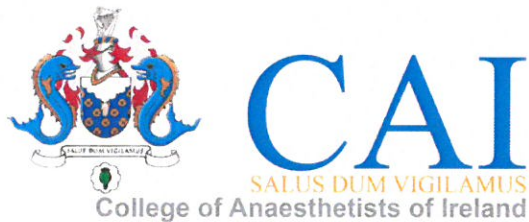


Exam No.



**MCQ Examination for the  
Membership of the College of Anaesthetists of Ireland  
July 2018**

**Subject: Sample Paper 1- Pharmacology**

**TIME ALLOWED 60 MINUTES**

- This booklet must not be taken from the Examination Hall
- There are 30 questions with 5 options on the paper
- Each question may be TRUE or FALSE
- Therefore you should have 150 responses by the end of the exam
- Allow enough time to fill out the Optical Mark Answer Sheet
- Please use the pencil provided only
- Please keep the answer sheet dry and do not fold the answer sheet
- There is no negative marking in this examination
- No mark is awarded for an answer left blank
- Candidates should answer all the questions

# College of Anaesthetists

Membership MCQ - Pharmacology Multiple Choice Paper on 25 December 2018

There are 30 questions on this paper

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**Q 1 Nitrous oxide**

- A** is a potent analgesic
- B** causes sympathetic nervous system activation
- C** brief exposure may cause agranulocytosis
- D** should be avoided in patients with pulmonary hypertension
- E** the increased tendency to post-operative nausea and vomiting is resistant to anti-emetic agents

**Q 2 The opioid antagonist naloxone:**

- A** produces pupillary constriction
- B** has good oral bioavailability
- C** duration of action is independent of the route of administration
- D** antagonises opioid effects by competing for the same receptors sites
- E** is contraindicated in pregnancy

**Q 3 Desflurane**

- A** Has a particularly high blood solubility
- B** Is the least potent of the modern halogenated anesthetic gases
- C** Tends to cause tachycardia when inhaled concentrations are increased
- D** Can directly cause laryngospasm in children
- E** Is a much more potent greenhouse gas than the other volatile agents

**Q 4 Morphine**

- A** Its main metabolite is morphine-6-glucuronide
- B** Is mainly ionised at physiologic pH
- C** Is more lipid soluble than fentanyl
- D** Causes respiratory depression mainly because of an effect on kappa-receptors
- E** Causes more nausea than an equi-analgesic dose of pethidine

## College of Anaesthetists

Membership MCQ - Pharmacology Multiple Choice Paper on 25 December 2018

There are 30 questions on this paper

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- Q 5 **When treating pulmonary hypertension**
- A Inhaled nitric oxide should be given every 6 hours
  - B Sildenafil is contraindicated in patients taking beta-blockers
  - C High SPO<sub>2</sub> should be avoided
  - D Prostacyclin can be given by inhalation
  - E Bosentan can be effective
- Q 6 **Following the oral administration of drugs:**
- A absorption occurs more readily when they are in the unionised state.
  - B absorption occurs mainly in the intestine.
  - C uptake is mainly by facilitated diffusion.
  - D absorption rate is not different with different formulations of the same drug.
  - E rate of uptake is related to gastro-intestinal motility rate.
- Q 7 **The volume of distribution of a drug is found to be 100 litres. The following statements are necessary consequences of this:**
- A Distribution is throughout the body water.
  - B The drug is preferentially accumulated in certain tissues.
  - C The drug is markedly bound to plasma protein.
  - D The drug crosses the blood brain barrier.
  - E The drug is rapidly excreted by the kidneys.
- Q 8 **Regarding diuretics:**
- A Large doses of mannitol increase extracellular osmolarity
  - B Acetazolamide decreases urinary pH
  - C Benzothiazide drugs inhibit sodium reabsorption in the distal tubule
  - D Frusemide is transported in the blood bound to albumin
  - E Bumetanide inhibits electrolyte reabsorption in the ascending Loop of Henle

## College of Anaesthetists

Membership MCQ - Pharmacology Multiple Choice Paper on 25 December 2018

There are 30 questions on this paper

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Q 9 **Nitrous Oxide:**

- A inactivates methionine synthase
- B has an anti-emetic effect
- C has a MAC of 80%
- D is a greenhouse gas
- E is contraindicated in patients with lungs cysts or bullae

Q 10 **Isoflurane:**

- A Has the same molecular weight as enflurane
- B Is a structural isomer of enflurane
- C Reduces blood pressure mainly by reducing peripheral resistance
- D Has the same saturated vapour pressure as enflurane and can therefore in theory be used safely in an enflurotec
- E Is eliminated from the body 95% unchanged