British Geriatrics Society Trainees Weekend
Leeds 4/5 February 2012
Mock SCE

I have tried as hard as possible to put together a Mock Exam paper which replicates an SCE exam paper in Geriatric Medicine as closely as possible. There are a total of 50 questions and at least one question from all the curriculum domains and a broad spectrum of question difficulty.

All the question are written in 'College style'

I am extremely grateful to Mike Vassallo (SCE Geriatric Medicine Lead) for his considerable help and support co-ordinating questions and also to the SCE Question Writers, Drs Clare Donellan, Alison Yarnall, Graham Sutton, Peter Lawson and Terry Aspray amongst others for supplying some questions.

I have also 'Standard Set' the exam using the same method as in the actual SCE to arrive at a pass mark for the exam. Although instead of having 8 setters I have done this single-handed so accuracy is slightly limited, I feel this would be regarded as quite a tough exam !

I am tempted to finish by saying 'Enjoy' but this might be pushing it a bit, but instead I hope you find the practice valuable and good luck !

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Chair SAC Geriatric Medicine 11 January 2012

Question 1

A 73-year-old man with metastatic prostate cancer presented with increasing pain in his right hip. He described the pain as worse with movement and complained that he was now unable to walk his dog. His prostate cancer was treated with 3-monthly goserelin injections.

On examination, he had tenderness over the right trochanter.
Investigations:

X-ray of right hip	large lytic lesion with cortical thinning within the upper third of right femur

What is the most appropriate next step in management?

A bicalutamide
B cyproterone acetate
C disodium pamidronate
D internal fixation
E radiotherapy

Question 2

A 72-year-old man presented with a 3-week history of persistent vomiting and 12-kg weight loss. He had a previous history of stroke resulting in an expressive dysphasia and right hemiparesis and was Karnofsky performance status 3.

At endoscopy he had a large fungating mass of the lesser curve of his stomach extending towards the cardia and proximally into the lower oesophagus. Histology confirmed an adenocarcinoma of the stomach. Despite high dose anti-emetics he continued to vomit and a water soluble contrast study showed narrowing of the oesophagogastric junction.

What is the most appropriate next step in management?

A chemotherapy
B gastrojejunostomy
C radiotherapy
D stent insertion
E venting gastrostomy

Question 3

A 68-year-old man had a 2-week history of “headache”. On examination he had suffusion of the face and eyes, facial oedema and distended jugular veins which were non-pulsatile.

A CT scan of the chest showed that the superior vena cava was compressed by a tumour in the right upper lobe of the lung, and evidence of a clot within the vessel. At bronchoscopy he had a tumour in the right upper lobe bronchus, biopsies confirmed this was a small cell carcinoma of the bronchus.

What is the most appropriate management?

A anticoagulation
B chemotherapy
C high-dose corticosteroids
D radiotherapy to the mediastinum
E superior vena caval stenting

Question 4

A 65-year-old man presented with fatigue. He had Type 2 diabetes mellitus and was on gliclazide 40mg once daily, and drank 4 pints of 5% lager per day. In the past he had injected drugs recreationally, but denied sharing needles and had used any illicit drugs for over 20 years. On examination he had no signs of chronic liver disease.

Investigations:

haemoblobin	14 g/dL (13-18)
white cell count	7 x 10^9/L (4-11)
serum urea	6.0 mmol/L (2.5-7.0)
serum creatinine	100 umol/L (60-110)
international normalised ratio	1.2 (<1.4)
activated partial thromboplastin time	35s (30-40)
total bilirubin	18 umol/L (1-22)
serum alanine aminotransferase	140 U/L (5-35)
serum alkaline phosphatase	103 U/L (45-105)
Abdominal ultrasound scan	hyperechoic liver parenchyma.

What is the most likely diagnosis?

A alcoholic liver disease
B fatty liver disease
C haemochromatosis
D hepatitis B
E hepatitis C

Question 5

A 70-year-old woman developed features of parkinsonism, she had a poor response to levodopa. 1-year later her husband reported that she was becoming very forgetful, he said she had also started to ‘see things like the faces of little children which were not there’. Her mini mental state examination was 20/30

What is the most likely diagnosis?

A Alzheimer’s Disease
B corticobasal degeneration
C dementia with Lewy bodies
D multiple system atrophy
E vascular dementia

Question 6

An 88-year-old woman was admitted from a residential home with delirium due to a urinary tract infection, which had been treated by her general practitioner with antibiotics. Shortly after admission, she developed persistent diarrhoea. She was given intravenous fluids, but her condition deteriorated over the next 48 hours.

On examination, she looked unwell, her temperature was 38.5°C, pulse rate 130 per minute and her blood pressure 95/65 mmHg. She had a tender distended abdomen.

Investigations:

haemoglobin 116 g/L (115–165)
white cell count 31.8 10^9/L (4.0–11.0)
neutrophil count 28.1 10^9/L (1.5–7.0)
platelet count 185 10^9/L (150–400)
serum urea 9.5 mmol/L (2.5–7.0)
serum creatinine 130 µmol/L (60–110)

faecal Clostridium difficile toxin negative

X-ray of abdomen dilated large bowel with thickened bowel wall

What is the most likely diagnosis?

A campylobacter gastroenteritis
B diverticulitis
C Escherichia coli O157 infection
D ulcerative colitis
E pseudomembranous colitis

Question 7

Human progeria syndromes are considered to represent a human model of accelerated ageing.

To what does current research suggest that the underpinning molecular mechanism relates?

A dominant inheritance of the lamin A gene
B dysregulation of nuclear lamin, a scaffold protein
C enhanced proteosomal degradation pathway involving lamin
D reduced DNA damage and demethylation of histones
E upgraded cholesterol metabolism pathway

Question 8

A 78-year-old woman was seen in general practice. She was registered blind owing to age-related macular degeneration. She had a history of hypertension and hypercholesterolaemia and was a long-standing smoker. Her mother had developed a similar visual problem at the same age. On examination, her body mass index was 32 kg/m^2 (18-25)

Which of her identified risk factors is likely to have contributed most to her macular degeneration?

A dyslipidaemia
B history in a first-degree relative
C hypertension
D obesity
E smoking

Question 9

To evaluate a new falls service, patients attending the accident and emergency department with a fall were allocated by a closed envelope system to either the new falls service or to standard medical care. They were asked to keep a falls diary. After 6 months, the number of recorded falls and attendances, at either primary or secondary care, with a subsequent fall were recorded.

What best describes this study?

A case control study
B cohort study
C cross-sectional study
D quasi-experimental design study
E randomised controlled trial

Question 10

A 76-year-old man presented after an episode of syncope. He had Alzheimer's disease, angina, hypertension and type 2 diabetes mellitus. His ECG demonstrated a long QT interval.

Which of his medicines is most likely to have prolonged the QT interval?

A enalapril
B galantamine
C glibenclamide
D isosorbide mononitrate
E metformin

Question 11

A 73-year-old man had a 3-week history of cough productive of purulent sputum, associated with intermittent fever and sweats. He had not responded to a course of antibiotics. He had a 55 pack-year smoking history.

On examination, he had signs consistent with a small right pleural effusion, confirmed by chest X-ray. A diagnostic pleural aspiration was undertaken.

Investigations:

random plasma	glucose 6 mmol/L
pleural fluid analysis:	cloudy and turbid
glucose	2.8 mmol/L
protein	40 g/L (1–2)
lactate dehydrogenase	1500 U/L (10–250)
pH	7.15 (7.60–7.64)
cytology	abundant mesothelial cells and neutrophils
Gram stain	negative

What is the most appropriate next investigation?

A CT scan of thorax
B fibreoptic bronchoscopy
C PCR analysis of fluid for Mycobacterium tuberculosis
D pleural biopsy
E video-assisted thoracoscopy

Question 12

A 79-year-old man presented with generalised abdominal pain that had gradually increased in severity over the past 48 hours. He had chronic atrial fibrillation.

On examination, he was tachypnoeic, there were signs of peritoneal irritation and there were no bowel sounds.

Investigations:

faecal occult blood	positive
serum amylase	360 U/L (60–180)
arterial blood gases, breathing air:	
pH	7.15 (7.35–7.45)
H^+	71 nmol/L (35–45)
Lactate	3.4 mmol/L (0.5–1.6)

What is the most likely diagnosis?

A acute appendicitis
B acute haemorrhagic pancreatitis
C acute sigmoid diverticulitis
D early intestinal obstruction
E mesenteric arterial occlusion

Question 13

A 75-year-old woman was admitted in a semiconscious state with a 3-day history of vomiting. She was taking furosemide 40 mg, aspirin 75 mg and omeprazole 20 mg once daily.

On examination, she appeared dehydrated and cachectic. Her blood pressure was 100/65 mmHg. She had a urine output of 5 mL in the first hour after admission. Urinalysis showed protein 1+, nitrites 1+.

Investigations:

Haemoglobin	106 g/L (115–165)
serum sodium	125 mmol/L (137–144)
serum potassium	2.4 mmol/L (3.5–4.9)
serum urea	27.0 mmol/L (2.5–7.0)
serum creatinine	323 µmol/L (60–110)
arterial blood gases, breathing air:	
PO_2	10.5 kPa (11.3–12.6)
PCO_2	4.2 kPa (4.7–6.0)
pH	7.65 (7.35–7.45)
H^+	22 nmol/L (35–45)
Bicarbonate	60 mmol/L (21–29)

What investigation is most likely to determine the underlying cause of these results?

A chest X-ray
B CT pulmonary angiography
C gastroscopy
D ultrasound scan of abdomen
E urine culture

Question 14

A 76-year-old man was referred with left-sided facial weakness, with involvement of the frontalis muscle, of 3 hours' duration. He had a history of well-controlled hypertension and was taking amlodipine 5 mg daily.

What is the most appropriate immediate treatment?

A aciclovir
B aspirin
C dipyridamole
D prednisolone
E thrombolysis

Question 15

A 74-year-old woman presented with unsteadiness when walking, especially in the dark, of recent onset. She had no vertigo but had noticed transient visual blurring on turning her head suddenly. She had a history of hypertension, stage 3 chronic kidney disease, type 2 diabetes mellitus and recurrent urine infections. She was taking furosemide, ramipril and gliclazide, and had recently required a 7-day course of intravenous gentamicin.

On examination, she had bilateral mild high-frequency sensorineural hearing loss. She had a bilaterally impaired vestibuloocular reflex.

What is the most likely diagnosis?

A acoustic neuroma
B basilar migraine
C cerebrovascular event
D gentamicin toxicity
E Ménière's disease

Question 16

A 91-year-old woman was admitted with increasing confusion associated with a widespread blistering rash that had not responded to penicillin. On examination, her temperature was 38.0°C and there was a widespread macular rash with some blisters.

What is the most likely cause of her rash?

A bullous pemphigoid
B dermatitis herpetiformis
C drug reaction
D pemphigus vulgaris
E Stevens–Johnson syndrome

Question 17

A 76-year-old man was admitted to hospital with breathlessness. He had developed a dry cough on his return from a Mediterranean cruise. Despite starting oral amoxicillin, he became progressively breathless with several episodes of haemoptysis and a high fever.

On examination he was confused, agitated and dehydrated.

Investigations:

Haemoglobin	11.5 g/dL (13–18)
white cell count	4.2 10^9/L (4–11)
neutrophil count	13.1 10^9/L (1.5–7.0)
lymphocyte count	0.8 10^9/L (1.5–4.0)
platelet count	133 10^9/L (150–400)
serum sodium	122 mmol/L (137–144)
serum potassium	3.5 mmol/L (3.5–4.9)
serum urea	14.9 mmol/L (2.5–7.0)
serum creatinine	129 µmol/L (60–110)
chest X-ray	right middle and lower zone consolidation
blood cultures	no growth

What is the most appropriate next investigation?

A autoimmune screen
B bronchoscopy
C HIV testing
D lumbar puncture
E serology

Question 18

A 70-year-old man was admitted because of worsening of an intense widespread rash, which had developed over 9 months. There was no past medical history.

On examination, he was covered with a red rash. The skin felt tight to touch but there were no excoriations or areas of blistering. The patient had alopecia and abnormal nails. His temperature was 36°C, his pulse was 118 beats per minute and regular, and his blood pressure was 104/56 mmHg.

Investigations:

serum urea	16 mmol/L (2.5–7.0)
serum creatinine	92 µmol/L (60–110)
serum albumin	32 g/L (37–49)
serum C-reactive protein	64 mg/L (<10)
serum immunoglobulin E	18 kU/L (<120)
HIV	negative

What is the most likely cause of this illness?

A drug reaction
B eczema
C HIV seroconversion illness
D mycosis fungoides
E psoriasis

Question 19

A 74-year-old woman had sustained a right hemiplegia, because of a cerebral haemorrhage 6 weeks previously, and had developed marked spasticity in the upper limb and occasional flexor spasms in the lower limb. As a complication of her stroke she had developed gastrointestinal haemorrhage from a duodenal ulcer but was now stable.

What is the most appropriate initial treatment for her spasticity?

A baclofen
B dantrolene
C diazepam
D methocarbamol
E tizanidine

Question 20

An 86-year-old woman was transferred to a rehabilitation ward after a prolonged admission with cellulitis and leg ulcers. She had a history of chronic venous insufficiency, hypertension, vascular dementia (mini-mental state examination score 21/30), stage 4 chronic kidney disease and ischaemic heart disease. Prior to admission, she had lived alone with carers attending three times daily. She had no family but a few elderly friends visited her regularly.

Three weeks into her rehabilitation, she was still requiring the assistance of two people with all transfers. She was able to weight-bear for short periods but could not walk. A trial without urinary catheter was aborted as she developed urinary retention. Faecal incontinence was a frequent problem despite thorough attention to her bowel care.

At the next multidisciplinary team meeting, the ward therapists reported no progress was being made. The patient retained capacity to make decisions about her discharge destination, but wanted to follow whatever advice she was given by the team.

What setting would normally be most appropriate for this patient?

A intermediate care
B nursing home
C residential home for older people
D sheltered housing with two carers four times per day
E ‘slow stream’ rehabilitation ward

Question 21

An 87-year-old woman was referred because of a general decline in physical function and confusion. Six months previously, a district nurse had described her as ‘a bit forgetful but functionally independent’. Her nephew had moved in to care for her following the breakdown of his marriage 3 months previously. The general practitioner requested a home visit.

On examination, she avoided eye contact and mumbled, rocking backwards and forwards in her chair and biting her lips. She did not speak to the geriatrician but gave some responses to her nephew when he shouted at her. She had bruising around the top of both arms, which the nephew said had resulted from his attempts to transfer her on to the commode. The home smelled of urine.

What is the most likely cause of this presentation?

A dementia
B elder abuse
C frontal brain tumour
D generalised anxiety state
E psychotic depression

Question 22

An 84-year-old man was referred because he had fallen out of bed on several occasions. His wife described that for several years he had increasingly frequent episodes where he moved about violently in bed, waking her up and sometimes bruising her legs. When these occurred she would wake him and his movements would cease. He was otherwise well. He had hypertension and took losartan 50 mg daily.

Physical examination was normal.

What is the most likely diagnosis?

A complex partial seizures
B generalised seizures
C rapid eye movement sleep behaviour disorder
D restless leg syndrome
E sleep apnoea

Question 23

A 75-year-old woman was seen in clinic after an isolated episode of confusion. She had no recollection of the event, but her son said that he had been telephoned a number of times, each time to be asked whether he was coming around for supper. His mother had sounded anxious, though her speech was normal and her voice not slurred. After a few hours, she had returned to her normal self. She had a history of hypertension, migraine and diet-controlled diabetes mellitus. She was a non-smoker and drank moderate amounts of alcohol.

Examination was normal, including mini-mental state examination. CT scan of head was normal.

What is the most likely cause for her confusion?

A early vascular dementia
B hypoglycaemia
C temporal lobe epilepsy
D transient global amnesia
E transient ischaemic attack

Question 24

A 75-year-old retired architect presented with a 3-week history of nocturnal confusion and wandering. He had noticed the gradual onset of poor memory for recent events that had become more marked over the last 6 months. Since returning from holiday 4 months earlier he had required help from his wife to get dressed. He had stopped smoking 5 years previously.

On examination, his pulse was 80 beats per minute and regular, and his blood pressure was 160/80 mmHg. He had normal heart sounds. His reflexes were brisk but symmetrical.

Investigations:

mini-mental state examination (MMSE)	28/30
clock drawing executive task (CLOX1)	4/15
confusion assessment method (CAM)	negative
informant questionnaire on cognitive dysfunction in the elderly (IQCODE)	4.2/5.0

What is the most likely diagnosis?

A Alzheimer's disease
B delirium
C depression
D normal pressure hydrocephalus
E vascular dementia

Question 25

A 79-year-old woman complained of an urgent feeling of the need to pass urine, on some occasions followed by uncontrolled passage of urine. Her symptoms had gradually worsened over several months. She had a history of hypertension, had sustained two strokes and was taking amlodipine 5 mg daily.

Physical examination revealed no significant abnormalities apart from slight hypertonia and hyperreflexia in her left arm and leg. Her mini-mental state examination score was 22/30. Urinalysis was normal.

What is the most likely explanation for this pattern of incontinence?

A an S4 sensory nerve root lesion
B detrusor sphincter dyssynergia
C pelvic floor weakness
D retention of urine with overflow incontinence
E uninhibited neurogenic incontinence

Question 26

A 72-year-old woman presented with a 2-month history of deteriorating mobility. She had been struggling to manage in her warden-controlled flat, and had fallen a couple of times. She complained of frequent muscle cramps.

On examination, she had power 4/5 in all limbs with generalised wasting which was particularly marked in the small muscles of her hands. She had some fasciculation in both legs. Sensation was intact. Her speech was normal.

What is the most likely diagnosis?

A Guillain–Barré syndrome
B motor neurone disease
C myasthenia gravis
D myopathy
E peripheral neuropathy

Question 27

A 77-year-old woman had a nasogastric tube inserted 2 days after a stroke because she was unable to swallow safely. She had a history of alcohol abuse. Feeding was started at a rate of 40 kcal/kg/day. Two days later, she became acutely confused, and developed diplopia and rotational vertigo.

What is the most likely reason for the new symptoms?

A alcohol withdrawal syndrome
B hyponatraemia
C metabolic acidosis
D re-feeding syndrome
E thiamine deficiency

Question 28

An 89-year-old woman with type 2 diabetes mellitus was admitted for further management of bilateral leg ulcers that were foul-smelling and painful. On examination, the ulcers were located over the medial aspect of each lower leg, with the left extending over the medial malleolus. The right-sided ulcer measured 7 cm 4 cm, the left 9 cm 4 cm. The lower legs were oedematous (non-pitting). The overlying skin was thin, dry and scaly and there were areas of brown pigmentation. On the left side, there was evidence of scarring, attributed to a previous healed ulcer. The edge of the new ulcer was irregular. Both ulcers were shallow, and contained a small amount of necrotic tissue and a moderate amount of extremely malodorous exudate.

What is the most likely underlying cause of the ulcers?

A arterial insufficiency
B pressure ulceration
C pyoderma gangrenosum
D vasculitis
E venous insufficiency

Question 29

An 85-year-old man was admitted with vomiting. He had a past history of locally invasive carcinoma of the transverse colon, which had been partially resected a year earlier. An X-ray of the abdomen confirmed large bowel obstruction and a CT scan showed extensive malignant disease. A decision was made to treat him symptomatically and not to subject him to further surgery.

What is the most effective drug treatment for the patient's vomiting in this situation?

A cyclizine
B granisetron
C haloperidol
D levomepromazine
E octreotide

Question 30

An 83-year-old man with a history of polymyalgia rheumatica and a Colles' fracture was advised to take prednisolone and strontium ranelate.

What is the most appropriate advice about when he should take strontium ranelate?

A at bedtime at least 2 h after eating
B in the evening just before eating
C in the morning 2 h after eating
D in the morning just before eating
E once daily whenever the patient wishes

Question 31

An 80-year-old professional man attended the clinic because of declining memory. His wife reported that he had become withdrawn over the past month and changed from his usual extroverted character. He did not have a past history of depression.

On examination, his mini-mental state examination score was 25/30. He complained about memory loss and replied “I don’t know” to a number of questions he was asked.

Which feature would most strongly suggest a diagnosis of depression rather than dementia?

A change of character
B no previous history of depression
C poor insight into memory loss
D rapid progression of symptoms
E symptoms worse in the evening

Question 32

A 93-year-old woman developed unilateral deafness of sudden onset, numbness on one side of her face and vertigo.

On examination, there was mild unilateral facial weakness. Otoscopy was normal.

What is the most likely diagnosis?

A acoustic neuroma
B anterior inferior cerebellar artery thrombosis
C herpes simplex infection
D polyarteritis nodosa
E Waldenström’s macroglobulinaemia

Question 33

A 76-year-old woman, with a history of previous stroke and long-standing uncontrolled hypertension, was referred to the outpatient clinic for advice on her blood pressure treatment.

Six blood pressure recordings at home and at her surgery within the last 2 weeks were 188–216/103–112 mmHg.

Her therapy comprised ramipril, atenolol and amlodipine.

Investigations:

serum urea	7 mmol/L (2.5–7.0)
serum creatinine	86 µmol/L (60–110)
serum sodium	138 mmol/L (137–144)
serum potassium	2.9 mmol/L (3.5–4.9)

Which non-prescribed product is most likely to be contributing to the treatment failure?

A antacids
B liquorice
C non-steroidal anti-inflammatory drugs
D pseudoephedrine
E table salt

Question 34

A 93-year-old man complained of light-headedness and falls during the day. He had a history of hypertension and type 2 diabetes mellitus. His medication included bendroflumethiazide, amlodipine and gliclazide.

On examination, his heart sounds were normal, and his blood pressure was 145/89 mmHg sitting and 124/80 mmHg upright after 3 minutes. The tone, power and reflexes in all of his limbs were normal.

Investigations:

serum sodium	138 mmol/L (137–144)
serum potassium	5.0 mmol/L (3.5–4.9)
serum creatinine	115 µmol/L (60–110)
plasma thyroid-stimulating hormone	0.1 mU/L (0.4–5.0)
plasma free T4	13.2 pmol/L (10.0–22.0)
plasma free T3	7.5 pmol/L (3.0–7.0)
24-h cardiac monitoring	symptomatic episodes of supraventricular tachycardia

What is the most appropriate treatment?

A amiodarone
B carbimazole
C fludrocortisone
D midodrine
E verapamil

Question 35

A 73-year-old man presented with a 4-month history of tiredness. He was not taking any medication. His examination was normal.

Investigations:

serum sodium	119 mmol/L (137–144)
serum potassium	3.9 mmol/L (3.5–4.9)
serum creatinine	106 µmol/L (60–110)
plasma osmolality	255 mosmol/kg (278–300)
urinary osmolality	405 mosmol/kg (350–1000)
urinary sodium	32 mmol/L

What is the most appropriate next investigation?

A chest X-ray
B CT scan of head
C short tetracosactide (Synacthen®) test
D thyroid function tests
E water deprivation test

Question 36

A 70-year-old man presented with a 3-year history of unsteadiness, recurrent falls and difficulty with gait initiation. For the past year, he had noticed urgency of micturition with incontinence.

On examination, he walked with a wide base, took small steps and had difficulty turning. Reflexes were normal and he had no sensory deficit. His mini-mental state examination score was 28/30.

A diagnosis of normal pressure hydrocephalus was made.

What is the best investigation to determine whether he would benefit from a cerebrospinal fluid shunt?

A gait analysis
B lumbar puncture ‘tap test’
C MR scan of brain
D PET scan of brain
E radionuclide cisternography

Question 37

A 73-year-old woman with type 2 diabetes mellitus had been admitted several times during the previous year with recurrent urinary tract infections. She was readmitted with fever and intractable back pain.

On examination, her temperature was 37.5°C and her blood pressure was 130/85 mmHg.

Investigations:

Haemoglobin	10.6 g/dL (11.5–16.5)
white cell count	13.5 10^9/L (4–11)
platelet count	264 10^9/L (150–400)
serum sodium	143 mmol/L (137–144)
serum potassium	4.4 mmol/L (3.5–4.9)
serum creatinine	123 µmol/L (60–110)
serum C-reactive protein	267 mg/L (<10)
urinalysis	protein trace
X-ray of spine	degenerative changes

What investigation is most likely to confirm the diagnosis?

A isotope bone scan
B MR scan of spine
C serum electrophoresis
D ultrasound scan of renal tract
E urine culture

Question 38

A 73-year-old woman had a symptomatic anaemia. No abnormalities were found on physical examination.

Investigations:

haemoglobin	9.4 g/dL
white cell count	10 $x10^9$/L (4-11)
platelet count	650 $x10^9$/L (150-400)
MCV	79fL (80-98)
MCH	25 pg (28-32)
blood film	9% hypochromic cells
upper gastro-intestinal endoscopy	normal
duodenal biopsy	normal
colonoscopy	normal
urine microscopy	no red blood cells
anti-endomysial antibodies	negative

What is the most appropriate management for this patient at this stage?

A 3 months of oral iron supplementation
B blood transfusion followed by oral iron supplementation
C investigate small bowel
D oral iron supplementation until the haemoglobin returns to normal and for a further 3 months afterwards
E oral iron supplementation until the haemoglobin returns to normal and for a further 3 months afterwards, review and investigate further if haemoglobin falls

Question 39

An 80-year-old woman with a history of stroke and rheumatoid arthritis is admitted to hospital. On examination she has changes of chronic rheumatoid arthritis, a residual hemiparesis and appears thin and malnourished. An assessment of her risk of pressure sores is undertaken.

What is the most appropriate rating scale to assess her risk of pressure sores?

A Barthel
B Early Warning Score
C Malnutrition Universal Screening Tool
D Modified Rankin
E Waterlow

Question 40

An 75-year-old man who is a retired building labourer had a 3-year history of exertional breathlessness and dry cough. He described himself as having had chest problems since he was a teenager. He had pulmonary tuberculosis 40 years earlier treated with standard therapy. He smoked 30 cigarettes a day and his hobbies included racing pigeons.

On examination he had finger clubbing and lung crackles to his mid zones

Investigations:

Chest X-ray: irregular pulmonary opacities at both lung bases and multiple calcified pleural plaques including on the diaphragmatic pleural surface

What is the most likely diagnosis?

A asbestosis

B bronchiectasis

C extrinsic allergic alveolitis

D idiopathic pulmonary fibrosis

E sarcoidosis

Question 41

Over the next 50 years the proportion of older people in the poulation will rise significantly.

What is the projected increase in the number of people aged over 65 years in the UK over that time period?

A 20%
B 40%
C 60%
D 80%
E 100%

Question 42

An 82-year-old woman who has had type 2 diabetes mellitus for 7 years is reviewed in clinic. She has chronic kidney disease. She is currently on diet alone but recently has felt tired and developed some nocturia. Her blood pressure is 156/92 and her body mass index 26.

Investigations:

Haemoglobin A1c	8.9% (3.8-6.4)
Creatinine	189 umol/L (60-110)

Which of the following is the most appropriate treatment for her ?

A chlorpropramide
B glibenclamide
C gliclazide
D metformin
E tolbutamide

Question 43

An 86-year-old woman who lives alone in the community had a previous history of hip fracture and was diagnosed with osteoporosis folowing a Dexa scan

What treatment is most appropriate for her?

A calcium and vitamin D
B calcium and vitamin D and a bisphosphonate orally
C intravenous bisphosphonate
D oral bisphosphonate
E raloxifene

Question 44

An 84-year-old woman with type 2 diabetes mellitus was on a combination of metformin and mixtard insulin. She had noticed she was becoming forgetful for recent events over the past 2 years.

On examination she had mild sensory peripheral neuropathy and background retinopathy. Blood pressure was 146/78. Mini mental state examination 20/30

Investigations

serum sodium	143 mmol/L (137-144)
serum potassium	4.4 mmol/L (3.5-4.9)
serum creatinine	123 umol/L (60-110)
serum urea	8.0 umol/L (2.5-7.0)
haemoglobin A1c	6.5% (3.8-6.4)
serum cholesterol	7.4 mmol/L (<5.2)
urinalysis	normal
CT Head Scan	atrophic change with some small vessel disease

What is the most appropriate treatment to slow her cognitive decline?

A galantamine
B increase insulin dosage
C ramipril
D reduce insulin dosage
E simvastatin

Question 45

The proportion of older people in the UK will increase over the next 50 years, many of whom will be frail.

What is the projected increase in care-home residents (residential and nursing homes) in the UK over the next 50 years ?

A 50%
B 100 %
C 150%
D 200%
E 300%

Question 46

A 71-year-old man, with a current driving licence, was admitted with an an unwitnessed, brief loss of consciousness whilst sitting in his garden. He had no recollection of the event. A similar episode had occurred 3 months earlier. He was otherwise in good health and had no significant past history. Physical examination was unremarkable.

Investigations:

ECG	left bundle branch block (no previous ECG record for comparison)
serum Troponin I	normal

If no cause is found and he has no more episodes when is he allowed to drive a car ?

A no restriction on driving
B after 1 week
C after 4 weeks
D after 6 months
E after 12 months

Question 47

An 84-year-old woman attended outpatient clinic with a history of episodic vertigo lasting approximately 15 seconds in duration and associated nausea. On examination when a Dix-Hallpike test was undertaken she had upward and torsional nystagmus which occurred immediately on lowering her head over the side of the bed and which did not fatigue.

What is the best treatment for this lady?

A Barbeque manoeuvre
B betahistine 8 mg three times a day
C Epley manoeuvre
D patient education and reassurance
E Semont manoeuvre

Question 48

A 68-year-old woman presented with a 2-year history of widespread joint pain, Raynaud's phenomenon and recurrent lower limb ulceration. On examination, she had purpuric lesions on her legs with numerous punched-out ulcers. She had reduced sensation in a stocking distribution, and absent ankle and knee reflexes. The plantar reflexes were flexor.

Investigations:

haemoglobin	10.8 g/dL (11.5-16.5)
white cell count	10.2 10^9/L (4.0–11.0)
platelet count	450 10^9/L (150–400)
erythrocyte sedimentation rate	89 mm/1st h (<30)
serum creatinine	130 µmol/L (60–110)
serum alanine aminotransferase	54 U/L (5–35)
serum alkaline phosphatase	192 U/L (45–105)
serum complement C3	45 mg/dL (65–190)
serum complement C4	5 mg/dL (15–50)
anti-neutrophil cytoplasmic antibodies	negative
antinuclear antibodies	negative
rheumatoid factor	150 kIU/L (<30)

ulcer biopsy small vessel leucocytoclastic vasculitis

What is the most likely diagnosis?

A microscopic polyangiitis
B mixed essential cryoglobulinaemia
C rheumatoid vasculitis
D systemic lupus erythematosus
E Wegener's granulomatosis

Question 49

A 70-year-old woman was referred for investigation of iron deficiency anaemia. She was on digoxin 0.125mg on and warfarin for atrial fibrillation.
On examination was in atrial fibrillation with a ventricular rate of 70 beats per minute. No other abnormalities were found.

Investigations:

haemoglobin	10.6 g/dL (11.5-16.5)
international normalised ratio	2.0 (<1.4)
endomysial antibodies	positive
echocardiogram	normal left ventricular systolic function no valvular abnormality

An upper gastro-intestinal endoscopy with duodenal biopsy is planned

What is the most appropriate plan for anticoagulation before endoscopy?

A no change in therapy
B stop warfarin
C substitute aspirin for warfarin
D substitute clopidogrel for warfarin
E substitute low-molecular-weight heparin for warfarin

Question 50

A 65-year-old woman presented with a 3-day history of haemoptysis. She had a 4-month history of lethargy and 3 kg weight loss. On examination she was pale and had red eyes bilaterally, but there were no other abnormalities.

Investigations:

haemoglobin	8.9 g/dL (11.5–16.5)
white cell count	13.6 10^9/L (4.0–11.0)
eosinophil count	0.8 10^9/L (0.04–0.40)
platelet count	389 10^9/L (150–400)
serum creatinine	389 µmol/L (60–110)
serum C-reactive protein	293 mg/L (<10)
chest X-ray	bilateral patchy shadowing in lower zones
Urinalysis	protein 2+, blood 3+.

What is the most likely diagnosis?

A anti-glomerular basement membrane disease
B Churg–Strauss syndrome
C systemic lupus erythematosus
D tubulointerstitial nephritis with uveitis
E Wegener's granulomatosis