is associated with
- a. Addisons disease
 - b. **Cushings syndrome**
 - c. Conn's disease
16. In Cushings syndrome, which of the following does not commonly occur
- a. increased adiposity of the face
 - b. increased adiposity of the neck and trunk
 - c. **increased adiposity of the limbs**
 - d. increased central adiposity on abdomen
17. Elevated secretion of aldosterone causes increased **sodium** / **potassium** retention.
18. A phaeochromocytoma a tumour of the chromaffin cells of the adrenal **medulla** / **cortex**.
19. Which of the following is not secreted from the pancreas
- a. glucagon
 - b. **gastrin**

c. insulin

20. **Type I/ type II** diabetes mellitus is due to an autoimmune destruction of the islets of Langerhans.

21. Glycosuria is an abnormal amount of glycogen in the urine.

☐ T / ☒ F

22. Which of the following indicates that the patient feels thirsty

a. polyuria

☒ b. polydipsia

c. polyphagia

23. Which of the following is a pathological change to the retina due to diabetes mellitus

a. non proliferative retinopathy

b. proliferative retinopathy

☒ c. both of the above

d. neither of the above

24. A lumbar puncture is commonly used to identify diabetes mellitus.

T / ☒ F

25. Which of the following is not a ketone body produced by the diabetic patient

a. acetone

☒ b. ethanol

c. acetoacetic acid

d. beta hydroxybutyric acid

26. Gestational diabetes mellitus exists for the duration of ☒ pregnancy / ☐ puberty.

27. The effects of excessive secretion of reproductive hormones include which of the following

a. decreased risk of cerebrovascular accident (stroke)

b. increase in sperm production / motility

☒ c. testicular and penile atrophy

d. decrease in the size of the clitoris

28. The climacteric is the time before and after menopause

29. Due to the nature of sperm production, elderly males can still be fertile. T / F

30. Osteoporosis is characterised by a process of removing calcium out of bone tissue. T / F

31. Osteoclasts / osteoblasts destroy bone matrix by secreting acids that dissolve the minerals and enzymes that break down the proteins such as collagen.

32. The **thecal** / granulosa cells within the follicle converts the androgens into oestrogens.

33. In the absence of adequate oestradiol, there is **more** / less inhibition on the secretion of PTH.

34. Current medical management of osteoporosis includes

- a. weight bearing exercise only
- b. increased dietary ingestion of calcium only
- c. both weight bearing exercise and increased dietary ingestion of calcium
- d. neither weight bearing exercise nor increased dietary ingestion of calcium

35. Which of the following is not a common fracture associated with osteoporosis

- a. neck of the femur
- b. distal radius
- c. sternum
- d. vertebral body

Describe the relationship between the stooped position of osteoporosis and the causation of gastro-oesophageal reflux (heartburn).

When a number are affected, the wedge shaped fractures of vertebrae cause an increase in the kyphotic curvature of the spine and forces the patient to assume a stooped posture. The stooped position causes secondary problems such as gastro-oesophageal reflux (heartburn) due to the stomach being pushed up against the diaphragm.

