

WRITTEN EXAMINATION SELECT CHOICE QUESTIONS (SCQ)

NSW Fellowship Course Trial Exam 2018:2

EXAMINATION TIME: 3 HOURS

DIRECTIONS TO CANDIDATE

1. 120 questions
 - a. MCQ - 88 questions
 - b. EMQ - 32 questions
2. Answer all questions on the answer sheet provided
3. No negative marking
4. MCQs - indicate using pencil the single best answer
5. EMQs - select the correct letter for each question
6. All papers and materials will be collected at the end of the exam

AFTER THE EXAMINATION

- Prior to leaving today, please fill out an envelope with your return address
- Feedback session - held at Westmead Hospital (Level 2 Auditorium) on 1/2/18 (9am)

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PART 1

MCQ QUESTIONS

Using pencil please select the single best correct answer on the answer sheet provided

QUESTION 1

Regarding evidence based medicine (EBM), which of the following best describes a TYPE 2 error:

- A. A test fails to reject a true null hypothesis
- B. A test fails to reject a false null hypothesis
- C. A test rejects a true null hypothesis
- D. False positive

QUESTION 2

Which is the MOST prevalent finding in serum blood testing in patients with SLE:

- A. Rheumatoid factor
- B. Anticardiolipin antibodies
- C. Low complement levels
- D. Anti double-stranded DNA

QUESTION 3

A limping child presents to the Emergency Department and you are asked to review their X-ray.



Which of the following is the MOST likely to account for the paediatric hip x-ray shown:

- A. Slipped capital femoral epiphysis
- B. Legg-Calvé-Perthes disease
- C. Acute transient tenosynovitis
- D. Avulsion Fracture

QUESTION 4

A 21-year old non-pregnant female presents to ED with shortness of breath and chest pain. She has no other medical background. On examination her HR is 105, BP 125/76, sats 99% R.A., Temp 36.9°C. The rest of the examination is unremarkable apart from some swelling in her left calf. The MOST appropriate approach to investigation for Pulmonary Embolism in this patient is:

- A. D-Dimer only
- B. CTPA only
- C. USS and D-Dimer
- D. USS only

QUESTION 5

A 60 year old female is suffering from back pain which has woken her from her sleep for 2 months. She has also noticed feeling thirsty and constipation. Bloods reveal a normochromic normocytic anaemia, thrombocytopenia, borderline low WCC, acute kidney injury (creatinine 320) and hypercalcaemia. The MOST likely underlying haematological diagnosis is:

- A. Multiple myeloma
- B. Acute promyelocytic leukemia (APML)
- C. Non Hodgkin's lymphoma
- D. Pernicious Anaemia

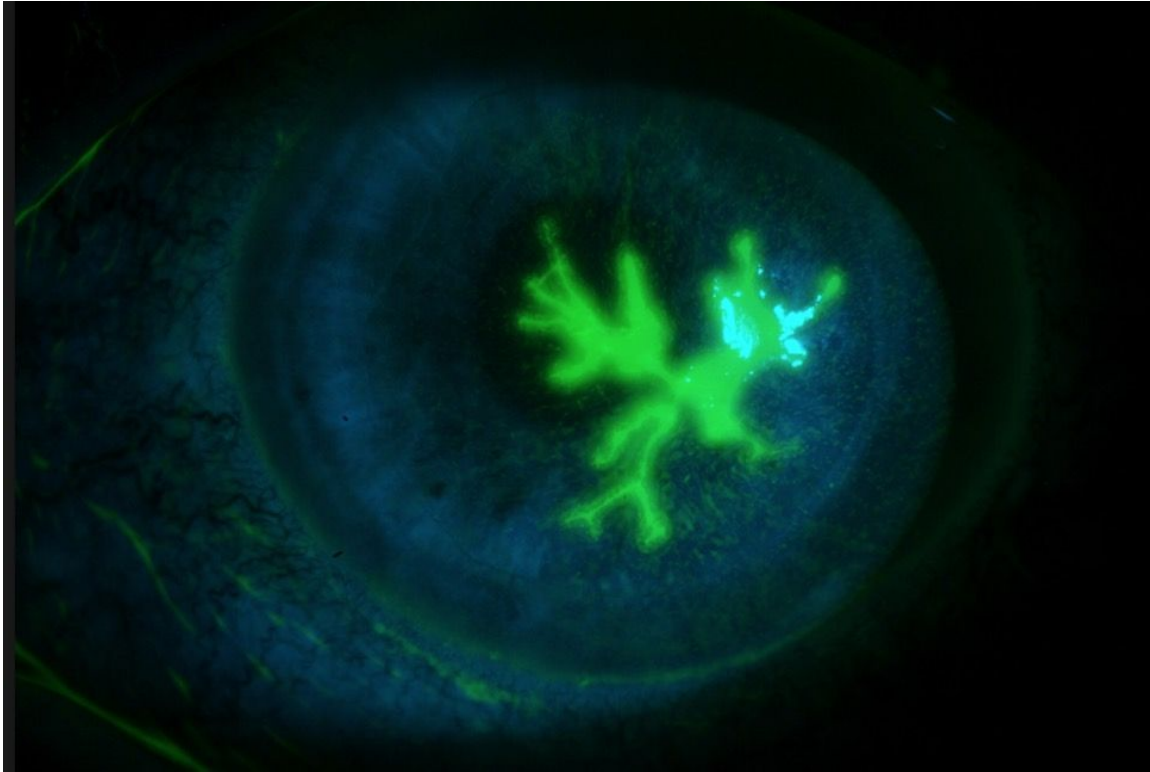
QUESTION 6

A 68 year old male presents to the Emergency Department with a cough productive of green sputum and shortness of breath. On arrival he is drowsy and confused. He is found to have a sodium of 115 mmol/L, normal renal function, and a plasma osmolality of 260 mOsm/kg. The urine osmolality is 500 mOsm/kg and urinary sodium of 145 mmol/L. The MOST likely cause of the hyponatraemia is:

- A. SIADH
- B. Hypothyroidism
- C. Psychogenic Polydipsia
- D. Addison's Disease

QUESTION 7

A patient with background history of recurrent painful oral lesions presents with an acutely painful right eye. On examination there is evidence of diminished visual acuity, conjunctival injection and the eye is exquisitely tender. Fluorescein dye is applied and reveals the lesion shown.



The MOST likely diagnosis is:

- A. Bacterial ulcer
- B. Scleritis
- C. Herpes simplex ulcer
- D. Occult Foreign body

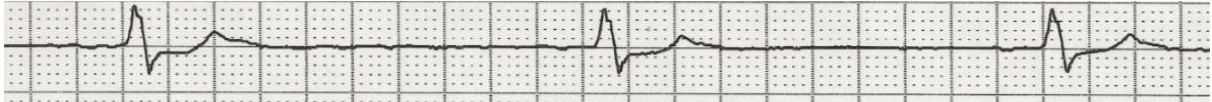
QUESTION 8

A 30 year old female presents to the Emergency Department with monocular visual loss. She has previously presented with abnormal sensory changes in her leg which have now resolved and required no follow up. On examination her visual acuity is significantly reduced and there is evidence of a Marcus Gunn pupil. There is painful ophthalmoplegia but no internuclear ophthalmoplegia. Fundoscopy and neurological examination are unremarkable. The MOST likely diagnosis is:

- A. Central retinal artery occlusion
- B. Optic neuritis
- C. Acute retinal detachment
- D. Vitreous haemorrhage

QUESTION 9

A 35-year-old aboriginal man is brought to the resuscitation bay five minutes after collapsing in the hospital foyer. He is now unresponsive with no cardiac output. The monitor ECG is shown in the attached image. CPR is now in progress and adrenaline 1mg IV has been given. He has a dialysis fistula present at the left cubital fossa.



Which ONE of the following medications will be LEAST likely to increase the chance of survival:

- A. IV Amiodarone 300mg
- B. IV Calcium Chloride 10% (6.8mmol)
- C. IV Insulin and 50% Glucose 50mls
- D. IV 50 mmol (8.4%) Sodium Bicarbonate

QUESTION 10

An 18-year old presents with acute onset abdominal pain. Her urine B-HCG is positive. The MOST important independent risk factor increasing the risk of ectopic pregnancy is:

- A. Pelvic inflammatory disease
- B. Smoking
- C. Intrauterine contraceptive device
- D. Endometriosis

QUESTION 11

An 80 year old male collapsed in their bathroom. The wife stated she could not find a pulse for the first few seconds upon her arrival. This is the second similar episode in the last month. On examination there were no abnormal findings and the ECG was normal. A Holter monitor was previously attended which was normal except for a few ectopics. Which is the MOST likely:

- A. Sick Sinus Syndrome
- B. Vasovagal Syncope
- C. Transient Tachyarrhythmia
- D. Carotid Sinus Hypersensitivity

QUESTION 12

A 68-year old presents with back pain, excessive thirst and nausea. Bloods reveal acute kidney injury and hypercalcaemia. What investigation will be MOST likely to confirm the underlying diagnosis:

- A. LDH
- B. Parathyroid Level
- C. Renal Biopsy
- D. Serum Protein Electrophoresis

QUESTION 13

A 65 year old male is found incidentally to have an ejection systolic murmur. An Echo attended in the Emergency Department confirms aortic stenosis with a gradient of 80 mmHg and mild left ventricular dysfunction. This patient should be best managed by:

- A. Monitored as an outpatient
- B. Anticoagulation
- C. Aortic valvuloplasty
- D. Aortic Valve Replacement

QUESTION 14

A normally well 67-year old female presents to ED with abnormal behaviour. Her sodium level is 114 mmol/L. She is euvolemic on examination. The measured serum osmolality is 235 mmol/L and urine sodium is 45 mmol/L. The MOST relevant investigation in her ongoing diagnostic workup is:

- A. Chest x-ray
- B. Echocardiography
- C. Renal biopsy
- D. Liver function tests

QUESTION 15

The patient described in 'QUESTION 14' subsequently has a tonic-clonic seizure in the Emergency Department which resolves spontaneously. The MOST appropriate initial treatment is:

- A. 500mls Normal saline immediately
- B. Fluid restrict only
- C. 100mls hypertonic saline over 10 minutes
- D. 100mls 3% NaCl / hour

QUESTION 16

In regard to patients with cardiac pacemakers, in the in North American Society of Pacing and Electrophysiology (NASPE) Generic Pacemaker Code, the chamber sensed is denoted to by:

- A. 5th letter in the code
- B. 1st letter in the code
- C. 2nd letter in the code
- D. 4th letter in the code

QUESTION 17

Regarding infective endocarditis which of the following statements is FALSE:

- A. The sensitivity of a transthoracic echo (TTE) is limited to in the range of 60-70%
- B. Appropriately taken blood cultures are likely to be positive in approximately 90-95% of patients who have not received antibiotics
- C. *Staphylococcus aureus* is the commonest pathogen causing native valve endocarditis in the non-IVDU population
- D. Embolic phenomena occur in more than 50% of patients

QUESTION 18

Which of the following has the LOWEST value in predicting cardiac failure as a cause of dyspnea:

- A. Documented history of congestive cardiac failure
- B. Paroxysmal nocturnal dyspnea
- C. Presence of a third heart sound
- D. Presence of a fourth heart sound

QUESTION 19

Regarding Propofol, which of the following is FALSE:

- A. A contraindication is an allergy to egg or soy-based products
- B. One known adverse effect is hypotension
- C. It has no analgesic properties
- D. It causes amnesia

QUESTION 20

Regarding Succinylcholine, which of the following is CORRECT:

- A. A recent Cochrane review showed Succinylcholine was superior to Rocuronium in achieving excellent and clinically acceptable intubating conditions.
- B. Succinylcholine should be avoided in children less than 2 years old because of bradycardia
- C. Succinylcholine should NOT be used in a patient presenting with acute burns
- D. Succinylcholine should NOT be used on patients who receive haemodialysis

QUESTION 21

Which of the following is the MOST frequent x-ray finding associated with left heart failure:

- A. Cardiomegaly
- B. Dilated upper lobe vessels
- C. Interstitial oedema
- D. Pleural effusion

QUESTION 22

Which of the following is a 'whole killed' vaccine:

- A. M.M.R.
- B. Tetanus
- C. Pneumococcus
- D. Rabies

QUESTION 23

Which factor is MOST likely to predict an adverse outcome in a patient with upper GI bleeding:

- A. A history of cirrhosis and ascites
- B. A presence of melena on rectal examination
- C. Coffee-ground vomiting in a nasogastric lavage
- D. An initial systolic blood pressure of less than 100 mmHg

QUESTION 24

An x-ray of a child's elbow reveals ossification centres of only the capitulum and radial head. The child's age is MOST likely to be:

- A. 1-2 years
- B. 4-5 years
- C. 6-7 years
- D. 10-11 years

QUESTION 25

Regarding abdominal trauma, major pancreatic injuries are:

- A. entirely excluded by a normal serum lipase
- B. may present with minimal abdominal signs initially
- C. are typically detected by peritoneal aspiration or lavage
- D. are the third most common organ injury in penetrating trauma

QUESTION 26

Which ONE of the following statements is TRUE:

- A. The commonest cause of aortic stenosis is rheumatic fever
- B. The murmur of hypertrophic obstructive cardiomyopathy (HOCM) is decreased by squatting and increased with a valsalva manoeuvre
- C. The murmur of ventricular septal defect (VSD) is decreased with inspiration
- D. In mitral valve prolapse isometric exercise causes the click to be heard earlier in systole

QUESTION 27

Which of the following is the MOST efficacious agent for significant cyanide poisoning:

- A. Hydroxycobalamin
- B. Sodium nitrite
- C. Sodium nitrate
- D. Sodium thiosulphate

QUESTION 28

Which of the following is part of the Wells criteria for pulmonary embolism workup:

- A. Heart rate greater than 90 beats/min
- B. Immobilisation or surgery in the previous 4 weeks
- C. PaO₂ on an Arterial Blood Gas of less than 60 mmHg
- D. Pleuritic chest pain

QUESTION 29

Regarding bronchiolitis which ONE of the following statements is TRUE:

- A. Saturations below 94% may indicate a need for admission
- B. Ability of child to sleep is most useful historical indicator of severity.
- C. Children admitted to hospital should always receive oral or IV steroids
- D. Peak age of occurrence is between 12-18 months of age

QUESTION 30

Seizures are a feature of the following drugs in overdose EXCEPT:

- A. Amphetamines
- B. Clonidine
- C. Cocaine
- D. Amitriptyline

QUESTION 31

Hypernatraemia is MOST commonly associated with:

- A. Hyperglycaemia
- B. Congestive Cardiac Failure
- C. Diabetes Insipidus
- D. Nephrotic Syndrome

QUESTION 32

Which of the following does NOT cause a SIGNIFICANT high anion gap metabolic acidosis::

- A. Iron poisoning
- B. Carbon Monoxide poisoning
- C. Methaemoglobinaemia
- D. Ethanol poisoning

QUESTION 33

In management of the patient with menorrhagia, which ONE of the following statements is FALSE:

- A. Patients over 35 years old require endometrial biopsy prior to definitive hormonal therapy for menorrhagia
- B. Anovulatory Dysfunctional Uterine Bleeding is usually not responsive to hormonal therapy
- C. Coagulopathies such as platelet function disorders may first manifest as severe premenarchal bleeding
- D. NSAIDs are useful in the treatment of menorrhagia, by blockade of prostaglandin PGE2

QUESTION 34

Which is NOT a risk factor for subarachnoid haemorrhage:

- A. Neurofibromatosis
- B. 1st degree relative with a history of subarachnoid haemorrhage
- C. Polycystic ovarian syndrome
- D. Hypertension

QUESTION 35

Which is NOT a cause of ptosis with a constricted pupil:

- A. Aneurysmal compression of the third cranial nerve
- B. Carotid aneurysm
- C. Brainstem infarction
- D. Squamous cell carcinoma of the lung

QUESTION 36

A 50 year old male presents following a high speed motor vehicle accident. He complains of neck pain and has a CT scan of the cervical spine:



Which of the following is LEAST appropriate in this case:

- A. Routine observations on a surgical ward
- B. Stroke work up and neurological examination
- C. Further imaging
- D. Cervical Spine collar

QUESTION 37

Which one of the following is TRUE in regard to Lumbar Puncture:

- A. The lymphocyte count can reliably differentiate viral and bacterial meningitis
- B. Normal Serum to CSF glucose ratio is 0.6-0.7
- C. Normal values in neonates and older children are the same
- D. IV caffeine has been consistently shown to improve LP related headaches

QUESTION 38

A 30 year old intravenous drug user presents with fever, shortness of breath and night sweats. On examination you find that he has splinter haemorrhages. Which of the following is NOT a Duke's Minor criteria for the diagnosis of Infective Endocarditis (IE):

- A. Predisposing heart condition or intravenous drug use
- B. Fever $> 38.0^{\circ}\text{C}$
- C. New valvular regurgitation
- D. Immunologic phenomena such as glomerulonephritis and Osler's nodes

QUESTION 39

Which of the following is the LEAST likely to be a complication of carcinoma of the lung:

- A. Hyponatraemia
- B. Hyperglycaemia
- C. Spinal cord compression
- D. Hypercalcaemia

QUESTION 40

Which one of the following is TRUE in regard to safe use of Nitrous Oxide:

- A. It can be used in a patient with joint pain after diving
- B. It can be used in a patient with end-stage COPD
- C. It can be used in a patient with paralytic ileus
- D. It can be used in a patient with traumatic retinal detachment

QUESTION 41

In which type of study does recall bias pose a substantial problem:

- A. Crossover study
- B. Retrospective observational chart review
- C. Retrospective case-controlled study
- D. Prospective study cohort study

QUESTION 42

A 30 year old male presents to the Emergency Department and has an Arterial Blood Gas (ABG):

● FIO ₂	21 %
● pH	7.26
● pCO ₂	29 mmHg
● pO ₂	101 mmHg
● HCO ₃	13 mmol/L
● Na ⁺	137 mmol/L
● K ⁺	1.8 mmol/L
● Cl ⁻	116 mmol/L
● Urea	7.8 mmol/L
● Creat	86 umol/L
● Glucose	4.0 mmol/L

Which of the following is LEAST likely to account for the results of this ABG:

- A. Diarrhoea associated with an ileostomy
- B. Isoniazid poisoning
- C. Diuretics
- D. Renal Tubular Acidosis

QUESTION 43

Which of the following patients are MOST likely to benefit from ED thoracotomy:

- A. A patient whose bedside ultrasound demonstrates free fluid in the pericardium
- B. A patient with a sucking chest wound following a gunshot wound
- C. A patient with a penetrating chest wound who arrests in the ED
- D. A blunt trauma patient who arrests in the ED

QUESTION 44

With respect to testicular pain in a 14-year old, which of the following statements is FALSE:

- A. Torsion of the testicular appendix occurs more often than torsion of the testes
- B. Diagnosis of epididymo-orchitis warrants diagnostic evaluation of the urinary tract
- C. Salvage rates in torsion operated on within 4 hours is approximately 75%
- D. Approximately 10% of patients with a testicular tumour present with acute pain

QUESTION 45

Regarding the sort triage system used in disaster triage:

- A. Uses heart rate, systolic blood pressure and GCS to determine category
- B. Can be used in the field by minimally trained personnel as it requires no equipment
- C. Can be used to assign Australasian Triage Scale categories (ATS 1-5)
- D. Is based on the parameters used in the Revised Trauma Scale

QUESTION 46

Which of the following statements regarding fat embolism is MOST true:

- A. Heparin is the mainstay of treatment for fat embolism
- B. Petechial rash typically appears on the lower extremities
- C. Systemic arterial circulation is rarely affected
- D. Thrombocytopenia is commonly an early finding

QUESTION 47

Regarding Personal Protective Equipment (PPE), which statement is MOST correct:

- A. Level C PPE has skin splash protection and either a gas mask or air purifying respirator
- B. Level B PPE is the usual level of PPE which ED staff are trained to use
- C. Level A PPE is gloves, goggles or splash shield and a fluid resistant gown
- D. Level B PPE has fully enclosed SCBA (self-contained breathing apparatus)

QUESTION 48

In the assessment of a patient with vertigo:

- A. Acoustic neuromas account for less than 50% of cerebellopontine tumours
- B. Caloric stimulation of one ear with cold water should produce nystagmus towards that side
- C. Bacterial labyrinthitis causing vertigo can be a complication of meningitis
- D. Meniere's disease causes bilateral hearing loss in most patients

QUESTION 49

With respect to Toxic Epidermal Necrolysis (TEN), which of the following statements is TRUE:

- A. The disease shows no gender predilection
- B. An underlying cause can be usually found
- C. Nikolsky's sign is pathognomonic
- D. There is high level evidence for treatment with corticosteroids

QUESTION 50

Which of the following statements MOST accurately characterises anorexia nervosa:

- A. Accompanied by DSM IV personality disorders
- B. Accompanied by two or more daily episodes of binge eating
- C. First episode usually occurs during childhood
- D. Typically does not disrupt the menstrual cycle

QUESTION 51

Zone 1 in the Roon and Christensen classification of neck trauma covers:

- A. Clavicles to cricoid cartilage
- B. Cricoid cartilage to angle of mandible
- C. Angle of mandible to base of skull
- D. Midline to anterior border of sternomastoid

QUESTION 52

Regarding performance appraisals of junior doctors, which one of the following statements is TRUE:

- A. Log Books are useful in assessing the quality of patient care
- B. Effective positive and negative reinforcement is dependent on understanding the employees values and goals
- C. Appraisals are always best performed by a single senior staff member who is directly responsible for the clinician's work
- D. Poor performance is most commonly due to lack of motivation

QUESTION 53

Which of the following statements is TRUE concerning disaster management planning:

- A. Victoria has the highest disaster hazard risk of all the states in Australia
- B. With earthquakes, the ratio of injuries to deaths is usually 5:1
- C. A level 1 disaster requires a regional response
- D. Chemical incidents are the most common cause of localised disasters

QUESTION 54

The risk of radiation exposure on the neurologic development of an embryo/foetus the HIGHEST at:

- A. 2 to 8 weeks post conception
- B. 8 to 15 weeks post conception
- C. 20 to 24 weeks post conception
- D. 24 to 28 weeks post conception

QUESTION 55

Which disorder is MOST commonly associated with Raynaud's Phenomenon:

- A. Systemic sclerosis
- B. SLE
- C. Rheumatoid Arthritis
- D. Polymyositis

QUESTION 56

Regarding Liver Function Tests (LFTs), which is TRUE regarding GGT:

- A. GGT is specific to the liver and it is used to monitor hepatic disease
- B. Does not increase in hepatic jaundice
- C. An isolated increase of GGT occurs in obstructive jaundice
- D. Increased GGT levels occur in alcohol excess and fatty liver disease

QUESTION 57

Which of the following will cause a RIGHT shift to the oxygen dissociation curve:

- A. Decreased pH
- B. Decreased temperature
- C. Decreased PaCO₂
- D. All of the above will cause a left shift

QUESTION 58

An otherwise well Emergency Department patient has the chest x-ray shown taken on arrival:



Which of the following is MOST likely to be a precipitant for the condition shown on the x-ray:

- A. Chronic obstructive pulmonary disease
- B. Cigarette smoking
- C. Marfan syndrome
- D. Pneumocystis carinii pneumonia

QUESTION 59

Which of the following statements is TRUE regarding aeromedical retrieval:

- A. According to the National Association of EMS Physicians, indications for helicopter scene transport include a GCS <12
- B. Fixed wing aircraft may be preferred to helicopters for the transport of patients with spinal injuries as they have decreased vibration
- C. All aircraft are able to be pressurised to approximately 1 atmosphere (101 KPA)
- D. A standard D cylinder at a flow rate of 10 L/min will last approximately 34 minutes

QUESTION 60

Which of the following statements is FALSE:

- A. 1 litre of Hartmann's solution contains 129 mmols of sodium and 5 mmols of potassium
- B. 10 ml of 10% calcium chloride solution contains approximately 2.2 mmols of calcium
- C. 100 ml of 8.4% sodium bicarbonate solution contains 100 mmols of sodium bicarbonate
- D. 1000 ml of 5% dextrose solution contains 50 grams of dextrose with an osmolality of approximately 280 mosm/L

QUESTION 61

Which statement regarding the anatomic and physiologic changes of advanced pregnancy is FALSE:

- A. Cardiac output increases by 40%
- B. BP falls by 15 mmHg in the 3rd trimester
- C. Mean PaCO₂ falls to 32
- D. Tidal volume increases by around 40%

QUESTION 62

What percentage body surface area is affected in a scenario where a 1 year old has burns to their entire anterior torso and the left arm excluding the hand:

- A. 10%
- B. 15%
- C. 27%
- D. 35%

QUESTION 63

On examining a patient following blunt facial trauma, the following statements is TRUE:

- A. Telecanthus suggests involvement of the lateral canthal ligament
- B. Cerebrospinal fluid rhinorrhoea rarely occurs in Le Fort type 2 fractures
- C. In mandibular fractures, symphysis fractures are less common than condyle fractures
- D. Enophthalmos does not occur in medial orbital wall fractures

QUESTION 64

With regard to hip pain in children, which statement is FALSE:

- A. Approximately 70% of congenital hip dislocations occur in the first baby of the family
- B. The commonest cause of a painful hip in children is transient synovitis
- C. Perthes disease is seen most commonly in the age group 12 months to 4 years
- D. Blood cultures are positive in 50% of cases of septic arthritis

QUESTION 65

A 52-year old smoker presents complaining of generalised fatigue and weakness for the past week. Over the past several weeks she has noticed that her clothes have become loose fitting and that she has lost 10 kilograms of weight.

Physical examination is unremarkable. A chest radiograph demonstrates a mediastinal mass. Serum electrolytes include a sodium, 116 mmol/L and bicarbonate of 21 mmol/L.

What is the MOST appropriate management option:

- A. Demeclocycline
- B. Fluid Restriction
- C. Hypertonic saline
- D. Intravenous frusemide

QUESTION 66

Regarding trauma, in an adult patient with a Lap belt injury sign which is TRUE:

- A. Pelvic injury is extremely common
- B. In the pregnant patient the lap belt should be placed as high as possible over the uterus
- C. 5% of patients involved in a motor vehicle crash who have a seat belt abrasion have a significant internal injury.
- D. Mesenteric and Small bowel injuries are common

QUESTION 67

A 74-year-old woman presents with right-sided extremity weakness of 4 hours' duration. Vital signs are blood pressure 183/115, pulse rate 100, respiratory rate 16, and temperature 37.2°C.

Physical examination reveals slow response to questioning and right sided limb weakness. There is right hemisensory loss. There are no cranial nerve deficits, and left-sided strength and sensation are intact. The MOST likely ischemic stroke syndrome is:

- A. Basilar artery occlusion
- B. Carotid artery dissection
- C. Middle cerebral artery infarction
- D. Posterior cerebral artery infarction

QUESTION 68

Which of the following statements regarding von Willebrand disease is CORRECT:

- A. Bleeding time is normal
- B. Characterised by inadequate hepatic production of von Willebrand factor
- C. It is the most common inherited bleeding disorder
- D. Use of desmopressin is ineffective in controlling bleeding

QUESTION 69

With respect to Henoch-Schonlein Purpura (HSP), which statement is TRUE:

- A. typically occurs in adolescents
- B. is most common in spring
- C. is usually most obvious on the head and neck
- D. represents a vasculitis of large arteries

QUESTION 70

With respect to acute upper gastrointestinal tract bleeding in adults which statement is TRUE:

- A. Pre-endoscopic IV proton pump inhibitors decrease mortality
- B. The need for blood transfusion is an independent predictor of mortality
- C. IV octreotide decreases the need for blood transfusions
- D. Sengstanken-Blakemore tubes have 4 lumens

QUESTION 71

With respect to performing cardiopulmonary resuscitation in a 5 year old male, which statement is MOST correct:

- A. The initial energy setting for ventricular fibrillation is 2J/kg
- B. The standard dose of intravenous adrenaline is 0.1ml/kg of 1:10,000 solution
- C. Ventricular fibrillation is the most common rhythm in cardiac arrest
- D. The airway should initially be cleared by a finger sweep

QUESTION 72

Which ONE of the following statements about volvulus is FALSE:

- A. Sigmoid volvulus is more common in inactive elderly patients
- B. Fluid and electrolyte sequestration less of an issue with sigmoid volvulus compared with small bowel obstruction
- C. A massively dilated loop of bowel with both ends down in the pelvis and the bow positioned superiorly ('bent inner tube' appearance) is pathognomonic of a caecal volvulus
- D. The treatment of choice for a non-strangulated sigmoid volvulus is decompression and detorsion with a rectal tube via proctoscopy

QUESTION 73

A 52 year old male who has been stable on the same dose of slow release morphine sulphate for many years becomes opiate toxic. He has been suffering from and intercurrent illness and has become socially isolated. From the history given, what is the MOST likely cause of opioid toxicity is:

- A. Loss of Tolerance
- B. Constipation
- C. Liver failure
- D. Acute kidney injury

QUESTION 74

A 22-year old woman presents with painless diplopia. Symptoms disappear when either eye is covered. Extraocular movements of both eyes are intact when tested individually. On conjugate gaze testing to the left, there is nystagmus in the left eye and limited adduction in the right eye. What is the MOST likely cause of these symptoms:

- A. Internuclear ophthalmoplegia
- B. Retro-orbital hematoma
- C. Sixth nerve palsy
- D. Third nerve palsy

QUESTION 75

A 58 year old male presents with pneumonia on a background of hypertension and alcoholism. The patient reports red currant jelly sputum. The MOST likely causative organism is:

- A. Klebsiella
- B. Streptococcus
- C. Staphylococcus
- D. Legionella

QUESTION 76

Regarding ACEM's policy on clinical handover in the Emergency Department, which of the following statements are FALSE:

- A. Recommendations on handover are associated with measures recommended by the National Safety and Quality Health Service (NSQHS) Standard 9
- B. The formal definition includes: "*transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients*"
- C. Rostering should allow time for clinical handover to occur during rostered working hours
- D. Should involve patients and carers in the clinical handover process, such that they are informed about the nature of the ongoing care

QUESTION 77

Regarding heart failure in patients with diastolic dysfunction compared with systolic dysfunction:

- A. Aggressive therapy with diuretics is more effective
- B. β -Blocking agents may improve cardiac output
- C. Both are associated with impaired cardiac contractility
- D. Ventricular filling pressures are higher in systolic dysfunction than in diastolic dysfunction

QUESTION 78

Which of the following is MOST likely to cause a characteristic 'slapped-cheek' appearance rash:

- A. Coxsackievirus A16
- B. Group A B-hemolytic streptococci
- C. Parvovirus B19
- D. Varicella-zoster virus

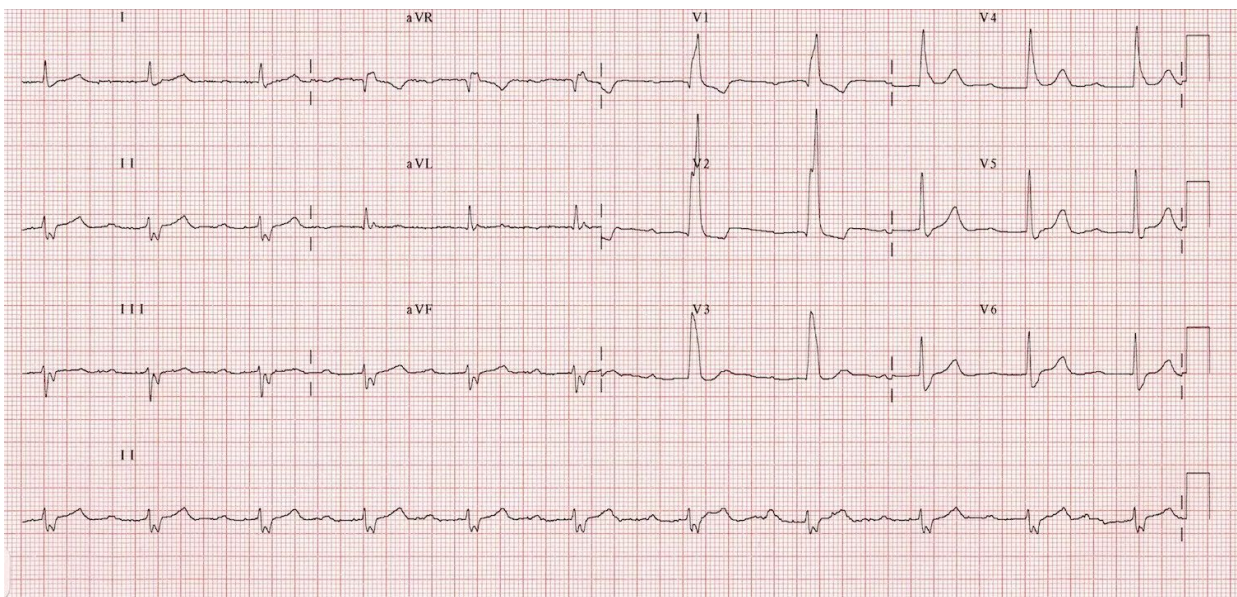
QUESTION 79

An 84-year old woman falls hyperextending her neck. The MOST likely neurologic findings would be:

- A. Absent pain and temperature sensations and motor function with normal vibratory function below the level of injury
- B. Ipsilateral motor loss with preserved contralateral pain and temperature sensation
- C. Motor weakness in the upper extremities greater than in the lower extremities
- D. Paralysis and hypalgesia with no rectal tone below the level of the injury

QUESTION 80

An 78 year old female presents to the Emergency Department with recurrent syncope without warning. The following ECG is obtained on arrival:



Which of the following statements is CORRECT regarding the ongoing care of this patient:

- A. Pericardial effusion is a likely cause and therefore an echocardiogram should be requested
- B. This patient may progress to complete heart block, although the overall risk is low
- C. Hypokalaemia and Drugs are important causes that should always be excluded
- D. Admission under cardiology with a view to urgent coronary angiogram is advisable

QUESTION 81

Which of the following statements regarding the femoral head dislocations is CORRECT:

- A. Associated femoral head and acetabular fractures are rare, therefore pre-reduction x-rays unnecessarily delay reduction
- B. Sciatic nerve injury is rare
- C. Femoral artery disruption can occur in 20% of cases

D. Prompt relocation reduces the incidence of avascular necrosis

QUESTION 82

In regard to the Ottawa knee rules and indications for ordering an X-ray, which of the following criteria is INCORRECT:

- A. isolated tenderness of the patella
- B. inability to transfer weight for 4 steps immediately after the injury and in ED
- C. inability to flex the knee to 60 degrees
- D. age > 55

QUESTION 83

Which of the following criteria is included in the San Francisco syncope rules:

- A. Nystagmus
- B. History of congestive cardiac failure
- C. Chest pain
- D. Sudden onset headache

QUESTION 84

Which of the following ossification centres at the wrist is the FIRST to appear:

- A. Hamate
- B. Scaphoid
- C. Lunate
- D. Pisiform

QUESTION 85

Regarding anterior shoulder dislocation, which of the following statements is FALSE:

- A. Recurrent instability following a first-time traumatic anterior shoulder dislocation can occur in up to 40% of cases
- B. Longer periods of immobilisation have NOT been shown to prevent recurrent dislocation
- C. On arrival in the Emergency Department the patient's arm is usually held in an internally rotated and abducted position
- D. A Bankart lesion is an impaction fracture of the humeral head

QUESTION 86

In patient with a reduced level of consciousness which of the following is NOT consistent with acute Uncal Herniation:

- A. Ipsilateral pupil dilation
- B. A false localising sign (Kernohan's notch)
- C. Contralateral homonymous hemianopia
- D. Progressive contralateral third nerve palsy

QUESTION 87

Which of the following is NOT a clinical predictor in acute pancreatitis:

- A. Calcium < 2 mmol/L
- B. PaO₂ < 60 mmHg on an arterial blood gas
- C. Glucose < 10 mmol/L
- D. AST > 250 IU/L

QUESTION 88

Which of the following statements regarding the use of continuous positive airway pressure therapy in pulmonary oedema is CORRECT:

- A. Decreases left ventricular preload and increases afterload
- B. Has been widely shown to reduced mortality
- C. Increases the FiO₂ delivered
- D. Reduces the work of breathing

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EMQ QUESTIONS

Please select the best correct letter on the answer sheet provided

THEME: TOXINOLOGY

- A. Brown snake Bite
- B. Death Adder Bite
- C. Blue Ringed Octopus
- D. Box Jellyfish Envenomation
- E. Taipan Snake
- F. Black Snake Mulga Bite
- G. Tiger Snake Bite
- H. Funnel Web Spider
- I. Red Back Spider

***For each scenario choose the most likely diagnosis.
Each option may be used once, more than once, or not at all.***

QUESTION 89

A 22 year male had a syncopal event after a possible 'bite' during a walk through bushland in New South Wales. On examination there is ooze at the bite site but no pain.

QUESTION 90

A 34 year female was snorkeling on a reef off the coast of Northern Queensland. She started developing tongue paresthesia and difficulty swallowing, soon after coming out of water. On examination she has ptosis, weak extraocular movements and dysarthria.

QUESTION 91

A 28 year old male in the Northern Territory presented with very painful bite on foot and also complains of dark colored urine. On Examination there is marked redness at the bite site and enlarged regional lymph nodes.

THEME: BLEEDING IN EARLY PREGNANCY

- A. Silent miscarriage
- B. Incomplete miscarriage
- C. Inevitable miscarriage
- D. Threatened miscarriage
- E. Endometrial hyperplasia
- F. Decidual miscarriage
- G. Decidual reaction
- H. Molar pregnancy
- I. Retroplacental haematoma
- J. Complete miscarriage
- K. Ectopic pregnancy

***For each scenario choose the most likely diagnosis.
Each option may be used once, more than once, or not at all.***

QUESTION 92

A 38 year old woman presents with vaginal bleeding and pain after eight weeks of amenorrhoea. Her pregnancy test is positive. The cervical os is open with moderate bleeding noted. No products of conception are seen. The uterus is clinically 6-8 weeks in size.

QUESTION 93

A 40 year old woman who is 10 weeks pregnant by her dates complains of some PV spotting. The ultrasound scan is essentially unchanged compared with the scan done 10 days earlier. It demonstrates an eight week size gestational sac with no foetal pole and a possible collapsed yolk sac.

QUESTION 94

A 32 year old woman presents with abdominal pain and vaginal bleeding at 12 weeks gestation. An ultrasound confirms a single live foetus which is appropriate for her gestation.

QUESTION 95

A 19 year old woman presents with abdominal pain and vaginal bleeding at 10 weeks gestation. An ultrasound scan shows some hyperechoic contents within the uterine cavity, which appear to be consistent with retained products of conception.

THEME: SEIZURES

- A. Midazolam
- B. Ceftriaxone
- C. Magnesium
- D. Dextrose 50%
- E. Octreotide
- F. Calcium Gluconate 10%
- G. Magnesium
- H. Sodium Bicarbonate 8.4%
- I. Pyridoxine
- J. Propofol, Rocuronium and External cooling
- K. Phenytoin

***For each presentation, choose the single most likely answer from the given list of options.
Each option may be used once, more than once, or not at all.***

QUESTION 96

A 10kg toddler presents with status epilepticus after accidentally ingesting some of his mother's medicines. She is HIV positive and currently being treated for tuberculosis.

QUESTION 97

A 10kg toddler presents with a generalised seizure after accidentally ingesting "a handful" of his grandfather's gliclazide tablets. Blood glucose is 0.5 mmol/L despite multiple boluses of 10% glucose.

QUESTION 98

A 55-year old male is brought in by ambulance with generalised seizures and hypotension. ECG reveals a QRS duration of 200ms with a secondary R' wave in aVR.

QUESTION 99

An unidentified female in her mid-20s has a prolonged seizure in the hospital car park and is taken to ED. She has a recent surgical scar on her lower abdomen.

QUESTION 100

A 45-year old female presents with painful involuntary muscle spasms of her hands and feet. She has a recent surgical scar on her anterior neck.

THEME: TOXICOLOGY: ANTIDOTES

A. Atropine	J. Intralipid
B. Calcium gluconate 10%	K. Methylene blue
C. Calcium chloride 10%	L. Octreotide
D. Digibind	M. Oxygen
E. Flumazenil	N. Prothrombinex
F. Fomepizole	O. Sodium bicarbonate
G. Hydroxocobalamin	P. Supportive care
H. Idarucizumab	Q. Vitamin K
I. Insulin	R. Ipecac

***For each clinical scenario, select the most appropriate treatment.
Each option may be used once, more than once, or not at all.***

QUESTION 101

A 65-year old male on dabigatran for atrial fibrillation presents to ED with massive haematemesis.

QUESTION 102

An 85-year old female presents with general weakness following several days of vomiting. Bloods show a significantly elevated creatinine of 300 $\mu\text{mol/L}$. ECG shows an irregular rhythm with a ventricular rate 35 bpm.

QUESTION 103

A 55-year male with a history of depression and anxiety presents with drowsiness and respiratory depression following an overdose of alprazolam and venlafaxine.

QUESTION 104

A 21-year old male presents with acute respiratory distress and cyanosis after ingesting a bottle of isobutyl nitrite ("poppers"). SaO₂ are 85% on 15L O₂.

QUESTION 105

A 50-year old female presents unconscious after being rescued from a massive house fire. ABG shows a COHb of 8% with lactate of 18 mmol/L.

THEME: OPHTHALMOLOGY

- | | |
|-----------------------------------|-------------------------|
| A. Acute angle closure glaucoma | E. Giant cell arteritis |
| B. Amaurosis fugax | F. Optic neuritis |
| C. Retinal artery occlusion | G. Retinal detachment |
| D. Central retinal vein occlusion | H. Vitreous haemorrhage |

*For each question, identify the most likely cause of visual loss from the list above.
Each option may be used once, more than once, or not at all.*

QUESTION 106

A 70-year old male presents with sudden painless loss of vision. Fundoscopy reveals a pale retina with a cherry red spot.

QUESTION 107

A 52-year old diabetic female presents with sudden painless loss of vision. Fundoscopy reveals a "blood and thunder" appearance with dilated tortuous vessels and retinal haemorrhages.

QUESTION 108

A 56-year old male presents with severe unilateral ocular pain, vomiting and bradycardia. Ocular examination reveals a hazy cornea, fixed mid-dilated pupil and perilimbal flush.

QUESTION 109

A 40-year old female presents with gradually deteriorating visual acuity in one eye, accompanied by decreased colour vision and pain on eye movement. She has a previous history of "Bell's Palsy".

THEME: FOREARM INJURIES

A 20-year old male presents with multiple deep lacerations to his right upper limb after punching his hand through a plate glass window.

- | | | | |
|----|--------------------------------|----|-------------------------|
| A. | Biceps tendon | G. | Lateral cutaneous nerve |
| B. | Brachial artery | H. | Median nerve |
| C. | Extensor digitorum | I. | Radial artery |
| D. | Extensor pollicis longus | J. | Radial nerve |
| E. | Flexor digitorum profundus | K. | Ulnar artery |
| F. | Flexor digitorum superficialis | L. | Ulnar nerve |

*For each injury pattern, match the deficit to the likely structure injured.
Each option may be used once, more than once, or not at all.*

QUESTION 110

Sensory loss to the volar aspect of the index and middle fingers with weakness of thumb opposition.

QUESTION 111

Complete wrist drop with inability to extend the wrist, fingers or thumb.

QUESTION 112

Inability to abduct or adduct the fingers.

QUESTION 113

Large haematoma overlying the anteromedial aspect of the wrist.

QUESTION 114

Weakness of PIP joint flexion of ring and middle fingers.

Flexion of these digits against resistance causes significant anterior forearm pain.

THEME: ANAEMIA

- | | |
|-------------------------------|-----------------------------|
| A. ABO incompatibility | F. Iron deficiency anaemia |
| B. Acute leukaemia | G. Red cell enzyme defect |
| C. Anaemia of chronic disease | H. Red cell membrane defect |
| D. Aplastic anaemia | I. Rhesus disease |
| E. Fanconi anaemia | |

*For each scenario chose the most likely diagnosis. Normal values are shown in brackets.
Each option may be used once, more than once, or not at all.*

QUESTION 115

A 5-year old girl with known Still's disease for two years is referred by her GP for review. The mother has noted that the child is pale and tired.

- Hb 85g/L (110-130)
- WCC $7.9 \times 10^9/L$ (5-17)
- Plt $434 \times 10^9/L$ (150-450)
- MCV 81 (75-87)
- Reticulocytes 1.1% (<2%)

QUESTION 116

A 6-year old girl is brought in by her concerned parents with pallor and bruising. There are no red flags for non-accidental injury.

- Hb 73 g/L (110-130)
- WCC $2.3 \times 10^9/L$ (5-17)
- Plt 84 (150-450)
- Blood film No blasts seen
- Reticulocytes 0.4% (<2%)

THEME: BACK PAIN

- A. Ankylosing spondylitis
- B. Epidural Abscess
- C. Prolapsed intervertebral disc
- D. Lumbar spondylosis
- E. Intervertebral disc infection
- F. Vertebral fracture
- G. Pars interarticularis defect
- H. Metastatic malignancy
- I. Aortic Dissection

***For each description pick the appropriate underlying condition.
Each option may be used once, more than once, or not at all.***

QUESTION 117

29 year old male has a 6-month history of lower back pain. His pain is predominantly at the thoracolumbar junction and in the right buttock. The pain is worse in the morning and he has difficulty in getting out of bed. There is some improvement during the day. Examination shows restriction of lumbar spinal movements, particularly lateral flexion.

QUESTION 118

A 33 year old female presents with acute onset of low back pain. The pain is constant and is not significantly affected by posture. All spinal movements are painful and difficult. Three weeks earlier, she had a urinary tract infection, which had been treated with amoxicillin.

QUESTION 119

A 42 year old male presents with a history of lower back pain and paresthesiae in both legs. He also complains of weakness in the flexion of the hip and difficulty mobilising. Background history includes hypertension, recurrent boils, lumbar discectomy and diabetes. At triage the patient is febrile. He is triaged to the urgent care centre where he is mobilising to the bathroom.

QUESTION 120

A 66 year old male presents with a history of lower back pain and paresthesiae in both legs. The patient has a cushingoid appearance and states he has refractory back pain with difficulty passing stool for one week. He has a past medical history of COPD and Ischaemic Heart Disease. Examination shows mild weakness in both legs (4+/5), normal reflexes and normal sensation. On further examination, he has a constricted pupil and mild ptosis on the left and has finger clubbing.

END OF EXAM PAPER

M C Q ANSWERS

QUESTION	A	B	C	D
1		■		
2			■	
3		■		
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5	■			
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7			■	
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22				■

QUESTION	A	B	C	D
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36	■			
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QUESTION	A	B	C	D
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QUESTION	A	B	C	D
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EMQ ANSWERS

89	A		105	G
90	C		106	C
91	F		107	D
92	C		108	A
93	A		109	F
94	D		110	H
95	B		111	J
96	I		112	L
97	E		113	K
98	H		114	F

99	C		115	C
100	F		116	D
101	H		117	A
102	D		118	E
103	P		119	B
104	K		120	H