FELLOWSHIP EXAMINATION 2004.2

PART A - WRITTEN EXAMINATION
MULTIPLE CHOICE QUESTIONS

Reading Time: 10 minutes
Examination Time: 1 hour 30 minutes

Candidate’s Name: ...................................................................................................

Candidate’s Number: □ □ □ □

DIRECTIONS TO CANDIDATE

1. Your name and examination number must appear on both the front cover and the answer sheet of the examination paper.

2. Use only pencil (preferably B or 2B) on the answer sheet. Should you need to change an answer, use a plastic eraser (e.g. Hi Polymer).

3. You should attempt all questions.

4. Each question consists of a stem followed by five alternative items which are identified by the letters A, B, C, D and E.

5. Choose a single most correct response to each question.

6. Only one item is correct.

7. Any question or item not attempted will be scored as incorrect.

8. Correct questions will receive ONE mark, incorrect questions will receive NO mark.

9. Do not write on the answer sheet other than as per instructions.

10. THE QUESTION BOOK MUST BE RETURNED AT THE COMPLETION OF THIS SECTION OF THE EXAMINATION.
1. With regards to thrombosed haemorrhoids, which one of the following statements is TRUE
   A. Internal haemorrhoids do not thrombose
   B. External haemorrhoids should be incised rather than elliptically excised
   C. Local anaesthetic infiltration is too painful to be recommended routinely
   D. Post operative bleeding after surgical treatment generally requires a period of emergency department observation
   E. Untreated, the symptoms from an external haemorrhoid will resolve over several days

2. With regard to Bell’s palsy, which one of the following is TRUE
   A. Onset is gradual over a few days
   B. It is associated with sudden onset of deafness
   C. Presence of incomplete paralysis in the first week is the most favourable prognostic sign
   D. The external auditory meatus has been implicated as the site of nerve swelling
   E. Presence of paraesthesia excludes the diagnosis

3. In posterior dislocation of the hip, which one of the following is TRUE
   A. It must be reduced within 12 hours
   B. It has a classical posture of a thigh partially flexed, abducted, shortened and internally rotated
   C. It often has an associated vascular injury
   D. It is complicated by sciatic nerve injury in at least one third of cases
   E. It may cause sensory loss on the anteromedial thigh

4. A patient who has been mowing his yard presents with an altered level of consciousness, tachypnoea and temperature of 42.3 degrees Celsius. Which one of the following statements is TRUE
   A. The initial treatment should be 100mg of intramuscular chlorpromazine
   B. Intubation is relatively contraindicated
   C. Initial management should include 5% dextrose solution and insulin
   D. Centrilobular necrosis of the liver is a possible complication
   E. Hypotension should be corrected with alpha-adrenergic agents
5 With respect to a sprained ankle, which one of the following is TRUE
A Injuries to the lateral ligament complex account for the majority of all ankle sprains
B Most ankle sprains are produced when the ankle is inverted, externally rotated and plantar flexed
C Most injuries to the lateral collateral ligament complex involve the calcaneofibular ligament
D Complete tear of the anterior talofibular ligament alone will not produce a positive anterior draw sign
E Inversion injuries frequently involve the subtalar joint

6 Regarding bronchiolitis in children which one of the following is TRUE
A The most common aetiological agent is para influenza virus
B The administration of corticosteroids is of no benefit
C Administration of ribavirin decreases mortality in patients with severe disease
D Arterial blood gases should be performed on children requiring hospitalisation
E Ipratropium bromide added to nebulised beta 2 agonist therapy is probably effective

7 With regard to gallstones, which one of the following is TRUE
A They are 10 times more common in women than men
B Calcium is a major component
C More than one third of stones show on plain X-rays
D They may not be detected by ultrasound examination
E They are associated with rapid weight loss

8 New onset jaundice in a one week old baby is MORE COMMONLY due to which one of the following
A ABO incompatibility
B Physiological causes
C Congenital infections
D Breast milk jaundice
E Sepsis
9. Which one of the following is FALSE with regard to pyloric stenosis in children
   A. It is more common in the first born male
   B. It is rare after the third month of life
   C. Peristaltic waves can be seen passing from right to left in the abdomen
   D. Dehydration and electrolyte abnormalities must be corrected before surgery
   E. A palpable “pyloric tumour” is pathognomic

10. In a community mass disaster situation, priority for transport to hospital should be given to which one of these patients
    A. Closed fractures of two long bones
    B. Abdominal wounds and hypotension
    C. Second degree facial burns with periorbital oedema causing eyelid closure
    D. Penetrating abdominal wound and normotension
    E. Patient with a GCS of 3, open head injury and profound hypotension

11. Which one of the following is TRUE of a hydrofluoric acid burn
    A. It causes progressive tissue destruction if untreated
    B. It typically causes immediate severe burns
    C. Pain is mild even in superficial burns
    D. Severe burns may be associated with marked hyperkalemia
    E. Calcium gluconate gel is of no value in treatment

12. With respect to acute coronary syndromes which one of the following is TRUE
    A. The term acute coronary syndrome does not include Q-wave myocardial infarction
    B. A positive sestamibi scan is not diagnostic of an acute myocardial infarction
    C. A patient with unstable angina who responds to medical therapy is unlikely to have severe coronary artery stenosis
    D. Heparin therapy in unstable angina can be ceased once a patient has been angina free for 24 hours
    E. An elevated troponin in the absence of an elevated creatine kinase MB is usually an artefact
13. Guillain-Barré syndrome causes all of the following EXCEPT
   A. Areflexia or marked hyporeflexia
   B. Presence of fever at the onset of illness
   C. Autonomic dysfunction
   D. Sixth nerve palsy
   E. Sensory disturbance

14. Regarding acute otitis media in children, which one of the following is FALSE
   A. Antibiotics are of limited effectiveness
   B. Redness of the tympanic membrane can be present without infection
   C. The incidence of mastoiditis complicating acute otitis media remains unchanged despite the introduction of antibiotics
   D. Antihistamines and decongestants are of no benefit
   E. Amoxycillin is an appropriate therapy

15. With regard to femoral hernias, which one of the following is TRUE
   A. Pain is the most common initial presenting symptom
   B. The patient may present initially with signs and symptoms in the abdomen
   C. The principal pathology is a defect in the Lacunar ligament
   D. The recurrence rate is approximately 50%
   E. Complications are uncommon and surgical repair is elective

16. Perthes’ Disease is MOST common in
   A. Girls under 5 years old
   B. Girls aged 5 - 9 years
   C. Boys under 5 years old
   D. Boys aged 5 - 9 years
   E. Boys older than 9 years of age
17 With regard to electrocution and electrical injuries, which one of the following statements is TRUE

A  At the same voltage, AC exposure causes greater damage than DC
B  Exposure to 240 volts has a high rate of delayed arrhythmias despite a normal ECG
C  The severity of injury relates to the voltage received and duration of current and is independent of resistance
D  Household current produces a high voltage DC injury
E  Cataracts will form in approximately 30% of high voltage electrocutions to the head

18 A patient displaying aggressive or violent behaviour should be approached using which ONE of the following principles

A  Interview in a closed area to discourage escape
B  Adopt an authoritarian manner and command control
C  Attempt to establish empathic verbal rapport
D  Physical restraint, being preferred over chemical restraint
E  Keep security and police out of sight

19 A two-year old child appears well about two hours after ingesting an unknown amount of eucalyptus oil. The most appropriate management would be

A  Activated charcoal orally or by nasogastric tube
B  Gastric lavage and activated charcoal via nasogastric tube in the awake child
C  Gastric lavage after endotracheal intubation
D  Observation with subsequent intervention only if there is clinical deterioration
E  Gastric lavage, activated charcoal and whole bowel irrigation after endotracheal intubation

20 On chest X-ray, which one of the following features is MORE suggestive of non-cardiogenic pulmonary oedema than cardiogenic pulmonary oedema

A  Pleural effusions
B  Cardiomegaly
C  Air bronchogram
D  Upper zone venous blood flow diversion
E  Peribronchial cuffing
21 In relation to thyroid storm, which one of the following is TRUE
A Salicylates should not be used as an antipyretic therapy
B Most patients show no sign of central nervous system disturbance
C Adrenaline should be used to treat hypotension
D The severity of symptoms is directly related to free T3 levels
E Glucocorticoids are of no value in treatment

22 Which one of the following is NOT a feature of a typical febrile convulsion
A The seizure is brief and generalised
B It is associated with a febrile illness in the absence of a central nervous system infection
C It occurs in 3-4% of children
D It occurs in children under 6 months of age
E It may be recurrent in 25-30% of children

23 In cystic fibrosis which one of the following is FALSE
A Approximately one third of all patients will survive into adulthood
B Pseudomonas aeruginosa is typically cultured from the sputum in older children
C It may be a cause of jaundice in infants
D Transplanted lungs do not develop cystic fibrosis
E Pneumothoraces are very rare

24 In the diagnosis and treatment of conjunctivitis, which one of the following is FALSE
A Neonatal purulent bilateral conjunctivitis is often due to gonococcus
B Contact lenses predispose to pseudomonal conjunctivitis
C Topical erythromycin drops should be given for 3 weeks in chlamydial conjunctivitis
D Herpes conjunctivitis may present without any evidence of a dendritic ulcer
E Pre-auricular lymphadenopathy is often seen with adenovirus conjunctivitis
25 Which statement regarding pulmonary aspiration is FALSE
   A Nasogastric tubes increase the likelihood of aspiration
   B The patient appears well initially
   C When antibiotics are indicated, gentamicin should be included in treatment
   D When antibiotics are indicated, ticarcillin and clavulanate can be used as a sole agent
   E There are no clinically detectable differences in lung injury pattern seen with salt or fresh water near drowning

26 Which one of the following has NOT been suggested as increasing the likelihood of acute pulmonary embolism
   A A new right bundle branch block on ECG
   B Sinus tachycardia
   C Increased alveolar-arterial gradient of oxygen
   D Focal lung consolidation on chest X-ray
   E Mismatched ventilation-perfusion defect on lung scan

27 Which one of the following is seen in anticholinergic poisoning
   A Muscle fasciculations
   B Lacrimation
   C Intestinal ileus
   D Miosis
   E Bronchorrhea

28 All the following factors have been shown to be associated with a reduced incidence of post lumbar puncture headache EXCEPT
   A Four hours supine bed rest immediately after the procedure
   B Use of smaller gauge lumbar puncture needles
   C Orientation of the needle bevel parallel to the longitudinal axis of the spine
   D Use of a non cutting ‘pencil point’ needle
   E Lumbar puncture in older, male patients
29 With respect to acute scrotal pain, which one of the following is TRUE
   A The salvage rate for a torted testicle is less than 60% even with intervention within 6 hours of onset of pain
   B Testicular torsion is more common in tall thin individuals with long spermatic cords
   C If a hydrocele transilluminates, then a testicular torsion can be excluded
   D Orchitis caused by the mumps virus usually develops 4-6 days after the parotitis
   E Mumps orchitis is nearly always bilateral

30 Which one of the following is FALSE with regard to adenosine in the treatment of supraventricular tachycardia (SVT)
   A It causes a concentration dependent slowing of AV conduction
   B It has a half life of approximately 10 seconds
   C It causes selective coronary vasodilation in high doses
   D It is the drug of choice in patients with poor left ventricular function
   E Bradycardia and sinus pause are its most commonly seen side effects

31 In the management of pulseless electrical activity (PEA) which one of the following is TRUE
   A Defibrillation at 360 joules (monophasic) should be attempted
   B High dose adrenaline significantly increases the likelihood of a return of measurable cardiac output when compared to the standard dose of 1mg
   C Sodium bicarbonate should be given if hypoxic lactic acidosis is confirmed
   D Hypovolemia is the most common cause of PEA
   E Hypokalemia should be treated with sodium bicarbonate

32 A 6 year old boy presents with a history and examination suggestive of septic arthritis of the hip. Which one of the following is TRUE
   A It is most likely to be caused by Streptococcus pyogenes
   B Blood cultures are likely to be positive in more than 40% of patients
   C It is best treated by intravenous vancomycin
   D It is almost completely excluded by a white cell count of less than 75,000/ml in the joint aspirate
   E It is best treated with hip joint drainage
33 Regarding rib fractures, which one of the following is TRUE
A Up to 10% of rib fractures are not seen on X-ray
B Ventilatory support should be delayed until respiratory failure is evident
C Paradoxical movement of the chest wall is the major cause for hypoxemia in association with a flail segment
D First and second rib fractures are associated with bronchial tears
E Chest strapping provides effective and safe pain control

34 Which one of the following statements is TRUE of metabolic acidosis
A Bicarbonate therapy is indicated if pH is less than 7.2
B The major causes of high anion gap metabolic acidosis in children and adults are quite different
C Lactate is best measured from arterial blood because venous levels are higher
D Alcoholics are less susceptible to lactic acidosis
E For each fall of 0.1 in the pH, the serum potassium will rise by 0.5mmol/L

35 In patients presenting to the emergency department after major trauma, which one of the following injuries is LEAST likely to be an immediate threat to life
A Airway obstruction
B Tension pneumothorax
C Cardiac tamponade
D Aortic tear
E Sucking chest wound 5cm in diameter

36 Which one of the following is NOT necessary in the initial ventilation settings of an intubated patient with acute severe asthma
A Long expiratory time
B High inspiratory flow rate (>80 L/min)
C Tidal volume of 6-8 ml/kg
D FIO2 of 1.0
E Low respiratory rate
37 With respect to renal failure, which one of the following is TRUE
A Diabetes mellitus is the commonest cause of end stage renal failure
B Calcium gluconate treats hyperkalemia by shifting potassium into the cells
C The absence of urinary casts indicates the renal failure is chronic
D The mortality rate for patients with acute renal failure is approximately 15%
E An IVP should be performed in acute renal failure to exclude an obstructive cause

38 Which one of the following is NOT a minimum documentation standard according to the ACEM Guidelines for the Implementation of the Australasian Triage Scale in emergency departments
A Name of triage officer
B Patient’s mode of arrival to hospital
C Patient’s chief presenting complaint
D Relevant assessment findings at triage
E Any treatment measures initiated at triage

39 A 62 year old man presents with severe chest pain following an episode of vomiting. With respect to a potential oesophageal injury, which one of the following is TRUE
A Pain may be worse on swallowing
B Pneumoperitoneum is common
C A normal erect chest X-ray excludes the diagnosis
D Loss of the aortic knob contour is classically seen on chest X-ray
E The usual site of rupture is where the oesophagus crosses the aortic arch

40 Which one of these envenomations does NOT have specific antivenom
A Funnel-web spiders
B Blue-ringed octopus
C Box jellyfish
D Sea Snakes
E Stonefish
41 Which one of the following definitions is FALSE
   A False positive rate equals 1 - the specificity
   B Sensitivity equals true positives/ (true positives + false negatives)
   C Specificity equals true negatives/ (true negatives + false positives)
   D Positive predictive value equals true positives/ (true positives + false negatives)
   E Positive likelihood ratio equals sensitivity/ (1- the specificity)

42 In injuries around the elbow, which one of the following is TRUE
   A The lateral epicondyle is not usually visible on X-ray until after 9 years of age
   B The presence of an anterior elbow fat pad on the lateral X-ray is abnormal
   C On the lateral X-ray, the anterior humeral line passes through the anterior third of the capitellum
   D The capitellum is usually visible on X-ray at birth
   E Intercondylar (“Y” or “T”) fractures occur more commonly in children than adults

43 Which one of the following statements is TRUE in a moderately dehydrated child with gastroenteritis
   A Oral antibiotics are contraindicated in children with suspected bacterial gastroenteritis
   B Oral rehydration solution should contain both glucose and sodium in a ratio of at least 2:1
   C Estimated fluid loss should be replaced within 1 hour by oral rehydration solutions
   D Age appropriate feeds should be reintroduced after the child is rehydrated
   E Half strength formula or lactose free diet is recommended when feeds are initially tolerated

44 In patients with a CSF leak, which one of the following is TRUE
   A Prophylactic antibiotics are proven to improve outcome
   B The leak should be surgically repaired within the first few days
   C Air fluid levels in the sphenoid sinus are diagnostic of a CSF leak
   D 90% or more of CSF leaks may resolve spontaneously
   E The antibiotic of choice is gentamicin
45 With regard to acute arterial occlusion, which one of the following is TRUE
A 60% of emboli originate in the heart
B In embolic occlusion, changes of chronic arterial insufficiency such as thickening of the nails and shiny hyper pigmented skin are often present
C Low output states may precipitate limb ischaemia
D Associated muscle weakness is usually a late sign
E The most common site for an upper extremity embolus to lodge is the distal radial artery

46 In relation to carbon monoxide poisoning which one of the following is TRUE
A Hyperbaric oxygen is never indicated if carboxyhaemoglobin is less than 15% and the patient is a smoker
B Headache is the most frequent symptom of mild exposure
C Delayed neuropsychiatric sequelae occur after twelve months
D Toxic effects are due to the binding of haemoglobin and a resultant shift of the oxygen haemoglobin dissociation curve to the right
E The foetus is resistant to the effects of carbon monoxide

47 Which one of the following statements about trauma scores is FALSE
A The revised trauma score (RTS) uses GCS, BP, respiratory rate and capillary refill time
B The Injury Severity Score (ISS) is calculated by adding the sum of the squared scores for the three most severely injured body parts
C It is possible for the Paediatric Trauma Score (PTS) to be less than zero in severe injuries
D The probability of survival can be calculated based on RTS and ISS
E The ISS is derived from the Abbreviated Injury Score (AIS)

48 Which one of the following ECG findings is more consistent with pericarditis than infarction
A ST segment elevation greater than 5mm
B Prominent T waves over 5mm
C Pathological Q waves
D Electrical alternans
E Concave ST segments
49. With respect to pertussis which one of the following is TRUE
   A. It is characterised by high fevers and neutrophilia
   B. It is not seen in children fully immunised with the DTP vaccine
   C. It can be excluded by the absence of an inspiratory whoop at the end of coughing paroxysms
   D. Children with pertussis should be excluded from school until in the convalescent stage, approximately 2-3 weeks from the onset
   E. It can be treated with a trimethoprim and sulfamethoxazole combination

50. Regarding arrhythmias in patients known to have the Wolff-Parkinson-White syndrome, which one of the following is TRUE
   A. The development of a broad complex tachycardia is due to retrograde conduction in the accessory pathway
   B. Atrial fibrillation with a fast ventricular response should be treated initially with digoxin
   C. Atrial fibrillation with a fast ventricular response can be direct current cardioverted
   D. Verapamil is contraindicated for the treatment of paroxysmal supraventricular tachycardia
   E. Amiodarone has no effect on the conduction through the accessory pathway

51. A woman who is 34 weeks pregnant presents after a motor vehicle accident. She is known to be Rh negative. Which one of the following is TRUE
   A. A pelvic X-ray is contraindicated
   B. Tetanus immunisation is contraindicated
   C. She needs an immediate caesarean section if the foetal heart beat cannot be found
   D. She may be discharged from the emergency department if her clinical examination is normal and she is asymptomatic
   E. She requires anti-D immunoglobulin even if the Kleihauer test is negative

52. In a patient with traumatic rhabdomyolysis, which one of the following is TRUE
   A. The level of hyperkalemia is proportional to the quantity of muscle injured
   B. Fasciotomy is indicated if the pressure in the affected limb compartment exceeds 15mmHg
   C. The anion gap is normal
   D. Hypocalcaemia is an associated cause for sudden death
   E. Disseminated intravascular coagulopathy is a recognized association
53 Which one of the following is NOT an ACEM minimum standard for the transport of critically ill patients in Australasia
   A. A trained paramedic retrieval team without a medical practitioner may perform interhospital transport
   B. Specifically trained personnel are required for the transport of infants
   C. Medical monitors used in transport should incorporate both audible and visual alarms
   D. Clinical monitoring of a patient during transport should include an assessment of their pain score and physical discomfort
   E. The clinical record should document the patient’s status before, during and after transport

54 Which one of the following does NOT cause hypocalcemia
   A. Hypomagnesaemia
   B. Vitamin D deficiency
   C. Chronic renal failure
   D. Hypoparathyroidism
   E. Hypophosphatemia

55 With regards to vascular access, which one of the following statements is FALSE
   A. In infants, good intravenous access can usually be achieved by cannulating a vein in the umbilical stump
   B. The tibia is the preferred site for intraosseous vascular access in children up to 5 years of age
   C. The landmark for needle insertion in the infraclavicular approach to subclavian vein cannulation is the bisection of the middle and lateral thirds of the clavicle
   D. In the supraclavicular approach for subclavian vein cannulation, the needle is directed to bisect the angle formed between the sternocleidomastoid and the clavicle
   E. A good vessel for venous cutdown is the saphenous vein on the medial aspect of the ankle
56 Regarding the use of nitrous oxide in emergency departments, which one of the following is TRUE
A It is a potent anaesthetic agent in 50:50 nitrous oxide/oxygen mixtures
B Scavenging devices are unnecessary in emergency departments
C It may cause hypoxia following cessation of administration due to rapid diffusion out of the blood
D It is safe and effective in patients with colicky abdominal pain
E Only children need demand valve devices to prevent over dosage

57 With regard to conscious sedation in children, which one of the following statements is FALSE
A Midazolam is effective when administered intranasally
B Promethazine is often ineffective
C Ketamine has no analgesic properties
D Midazolam may be given at a dose of 0.5mg/kg orally
E Nitrous oxide may be used safely and effectively

58 Regarding paracetamol overdose, which one of the following statements is TRUE
A Prolonged INR may occur without raised liver enzymes
B Use of N-acetyl cysteine is ineffective after 16 hours or more after ingestion of a toxic dose
C AST may increase within 12 hours of toxic ingestion
D Children are more susceptible to toxicity
E Ingestions greater than 100mg/kg are potentially fatal if untreated

59 Which one of the following is NOT an early sign of hypovolemia secondary to blood loss in children
A Normal systolic blood pressure
B Lethargy
C Oliguria
D Tachypnea
E Cool pale skin
With respect to radiological contrast agents, which one of the following is TRUE

A. Following injection, agents distribute rapidly into the intracellular space

B. Low osmolality contrast agents have an increased incidence of reactions compared with high osmolality contrast agents

C. Patients with suspected renal dysfunction should not have intravenous contrast before a serum creatinine level is known

D. Intravenous contrast is contraindicated in patients with a history of severe asthma

E. Steroid premedication is ineffective in reducing contrast reactions