

# Practice Papers for MCEM Part A

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## **Preface**

The Membership of the College of Emergency Medicine examination was first held in 2003 (initially known as MFAEM). It is now a pre-requisite to pass this examination before undertaking higher training in emergency medicine. There is a dearth of practice questions and papers specifically targeted at the MCEM-A examination. We have put together 8 practice papers (altogether 400 questions) along with answers for the MCEM part-A examination. These are based on the syllabus of the College of Emergency Medicine and each subject area has been given the appropriate proportion according to the College examination guidance. We hope that this book will be helpful for candidates preparing for this examination by identifying knowledge deficiencies and quickly correcting them through the succinct answers provided.

We would like to thank all members of our respective families for their support and patience during the time of writing this book.

Jaydeep Chitnis  
Gary Cumberbatch  
Upali Gankande  
November 2009





# Practice Papers



# Practice Paper 1

- 1 Regarding the portal venous system
  - a) The portal vein is formed by the union of the splenic vein and the superior mesenteric vein
  - b) The inferior mesenteric vein drains blood from the ascending and transverse colon
  - c) Elevated portal venous pressure causes caput medusae
  - d) Right and left gastric veins draining the lesser curve of the stomach are tributaries to the left hepatic vein
  
- 2 In the skull
  - a) The frontal bone articulates with the parietal bone at the lambdoid suture
  - b) The facial nerve passes through the stylomastoid foramen
  - c) The zygomatic arch is formed by the zygomatic processes of the frontal and temporal bones
  - d) The optic nerve passes through the superior orbital fissure
  
- 3 Regarding pain
  - a) In the dorsal columns, sensory signals are carried in small nerve fibres
  - b) The thalamus has a role in determining the type of sensation a person feels
  - c) Pain elicits an immediate high level of excitability in the brainstem and cerebrum which can manifest itself in screaming
  - d) One pain control mechanism is by transmitting signals from the cerebrum to the posterior horns of the spinal cord to inhibit transmission of pain
  
- 4 The cardiac output increases with
  - a) Moderate changes in environmental temperature
  - b) Standing from a lying down position
  - c) Eating
  - d) Rapid arrhythmias

- 5** Thiopentone sodium
- a) Is a barbiturate and is dissolved in normal saline
  - b) Reduces cerebral metabolic rate, cerebral blood flow and intracranial pressure
  - c) Is highly protein bound
  - d) May damage nerves and cause tissue necrosis if it extravasates
- 6** Aspirin can cause asthma in a sensitive person by
- a) Releasing histamine from mast cells
  - b) Increasing the formation of leukotriene D4 in the lungs
  - c) Its beta-adrenoceptor blocking action
  - d) Increasing renal clearance of endogenous noradrenalin
- 7** The following are brainstem reflexes
- a) The knee-jerk reflex
  - b) The oculocephalic reflex
  - c) The vestibulocochlear reflex
  - d) The pupillary reflex
- 8** Plasma renin activity is most likely to be decreased in
- a) Gram-negative shock
  - b) Haemorrhagic shock
  - c) Standing quietly
  - d) Essential hypertension
- 9** The vertebral column
- a) Is made up of 33 vertebrae
  - b) Has intervertebral foramina which are formed by notches in the laminae
  - c) Has C1 to C7 segmental spinal nerves passing over the superior aspect of their corresponding vertebrae
  - d) Results in spina bifida if the two primary ossification centres of the body do not fuse
- 10** The mitral valve
- a) Cusps are avascular
  - b) Has no papillary muscle attachments
  - c) Has a larger posterior cusp which lies between the aortic and mitral orifices
  - d) 'Guards' the right atrioventricular orifice

- 11** Regarding study design
- a) Hypothesis is a prediction
  - b) In a cross-over study each patient receives treatment and placebo in a random order
  - c) Case-control study is a type of observational study
  - d) Blinding reduces bias in treatment studies
- 12** Regarding the red blood cell
- a) The diameter of the biconcave erythrocyte is more than that of the capillaries
  - b) Haemoglobin makes up about 30% of the dry weight of the red blood cell
  - c) Adult haemoglobin A1 has lower affinity for oxygen than foetal haemoglobin
  - d) Red blood cells carry 10 times the amount of oxygen that can be carried in plasma alone
- 13** In the unconscious patient
- a) Vomiting can occur at any time
  - b) The administration of naloxone should always be considered when the diagnosis is uncertain
  - c) They should always be transferred to a high-dependency area once stable
  - d) A CT scan of the head is required
- 14** While working in an emergency department
- a) Make concise notes
  - b) The allocated triage category for a patient may change with time
  - c) You can provide a written police statement without patient consent
  - d) Do not delay life-saving treatment in order to obtain consent
- 15** The tongue
- a) Has no papillae over its posterior half
  - b) In its anterior 2/3 receives its sensory supply from the trigeminal nerve
  - c) Has all its muscles supplied by the hypoglossal nerve
  - d) Can be brought off the posterior pharyngeal wall of the unconscious patient by using the jaw thrust because it is attached to the symphysis of the mandible by genioglossus