FELLOWSHIP EXAMINATION 2004.2

PART A - WRITTEN EXAMINATION MULTIPLE CHOICE QUESTIONS

| Readi | ng Time: | 10 minutes |
|---------------------|--|-------------------------|
| Exami | ination 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 <u>one</u> 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. | |
| | | |

THE QUESTION BOOK MUST BE RETURNED AT THE COMPLETION OF

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

THIS SECTION OF THE EXAMINATION.

9.

10.

- 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
- 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
- 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
- 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

- 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
- 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 noncardiogenic 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
- 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
- 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
- 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
- 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
- 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
- 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
- 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
- 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

- 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
- 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
- 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
- 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
- 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

- 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
- 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
- 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
- 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

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

- 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
- 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