



ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

Fellowship Examination 2017

**Neurosurgery**

**Written Paper One**

Thursday, 13 April 2017

Writing Time: **Paper 1 Writing Time**

**QUESTION & ANSWER BOOK**

<i>Section</i>	<i>Number of Questions to be Answered</i>
Essay Questions	3

**Candidates are permitted to bring into the examination room:**

- Pens
- Pencils
- Erasers

**Candidates are not permitted to bring into the examination room:**

- Blank sheets of paper
- White-out liquid/tape

**Materials supplied:**

- Question and Answer Book of 65 pages

**Instructions to candidates:**

- All answers must be written in English.
- Write only on the lined pages.

At the end of the examination, candidates are to leave the Question and Answer Book on their desk. Candidates are not permitted to remove the Question Book from the examination room.

**Candidates are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

## Essay Questions

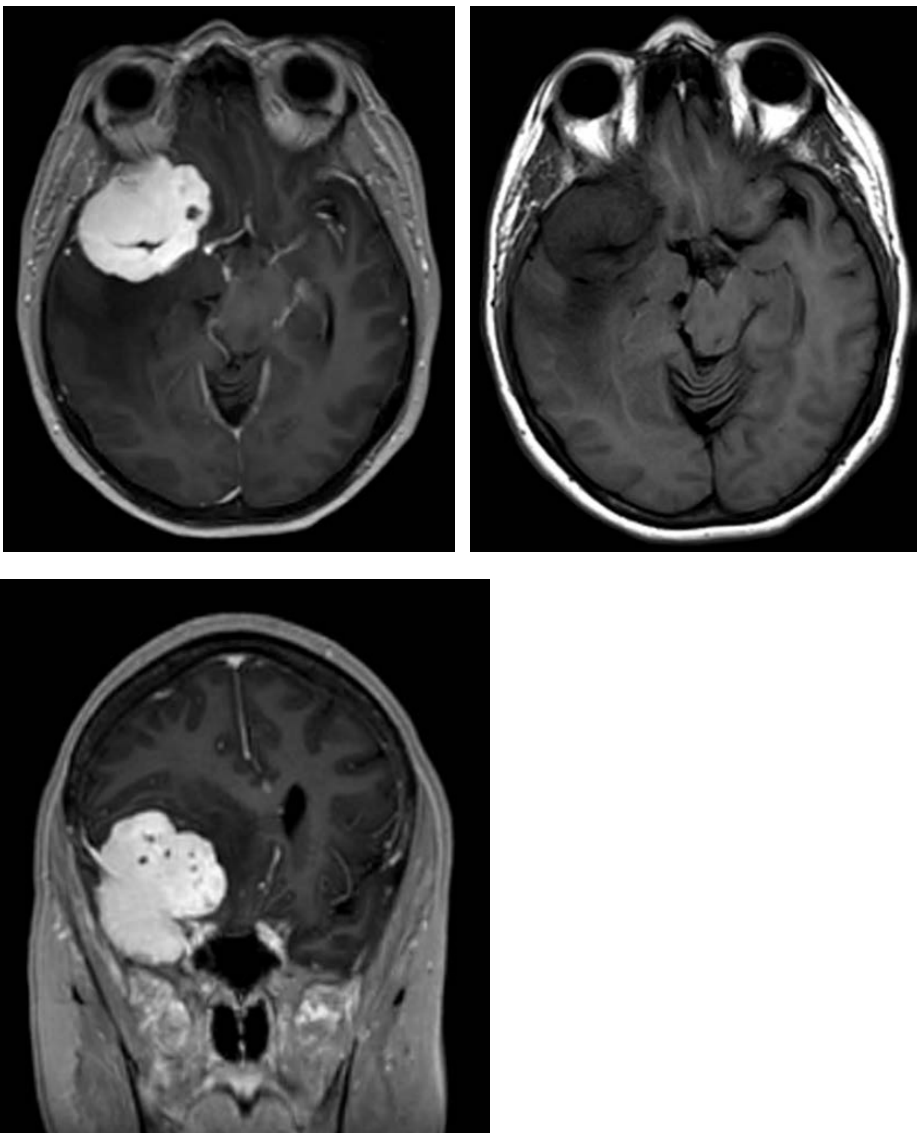
Candidates are to write answers in the space provided. Answers outside this area will not be seen in the Examiners' copies of the answers and will therefore not be assessed.

ALL questions must be answered. Clearly number the sub question you are answering.

### Question 1

A 56 year old female presents with a 4 month history of blurring of vision and headaches. She has bilateral papilledema. The MRI is shown.

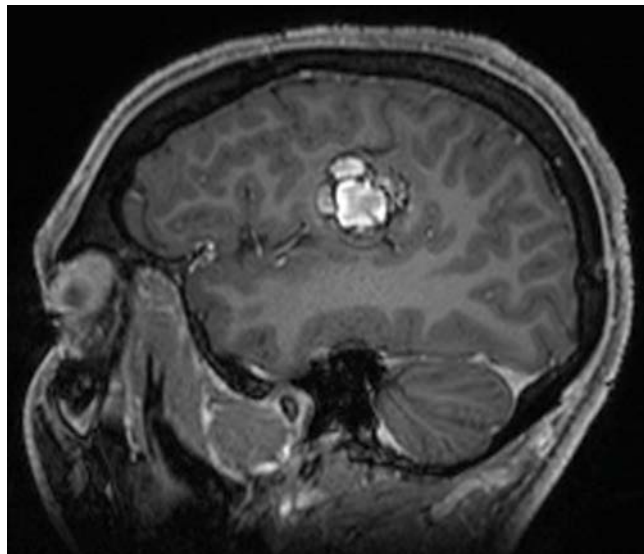
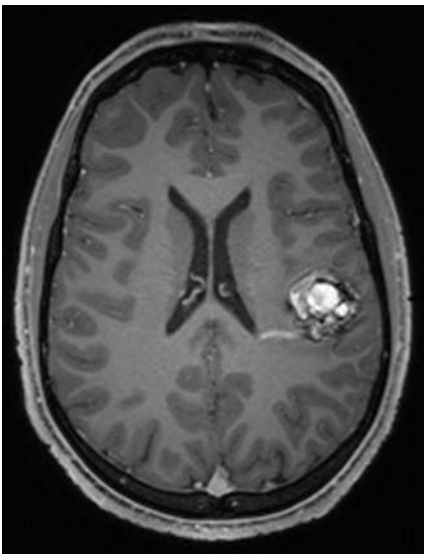
- 1a) List the likely and differential diagnoses.
- 1b) Discuss your management plan.
- 1c) Explain the possible complications of surgical treatment with reference to the pertinent anatomy.
- 1d) If this is a meningioma, what are the factors that contribute to the prognosis?



**Question 2**

A 20 year old man is referred by a neurologist. He presents with refractory epilepsy despite two anticonvulsant agents. The MRI is shown.

- 2a) Describe the MRI findings and your differential diagnosis. Are there additional MRI sequences that would support the diagnosis?
- 2b) Explain the indications for surgery for this lesion. What factors would influence your decision to recommend surgery?
- 2c) What would you explain to the patient about the likely risks and reasonable expectations of surgical treatment?

**Question 3**

Describe the embryology of the spinal cord and its coverings; correlate this with the pathological anatomy of myelomeningocele. Use diagrams in your answer.





ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

Fellowship Examination 2017

# Neurosurgery

## Written Paper Two

Thursday, 13 April 2017

Writing Time: **Paper 2 Writing Time**

### QUESTION & ANSWER BOOK

<i>Section</i>	<i>Number of Questions to be Answered</i>
One - Essay Questions	2
Two - Short Answer Question	1

**Candidates are permitted to bring into the examination room:**

- Pens
- Pencils
- Erasers

**Candidates are not permitted to bring into the examination room:**

- Blank sheets of paper
- White-out liquid/tape

**Materials supplied:**

- Question and Answer Book of 60 pages

**Instructions to candidates:**

- All answers must be written in English.
- Write only on the lined pages.

At the end of the examination, candidates are to leave the Question and Answer Book on their desk. Candidates are not permitted to remove the Question Book from the examination room.

**Candidates are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

## Section One - Essay Questions

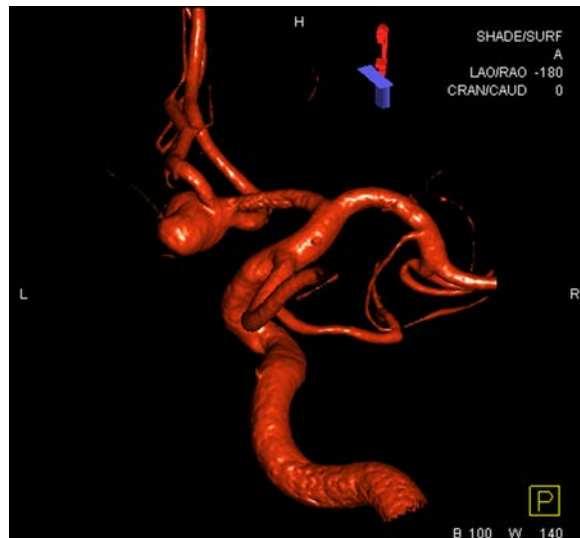
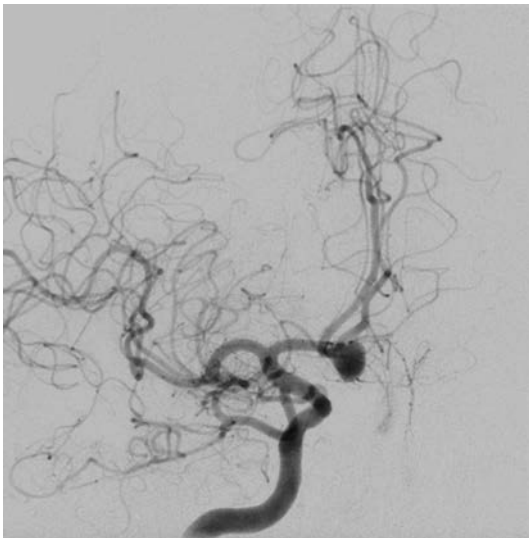
Candidates are to write answers in the space provided. Answers outside this area will not be seen in the Examiners' copies of the answers and will therefore not be assessed.

ALL questions must be answered. Clearly number the sub question you are answering.

### Question 1

A 51 year old woman presents following investigation for vertigo with an incidental finding of a 10mm aneurysm. She is a smoker with well-controlled hypertension. She also recounts that her maternal aunt had died suddenly when aged about 50 years but she does not know the cause of death. A catheter angiogram has been performed, including 3-D images.

- 1a) What is the natural history of this lesion? Give support from the literature.
- 1b) Compare the possible management options of observation, microsurgical repair and endovascular treatment for this aneurysm with reference to the anatomy and morphological features of this aneurysm. What is your preferred option and why?



### Question 2

- 2a) List the indications for intracranial pressure monitoring in patients with severe traumatic brain injury.
- 2b) Evaluate the medical therapies used to treat raised intracranial pressure in traumatic brain injury. For each therapy describe the indications and limitations.
- 2c) Evaluate the surgical options used to treat raised intracranial pressure in traumatic brain injury. For each surgical treatment describe the indications and limitations.

**Section Two – Short Answer Question**

Candidates are to write answers in the space provided. Answers outside this area will not be seen in the Examiners' copies of the answers and will therefore not be assessed.

**ALL questions must be answered. Clearly number the sub question you are answering.**

**Question 3**

Write short notes on:

- 3a) Horner's syndrome, Parinaud's syndrome and Foster-Kennedy syndrome.
- 3b) The accepted indications and contraindications for deep brain stimulation in the treatment of Parkinson's disease.
- 3c) The clinical and radiological features of ganglioglioma.
- 3d) Strategies to treat over-drainage of CSF after ventricular shunting for hydrocephalus.
- 3e) The clinical differences between a femoral neuropathy and an L4 radiculopathy.

**END OF PAPER**