



# Stage 2 Competency Based Assessment Preparation

October 2011

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## Preamble

The Competency Based Evaluation developed and administered by the CCEA provides results which are used to determine a candidate's competency against current Australian "entry level" chiropractic competencies. The Chiropractic Board of Australia utilises the CCEA's Competency Based Evaluation to determine a candidate's eligibility for registration.

**Candidates are reminded that successful completion of the CCEA's Competency Based Evaluation may not entitle them to automatic registration. The Board may require candidates to complete a local ethics and jurisprudence assessment prior to registration being granted.**

After candidates have been advised that their Stage 1 – Desktop Audit has been approved, they are eligible to apply to sit the Stage 2 – Competency Based Assessment.

## Stage 2 – Competency Based Assessment Format

The Stage 2 – Competency Based Assessment is 11¼ hours in length and consists of the following three (3) parts:

- Part 1 – Written Basic Competency (exemptions apply – see below);
- Part 2 – Written Clinical Competency; and
- Part 3 – Practical Clinical Competency.

## Purpose of the Stage 2 – Competency Based Assessment

To practice chiropractic in Australia, a person must first be registered with the Chiropractors Board of Australia. The Board is responsible for protecting the public and upholding standards of practice within the chiropractic profession and as such, the Board requires persons trained outside of Australia and New Zealand to have their competency assessed. The CCEA has been devolved this responsibility by the Chiropractic Board of Australia, therefore the purpose of the Stage 2 – Competency Based Assessment is to ensure that candidates are safe and competent to practise in Australia.

The Stage 2 – Competency Based Assessment is designed to:

- determine a candidate's overall competency;
- resemble as closely as possible the experiences of chiropractic practice within the constraints of cost and time;
- provide the candidate with an appropriate setting in which to affectively demonstrate their knowledge, skills and abilities; and
- minimise stress.

An exemption for the Part 1 – Written Basic Competency may be granted to candidates who graduated from a Council on Chiropractic Education (CCE) accredited program, however all candidates trained outside of Australia or New Zealand will be required to successfully complete **both** Parts 2 and 3 regardless of where they graduated.

**Disclaimer**

These are sample questions only. The questions presented are intended solely to portray some of the styles of questions and general content areas that may appear in an actual examination; they are not questions that will appear in an actual examination.

**SAMPLE QUESTIONS**

Part 1 – Written Basic Competency  
ANATOMY AND PHYSIOLOGY

*Section 1 - Sample Multiple Choice Questions in Anatomy.*

Choose the most correct alternative. Circle the letter corresponding to your choice.  
(The correct answer is marked by \*).

1. All of the following structures pass deeply to the flexor retinaculum EXCEPT the:
  - A. flexor digitorum profundus to the little finger
  - B. flexor digitorum superficialis
  - C. flexor pollicis longus
  - D. median nerve
  - E. ulnar artery \*
  
2. The ulnar nerve innervates which of the following muscles of the thumb?
  - A. Abductor pollicis brevis
  - B. Abductor pollicis longus
  - C. Deep head of the flexor pollicis brevis \*
  - D. Opponens pollicis
  - E. Superficial head of the flexor pollicis brevis
  
3. All of the following structures are located at the approximate level of the 4th or 5th thoracic vertebra EXCEPT the
  - A. bifurcation of the trachea
  - B. costosternal articulations of the 2nd ribs
  - C. nipple in the male \*
  - D. manubriosternal joint
  - E. superior extent of the pericardial cavity
  
4. Movement of the ribs during relaxed thoracic expiration involves all of the following EXCEPT
  - A. contraction of the intercostal portion of the internal intercostal muscles \*
  - B. decrease of the transverse thoracic diameter
  - C. inward rotation of the ribs
  - D. movement at the costovertebral joints
  - E. release of stored energy within the costal cartilages
  
5. The muscles of the back receive motor innervation from
  - A. dorsal primary rami \*
  - B. dorsal roots
  - C. posterior branches of lateral perforating nerves
  - D. ventral primary rami
  - E. none of the above

6. Pain of visceral origin is not referred to dermatomes L3 through S1 because there is an absence of:
  - A. paravertebral sympathetic ganglia below L2
  - B. sympathetic efferent (motor) supply to spinal nerves L3-S1
  - C. visceral afferents in the lumbar splanchnic nerves
  - D. visceral afferents in the sacral section of the spinal cord
  - E. white rami communicantes to spinal nerves L3-S1 \*
  
7. Chronic traction on the ulnar nerve at the elbow may be relieved by a medial epicondyle osteotomy whereby the condyle is removed without disturbing the muscular attachments; the nerve is then relocated anteriorly to the humerus, and the medial epicondyle is reattached. Which of the following muscles originates from the medial epicondyle and is, therefore, directly involved in this procedure?
  - A. Brachioradialis
  - B. Extensor carpi ulnaris
  - C. Flexor carpi radialis \*
  - D. Flexor pollicis longus
  - E. Supinator
  
8. A characteristic of the intercostal neurovascular bundle that makes it particularly susceptible to injury from a fractured rib is that it lies
  - A. behind the superior border of the rib
  - B. beneath the inferior border of the rib \*
  - C. between external and internal intercostal layers
  - D. directly behind the midpoint of the rib
  - E. halfway between two adjacent ribs
  
9. All of the following structures pass through the lesser sciatic foramen EXCEPT the
  - A. internal pudendal artery
  - B. internal pudendal vein
  - C. piriformis muscle \*
  - D. pudendal nerve
  - E. tendon of the obturator internus muscle
  
10. Circumduction is a movement that involves
  - A. abduction/adduction and flexion/extension \*
  - B. flexion/extension and medial rotation/lateral rotation
  - C. medial rotation/lateral rotation and abduction/adduction
  - D. one axis of rotation
  - E. ball-and-socket joints only

### *Section 2 - Sample True or False Questions in Anatomy*

For each of the following statements indicate whether they are True or False. Please use the words 'True' and 'False' or the letters 'T' and 'F'.

11. The stomach refers pain via the greater splanchnic nerve to the epigastric region. T
12. The apex of the heart is normally located deeply to the 5th intercostal space in the left midclavicular line. T
13. The Anterior primary rami pass through the posterior sacral foramina. F
14. The sharp searing mid back pain is explained by stimulation of neurones travelling along the lumbar splanchnic nerves. F
15. In the adult vertebral column, the spinal cord usually terminates between L1 and L2. T
16. The vertebral venous plexus is found in the epidural space. T
17. The superficial inguinal ring is a perforation in the internal oblique muscle. F
18. A spinal segment is defined as that region of the spinal cord that sends rootlets to a particular spinal nerve. T
19. Paralysis of the superior gluteal nerve results in an inability to fully extend the hip joint on the affected side. F
20. The dura mater terminates caudally as the coccygeal ligament. T

*Section 3 - Sample Short Answer Questions in Anatomy*

21. Describe the anatomical pathway which conveys sensory information from the hallux to the cerebral cortex. You should name at least 5 structures.
22. Name five muscles which attach to the spinal column and indicate their primary motor action on the spine.

*Section 4 - Sample Multiple Choice Questions in Physiology.*

Choose the most correct alternative. Circle the letter corresponding to your choice.

23. Which one of the following is incorrectly paired:
  - A. trained athlete: large end-systolic ventricular volume
  - B. vasoconstriction: decreased blood volume venous system
  - C. vasodilatation: decreased blood volume arterial system
  - D. inspiration: increased stroke volume (SV) left ventricle \*
  - E. increased blood volume: atrial natriuretic factor
24. Which of the following substances does not take part in the human urea cycle?
  - A. arginase
  - B. aspartate
  - C. argininosuccinate
  - D. ornithine transcarbamoylase
  - E. urease \*
25. The cardiac output:
  - A. decreases as the arterial pressure increases from 80 to 170 mm Hg
  - B. is constant as the end-diastolic volume(EDV) increases from 140 to 200ml
  - C. is constant as the right atrial pressure (RAP) increases from 0 to 5 mm Hg
  - D. is unchanged by vagal stimulation of the heart
  - E. is increased by sympathetic stimulation of the heart \*
26. Which statement about aspartate transcarbamoylase is incorrect?
  - A. it obeys Michaelis-Menten kinetics \*
  - B. its allosteric inhibitor is CTP
  - C. it catalyzes the committed step of pyrimidine biosynthesis
  - D. it is a multiple-subunit enzyme
  - E. all of the above are incorrect
27. Choose the incorrect statement about ketone bodies:
  - A. during prolonged starvation, the brain adapts to using ketone bodies as a fuel
  - B. excess acetone production during ketoacidosis is not itself highly dangerous
  - C. B-Hydroxybutyrate can be used as a fuel for fatty-acid biosynthesis
  - D. acetoacetate can be indirectly converted to glucose during prolonged starvation \*
  - E. all of the above statements are incorrect
28. Identify the incorrect value: In an adult 70 kg man, blood flow at rest through:
  - A. skeletal muscles = 1000ml/min
  - B. liver = 1500 ml/min
  - C. brain = 750 ml/min
  - D. bones = 400 ml/min
  - E. coronary vessels = 600 ml/min \*

29. With respect to body temperature regulation
- A. set-point of the temperature regulation mechanism is 37C
  - B. core temperature normally is 37C
  - C. when core temperature rises above or falls below 37C, temperature control mechanisms attempt to bring core temperature back to set-point level of 37C
  - D. when skin temperature rises from 30-39C the set-point for sweating is adjusted slightly below 37C
  - E. all of the above \*
30. HMG-CoA:
- A. from the cytoplasm is converted to ketone bodies
  - B. formation is the rate-controlling step in cholesterol biosynthesis
  - C. from the mitochondria can be used in cholesterol biosynthesis
  - D. is formed from acetoacetyl-CoA plus acetyl-CoA \*
  - E. is the coenzyme in haemoglobin synthesis
31. During the period of isometric (isovolumetric) contraction of the ventricles:
- A. the P wave of the ECG is being inscribed
  - B. the 4th heart sound is being produced
  - C. the aortic valve is closed and the mitral valve is open
  - D. retrograde flow occurs in the proximal aorta
  - E. the aortic pressure is falling \*
32. When an unclad individual is exposed to an ambient temperature of 21oC the percentage of heat lost by:
- A. radiation and conduction is about 70 \*
  - B. respiration is about 15
  - C. vaporisation of insensible water is about 50
  - D. urination and defaecation is about 10
  - E. none of the above

*Section 5 - Sample True or False Questions in Physiology.*

For each of the following statements indicate whether they are True or False. Please use the words 'True' and 'False' or the letters 'T' and 'F'.

33. A trained athlete is expected to have a large end-systolic ventricular volume. T
34. In the vascular bed the resistance vessels are the arterioles, metarterioles and precapillary sphincters. T
35. In terms of heart function, cardiac efficiency increases when pressure work increases. F
36. During exercise the increased unloading of O<sub>2</sub> to the tissues (ie increased coefficient of O<sub>2</sub> utilisation) is due most importantly to increased PCO<sub>2</sub> in tissue fluid. F
37. A 70 kg man at rest consumes 250 ml O<sub>2</sub>/minute. T
38. The O<sub>2</sub> -dissociation curve is shifted to the right by high altitude after adaptation. T
39. During strenuous exercise in which alveolar ventilation increases 15-fold the plasma lactic acid remains unchanged. F
40. With respect to blood gases decreased VA = decreased Pa O<sub>2</sub> + decreased PaCO<sub>2</sub>. F
41. In restrictive lung disease the decreased PaO<sub>2</sub> is due mainly to diffusion impairment. F
42. In restrictive lung disease the VC is reduced. T

*Section 6 - Sample Short Answer Questions in Physiology*

43. Outline how the structure of kidney allows it to regulate the concentration of substances in the blood. (Ten lines of text should suffice.)
44. Identify the key events and substances active in nerve synapse. (Ten lines and/or a labelled drawing may suffice.)

BIOCHEMISTRY, PATHOLOGY, NUTRITION AND COMMUNITY MEDICINE

Section 1 - Sample Multiple Choice Questions in BPN&C.

Choose the most correct alternative. Circle the letter corresponding to your choice.

1. Coenzymes:
  - A. alter the equilibrium of reactions
  - B. are consumed by reactions
  - C. usually consist of polypeptides
  - D. often transfer activated groups \*
  - E. all of the above
  
2. In healthy, non-ischaemic cells, the rate of electron transport is governed by which factor?
  - A. NADH
  - B. ADP \*
  - C. ATP
  - D. Pi
  - E. Acetyl-CoA
  
3. Risk factors for lung cancer include all of the following EXCEPT
  - A. smoking
  - B. occupational exposure
  - C. air pollution
  - D. radiation
  - E. family history \*
  
4. All of the following substances are associated with both abuse and dependence EXCEPT
  - A. cocaine
  - B. cannabis
  - C. alcohol
  - D. PCP \*
  - E. opioids
  
5. All of the following statements concerning iron deficiency anaemia are true EXCEPT
  - A. a hypochromic anaemia is present
  - B. the cause may be a caecal adenocarcinoma
  - C. the serum iron concentration is low
  - D. the serum iron-binding capacity is high
  - E. the red cells are larger than normal (macrocytic) \*
  
6. Sickle cell disease results in each of the following complications EXCEPT
  - A. leg ulcers
  - B. spleen infarction
  - C. cholelithiasis
  - D. pancreatitis \*
  - E. osteomyelitis
  
7. Motor vehicle-related mortality rate is greatest among which of the following age-groups?
  - A. <15 years
  - B. 15-24 years \*
  - C. 25-44 years
  - D. 45-64 years
  - E. >65 years

8. Health care workers are at risk for developing which of the following diseases because of occupational exposure?
  - A. Silicosis
  - B. Byssinosis
  - C. Bagassosis
  - D. Hepatitis \*
  - E. Brucellosis
  
9. Mobilisation and metabolic activation of macrophages in the inflammatory response are regulated by which of the following chemical mediators?
  - A. Leukotrienes
  - B. Lymphokines \*
  - C. Proteases
  - D. Prostaglandins
  - E. Kinins
  
10. Which of the following tumour markers has been associated with the testis yolk sac tumour?
  - A. Carcinoembryonic antigen
  - B. Acid phosphatase
  - C. Human chorionic gonadotropin
  - D. Alpha-foetoprotein \*
  - E. Alpha 1-antitrypsin

*Section 2 - Sample True or False Questions in BPN&C.*

For each of the following statements indicate whether they are True or False. Please use the words 'True' and 'False' or the letters 'T' and 'F'.

11. The leading cause of death among school children is congenital anomalies. F
12. An HIV-1 infected mother has a 90% chance of transmitting the virus to her foetus. F
13. The primary difference between Niemann-Pick disease type 1 and type II is that type I disease is due to an absence of sphingomyelinase and the metabolic defect for type II is unknown. T
14. Approximately 50% of the adolescent population 16-17 years of age reports some alcohol use in the past month. T
15. The most common cause of occupational injury deaths is related to agricultural equipment. F
16. Syphilitic arterial aneurysms typically involve endarteritis of the vasa vasorum. T
17. The primary predisposing factor for actinic keratosis is sunlight exposure. T
18. The classic histologic lesion of acute rheumatic fever is the Mallory's body. F
19. Pyridoxal phosphate is derived from vitamins. T
20. The liver is a significant target of lead toxicity. F

*Section 3 - Sample Short Answer Questions in BPN&C*

21. What are the indications of Vitamin A hypervitaminosis? Name five.
22. Outline the support structures within our society you would recommend to a patient who sought advice on the termination of her pregnancy.

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**SAMPLE QUESTIONS**

**Part 2 – Orthopaedics and Neurological Diagnosis**

A number of typical case histories will be presented along with certain information regarding results of tests, laboratory workups or imaging.

Candidates will be asked to provide opinions regarding:

- *any other tests that may be indicated*
- *provisional list of diagnoses*
- *differential diagnosis*
- *treatment or management*
- *potential contraindications or complications*

Cases may involve simple or complex spine and peripheral conditions that may typically present to a chiropractor.

Questions may involve short answer, multi-choice or mini-essay formats.

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**SAMPLE QUESTIONS**

**Part 2 – Differential Diagnosis / Organ Systems**

Organ Systems

**CASE 1**

A 55 year old lady presented with bloating and hot flushes. She was an average sized lady who experienced some indigestion, a little burning pain in the lower sternum.

- What is the most likely explanation of her bloating, hot flushes & lower sternal pain?
- What differential diagnoses should also be considered with pain in the lower sternal region?
- What diagnostic tests would be appropriate, both within and outside your consulting rooms?
- What are two related organic conditions that can be associated with the lower sternal pain condition? What are pathological mechanisms by which they may be related?
- What treatment would be relevant both medically and from a complementary medicine perspective with regard to the hot flushes and sternal pain?

**CASE 2**

A 48 year old lady presented with a little dyspnea and slightly edematous ankles. She was an average sized lady who experienced some tiredness and lethargy over the last 3 years. As a child she did remember being very sick and having antibiotics.

- What is the most likely explanation of her edema and dyspnea?
- What differential diagnoses should also be considered with presentation?
- What diagnostic tests would be appropriate, both within and outside your consulting rooms?
- What are two related organic conditions that can be associated with this diagnosis? What are pathological mechanisms by which they may be related?
- What treatment would be relevant both medically and from a complementary medicine perspective?

**CASE 3**

A 13 year old adolescent presented with some left sided abdominal pain. He was a thin and although being well was found to have an enlarged spleen on diagnostic ultrasound.

- What is the most likely explanation of his clinical presentation?
- What different causes are there of an enlarged spleen?
- Apart from diagnostic ultrasound, what diagnostic tests would be appropriate, both within and outside your consulting rooms?
- What are two related pathology can be associated with this diagnosis? What are pathological mechanisms by which they may be related?
- What treatment would be relevant both medically and from a complementary medicine perspective?

#### CASE 4

A 72 year old man presented with tiredness and some weight loss. The weight loss was gradual over the last 18 months. He does explain that he gets up at night to go to the toilet at least 2 or 3 times.

- What is the most likely explanation of his clinical presentation?
- What differential diagnoses should also be considered with these symptoms?
- What organ systems examination and what diagnostic tests would be appropriate, both within and outside your consulting rooms?
- What are two complications that can occur from this condition? What are pathological mechanisms by which they may be related?
- What treatment would be relevant both medically and from a complementary medicine perspective?

#### CASE 5

A 45 year old lady presented with abdominal pain and some diarrhea. She has not experienced any bleeding from the bowel but she does have significant bloating.

- What is the most likely explanation of her clinical presentation?
- What differential diagnoses should also be considered with presentation?
- What diagnostic tests would be appropriate, both within and outside your consulting rooms?
- What aggravating factors are commonly seen with this condition?
- What treatment would be relevant both medically and from a complementary medicine perspective?

#### CASE 6

A 19 year old adolescent presented with a diffuse rash covering her face, neck and trunk and to a lesser degree her arms. The rash is characteristically itchy, small circular blisters with lesions of different maturities.

- What is the most likely explanation of her symptoms?
- What differential diagnoses need to be considered with this presentation?
- What examination or additional tests would be appropriate, both within and outside your consulting rooms?
- What are two related sequelae can be associated with this diagnosis? What are pathological mechanisms by which they may be related?
- What treatment would be relevant both medically and from a complementary medicine perspective?

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**SAMPLE QUESTIONS**

**Part 2 – Diagnostic Imaging**

Questions relate to diagnostic imaging of the musculoskeletal system, with emphasis to the spine. Questions relate mainly to plain film radiographs but also CT, MRI, Bone Scan and US are included. There are three types of questions used:

1. Knowledge questions
2. Application questions
3. Problem solving questions.

Knowledge questions generally contain the topic or condition within the stem, and choices will contain general information about that condition. These questions usually encompass “most common” and “percentage” questions. Example:

1. *A slipped capital femoral epiphysis is a classic example of a :*

- a) *Torus fracture*
- b) *occult fracture*
- c) *Salter-Harris Type V fracture*
- d) *Salter-Harris Type I fracture*

Application questions will generally not contain the identified topic or condition within the stem but will be found in the choices. This type of question may encompass “differentiate between” and imaging protocol questions. Example:

1. *A pars defect may be an incidental finding in the plain film evaluation of back pain. You are evaluating an elite athlete with back pain and observe an L4 pars defect. Your choice of imaging modality to next best evaluate if this pars defect is the painful lesion would be:*

- a) *T2-weighted magnetic resonance imaging (MRI)*
- b) *three-dimensional helical (reformation) computed tomograph (CT) scan*
- c) *planar bone scintigraphy (PBS)*
- d) *single-photon emission computed tomography (SPECT)*

Problem solving questions may offer an image description then a question asked. The description, and any other clinical data, will be sufficient to allow identification of the condition or finding. It is a combination of the other two question formats. Example:

1. *A 24 year old male, heroin addict presents with acute pain in his right sacroiliac joint and cervical spine. Radiographs demonstrate considerable reactive sclerosis in the inferior portion of the right sacroiliac joint with destruction of the cortical bone of the sacrum and ilium. There is loss of the C4-5 disc space with loss of definition of the adjacent end-plates. Radionuclide bone scans reveals areas of increased activity in the areas of the described lesions. Aspiration of the sacroiliac joint and culturing is most likely to reveal which organism:*

- a) *staphylococcus aureus*
- b) *brucellosis abortus*
- c) *streptococcus*
- d) *pseudomonas*

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**SAMPLE QUESTIONS**

**Part 2 – Radiographic practice**

Typically 35 – 50 multi-choice questions are used.

Questions relate to diagnostic imaging of the musculoskeletal system, with emphasis to the spine. There are three types of questions used:

1. Knowledge questions
2. Application questions
3. Problem solving questions.

Knowledge questions generally contain the topic or condition within the stem, and choices will contain general information about that condition. These questions usually encompass “most common” and “percentage” questions. Example:

1. *The centring point for a lateral cervical spine view is:*

- C3
- C4
- C5
- C6

Application questions will generally not contain the identified topic or condition within the stem but will be found in the choices. This type of question may encompass “differentiate between” and imaging protocol questions. Example:

1. *Patient doses are reduced if:*

- *an air gap technique is employed*
- *a low kVp is used*
- *a long focal film distance (FFD) is used*
- *high resolution films are used*

Problem solving questions may offer an image description then a question asked. The description, and any other clinical data, will be sufficient to allow identification of the condition or finding. It is a combination of the other two question formats. Example:

1. *You are looking at an optimal radiograph of the lateral cervical spine. A grid was not used for this radiograph. How is it possible to obtain the radiograph without using a grid?*

- a) *a 180cm SID was used*
- b) *the “anode-heel” effect was utilized*
- c) *the OID of the cervical spine causes an air-gap to produce an effect similar to that of a grid*
- d) *the patient’s shoulders were depressed sufficiently to visualize the cervical spine without a grid*

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**SAMPLE QUESTION**

**Part 3 – Image Interpretation**

A number of short answer questions are posed for each image viewed.

Candidates have 2 minutes to view images and write answers.

Typical question examples are below:

**SLIDE 1**

(1.5 marks)

Do you consider this appearance to be congenital or acquired?

Describe 2 features that support your answer.

**SLIDE 2**

(2 marks)

This young man presented with a long history of low back pain.

What is your diagnosis?

Describe 2 features on this film that support your answer.

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**SAMPLE QUESTION**

**Part 3 – Radiographic Positioning**

**Chiropractic Radiographic Assessment- Practical Exam**

Card History		Assessor			
Series		Student name			
		Date			
Projection		Mark	/70		

Preparation					Comments	
History taking	Establishes ROI and referred areas		Previous imaging/treatments /history			
	Current history/Mechanisms		ROM/Limitations, etc			
	Type /behaviour of symptoms		/5			
Diagnostic Series	0	2	4	6	8	10
Patient Preparation	0		1		2	
Pregnancy Checked	Y		N		N/A	
KVp range	0		1		2	
Room Preparation	0		1			/20
Radiographic Examination					Comments	
Patient Comfort / Privacy	0		1			
Respiration / Patient Instructions	0		1			
Radiation protection	0		2		4	
FFD	0		1			
Immobilisation	0		1		2	
Tube and Bucky Centered	0		1			
					/10	

Image Quality						
Orientation (PA/AP)		Positioning Techniques				
FOV/ROI/ C.P		Rotation				
Tube Angle		Bucky				/30
Collimation	0	1	2	3		
Cassette Size / placement	0	1	2			
ID label / Placement	0	1	2			
Marker	0	1	2	3		/10
Total						/70
Penalties						
Incorrect Side examined	-20	Pregnancy Check Omitted		-30	Total Penalties	
Incorrect marker used	-20	Incorrect Projection performed		-20		

## VIVA EXAMINATION PROCESS

Candidates will be expected to turn up at least 15 minutes ahead of the starting time of the examination. It is wise to check with the Examination Coordinator prior to the exam to ensure that CCEA scheduled exam times are as published. It is possible that due to changes in Candidates being available, that the starting times may need to be altered. However every endeavour will be made to adhere to the published exam times. Candidates will be responsible for bringing with them the necessary physical examination equipment.

Candidates will assemble in a waiting area of the Clinic / Classroom setting, where the examination is to be undertaken. Candidates will usually have an opportunity to mix with each other, to review some notes and prepare mentally. The examination will begin with the Candidate reading a short case history. Candidates will have 10 minutes to read the case and will have an opportunity to write notes, such as differential diagnoses and points that are relevant to the examination during this reading time.

Candidates will be taken from the reading room into the Panel room, where there will be at least 3 Assessors present. The Assessors will include 1 chiropractic academic registered in Australia or New Zealand; 1 chiropractor registered in Australia or New Zealand; and 1 current chiropractic clinical assessor registered in Australia or New Zealand. The panel members will have an understanding as to what is expected in private practice and by a Chiropractic practitioner practicing in Australia. Within the panel room, the panel will ask questions and may prompt you to explain the pertinent history and missing information. You will be expected to identify what extra information you feel necessary in order to complete and adequate clinical history. Panel members will provide the candidate, on appropriate questioning, the answers necessary to complete the history. The Panellists will usually ask what sort of conditions you are considering during this section and you will be judged on your interpretation of the information and your questions to seek more information. This section will be marked as competent or incompetent.

Candidates will then be instructed to conduct an examination on a mock patient. This will involve assessing organ systems and the musculoskeletal examination. Candidates will be expected to utilize and be familiar with the equipment that is used to undertake the examination. Candidates will be expected to explain what they are doing, what they are looking to check and what a positive result would mean with regard to the case. During the examination of the mock patient the Panel will inform the candidate when a particular test should have been positive. The Panel will not advise the candidate of any test result should the candidate not perform the test. The Panel may ask the candidate to assess more than one involved region but time constraints may prevent the candidate from assessing all regions. Under such circumstances the candidate will not be penalised for failure to examine all involved regions. This section will be marked as competent or incompetent.

Following the physical examination candidates will be asked to provide a diagnosis(es) and what management would be appropriate for the patient. Again, this section is given a mark as competent or incompetent. This grade will be considered on the basis of the history taking and examination and what information was available to you to form a logical conclusion. An appropriate management plan will likely involve both musculoskeletal and systemic approaches in the care of that patient and will usually include practitioner-based care and self-care.

Candidates will then be asked to explain the management in more detail. This could involve identifying specific techniques that would be used on the patient. An adjusting table will be present and the technique may be asked to be demonstrated (without thrusting). Candidates will usually be asked to identify how frequently treatment would be required and for how long. The Panel will consider the appropriateness of the technique and patient safety. Candidates can expect to be asked how exercises would be taught to the patient, what nutritional supplementation would be appropriate, what ancillary procedures are pertinent and their value (including massage, traction, balance boards etc).

Finally candidates can expect to be asked questions with regard to prognosis, natural history of this type of condition, how treatment would affect the outcome etc. Some consideration may be given to how a candidate would promote their practice, how they would seek informed consent and the breadth of services that you have at your disposal.

The Panel Assessment will last 50 minutes and so the entire assessment will last approximately 60 minutes. At the conclusion of the assessment, all the papers will be collected.

**Disclaimer**

This is a sample question only. The question presented is intended solely to portray the style of questions and general content areas that may appear in an actual examination; it is not a question that will appear in an actual examination.

**SAMPLE QUESTION**

**PART 3 VIVA**

**Presenting Complaint**

A fit female 35 YO, presents to the clinic with a diagnosis of “scoleosis” from her medical practitioner. She has a history of “back” pain on exercise and headaches especially after exercising. Low back pain is localised to both sacroiliac joints. It used to be worse on the left and would radiate down the left anterior leg to the knee. However, since her medical practitioner has manipulated her it is now much easier. She has mid thoracic pain, especially on long sitting, and on lifting her infant daughter. This is localised to the mid thoracics and doesn’t radiate. She describes it as a sharp stabbing pain. She may wake with a headache, they are always worse after exercise. The headaches are at the base of the skull and across her shoulders. They may go to her temples bilaterally. She exercises 3 times a week and the worst discomfort follows a session of weight training. On a 10-point pain scale she rates her pain as 9/10 and states that while she is generally healthy (rates 8/10 for her health) her current problems interfere with sleep and her daily routine. She has had many different chiropractors over the last 20 years and was last x-rayed 10 years ago. She cannot remember any abnormalities from those films.

**General History**

A review of systems shows she is allergic to wheat milk and animal dander. She takes vitamin C along with a daily multivitamin and a calcium supplement. She takes no medications. Apart from childbirth she has not been hospitalised. She reports no problems with her heart or lungs, however suffers digestive problems in association with her allergies. She suffers dysmenorrhea and states she may have a hormonal imbalance.

**Assessment Findings**

A sitting physical examination revealed a weakness of the left triceps (3/5, where 5/5 is normal strength). All deep tendon reflexes were equal and brisk. Standing SI motion appeared normal. Supine, Straight Leg Raise was equal bilaterally at 80 degrees. Both FABERE Patrick and Gaenlens tests were normal. All muscles tested normally except the Quadriceps which were bilaterally under inhibited (6/5). Prone leg length appeared equal. Bilaterally Gluteus Maximus and Hamstring groups were weak, being rated as 3/5.

**Imaging Assessment**

X-rays were ordered.

The candidate will be given 10 minutes to read through this case, study the accompanying radiographs and to consider the following questions and write notes for themselves.

Is the information about the case adequate to be able to form a meaningful and safe management plan?

Do you need more verbal data?

Are further tests required?

What are your x-ray findings?

What is your working hypothesis/diagnosis?

What differentials should be considered?

What are your management options?

Which techniques would you use for the listings given?

Which segments would you adjust during the first visit?

What is your prognosis?

What would you do if the patient were worse after the first 6 visits?

What would you do if the patient were much better after the first 3 visits?

**Disclaimer**

This is a sample question only. The question presented is intended solely to portray the style of questions and general content areas that may appear in an actual examination; it is not a question that will appear in an actual examination.

**SAMPLE QUESTIONS**

**Part 3 – Technique**

**Question**

Your patient presents with upper cervical dysfunction appropriate for intervention by chiropractic adjustment. The clinical indicators suggest fixation specifically on the left between occiput and C1. Please demonstrate two approaches to the adjustment of this finding.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

How would you modify your technique for a 74 year old female patient who has a history of chiropractic adjustment about the neck?

Satisfactory / Not satisfactory

How would you modify your technique for a 9 year old male patient who has not previously been adjusted?

Satisfactory / Not satisfactory

**Question**

Your patient presents with cervicothoracic dysfunction appropriate for intervention by chiropractic adjustment. The clinical indicators suggest fixation specifically on the left between T1 and T2. Please demonstrate two approaches to the adjustment of this finding.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

How would you modify your technique for a 74 year old female patient who has a history of chiropractic adjustment about this region?

Satisfactory / Not satisfactory

How would you modify your technique for an elite 16 year old female gymnast?

Satisfactory / Not satisfactory

**Question**

Your patient presents with thoracolumbar dysfunction appropriate for intervention by chiropractic adjustment. The clinical indicators suggest fixation specifically on the left between T12 and L1. Please demonstrate two approaches to the adjustment of this finding.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

How would you modify your technique for a 74 year old female patient who has a history of chiropractic adjustment about this region?

Satisfactory / Not satisfactory

How would you modify your technique for a 14 year old male patient who has not previously been adjusted.

Satisfactory / Not satisfactory

**Question**

Your patient presents with low back and pelvic dysfunction appropriate for intervention by chiropractic adjustment. The clinical indicators suggest fixation specifically on the right between L5 and S1. Please demonstrate two approaches to the adjustment of this finding.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

How would you modify your technique for a 57 year old male patient who has a history of chiropractic adjustment about the pelvis?

Satisfactory / Not satisfactory

How would you modify your technique for a 19 year old female patient who reports she may be pregnant?

Satisfactory / Not satisfactory

**Question**

Your patient presents with shoulder and neck pain with headache appropriate for intervention by soft tissue technique. The clinical indicators suggest active trigger points in the left splenius capitis and left upper and middle trapezius. Please demonstrate your approach to the soft tissue treatment of these findings

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

How would you modify your technique for a 74 year old female patient?

Satisfactory / Not satisfactory
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How would you modify your technique for a 9 year old male patient?

Satisfactory / Not satisfactory
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**Question**

Your patient presents with an extremity demonstrating clinical findings that indicate adjustment as a preferred intervention Please select an extremity and a joint complex of your choice and demonstrate your approach to its adjustment.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

Please select a joint of your choice in the [other – upper or lower] extremity and demonstrate your approach to its adjustment.

Description:

<i>Element</i>	<i>Not as good as the expected entry-level competence</i>	<i>Entry-level competence</i>	<i>Better than entry-level competence</i>
Doctor-patient interaction			
Selection of technique			
Global positioning for this technique			
Segmental positioning for this technique			
Planned performance of this technique (SCP, LOD, thrust)			
Overall safety of performance			
Overall proficiency			

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