



COLLEGE OF INTENSIVE CARE MEDICINE OF AUSTRALIA AND NEW ZEALAND

FIRST PART EXAMINATION

MONDAY 10TH AUGUST 2020

MORNING PAPER

SHORT ANSWER QUESTIONS (SAQs)

- (A) Write your answers in the blue books provided. Questions should be answered in groups of **TWO per book only**:

1 and 2	3 and 4	5 and 6	7 and 8	9 and 10
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- (B) Start each answer on a **new page** and indicate the **question number**. It is not necessary to rewrite the question in your answer book.
- (C) You should aim to allocate **10 minutes** to answer each SAQ.
- (D) The questions are worth **equal** marks.
- (E) SAQs with more than one part have the **proportion of marks** indicated for each part.
- (F) Record your **candidate number** and each **question number** on the cover of each book and hand in question papers and all answer books.
- (G) PLEASE **DO NOT** WRITE IN THE BLUE MARGINS OF THE ANSWER BOOK.

MULTIPLE CHOICE QUESTIONS (MCQs)

- (A) Please indicate your answers on the **RED MCQ answer sheet**.
- (B) You should aim to allow **50 minutes** to answer MCQs.
- (C) Do **NOT** fold or bend the answer sheet paper.
- (D) Use a **2B pencil** only.
- (E) Select **ONE** answer from four options. Do **NOT** select multiple answers for the same question.
- (F) Erase any mistakes **completely** using an eraser.
- (G) At the end of the exam hand the **RED MCQ answer sheet and question papers** in to the **Invigilator**.

Answer questions 1 and 2 in a separate booklet

1. Describe and compare the action potentials from cardiac ventricular muscle cells and the sino-atrial node.
2. Define functional residual capacity (10% marks). Outline the functions (70% marks) of the functional residual capacity and the factors affecting it (20% marks).

Answer questions 3 and 4 in a separate booklet

3. Describe the pharmacology of hydrocortisone.
4. Outline the role of the liver in the metabolism of fat ($\frac{1}{3}$ marks), carbohydrate ($\frac{1}{3}$ marks) and proteins ($\frac{1}{3}$ marks).

Answer questions 5 and 6 in a separate booklet

5. Describe the anatomy (70% marks) and effects (30% marks) of the sympathetic nervous system.
6. Classify the oral hypoglycaemic drugs (20% marks); include their mechanism of action (40% marks) and their most significant side effects (40% marks).

Answer questions 7 and 8 in a separate booklet

7. Compare and contrast external ventricular drains and intraparenchymal fibreoptic pressure monitors.
8. Describe the cough reflex.

Answer questions 9 and 10 in a separate booklet

9. Outline the daily nutritional requirements, including electrolytes, for a normal 70 kg adult.
10. Describe the pharmacology of suxamethonium.



COLLEGE OF INTENSIVE CARE MEDICINE OF AUSTRALIA AND NEW ZEALAND

FIRST PART EXAMINATION

MONDAY 10TH AUGUST 2020

AFTERNOON PAPER

SHORT ANSWER QUESTIONS (SAQs)

- (A) Write your answers in the blue books provided. Questions should be answered in groups of **TWO per book only**:

11 and 12	13 and 14	15 and 16	17 and 18	19 and 20
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- (B) Start each answer on a **new page** and indicate the **question number**. It is not necessary to rewrite the question in your answer book.
- (C) You should aim to allocate **10 minutes** to answer each SAQ.
- (D) The questions are worth **equal** marks.
- (E) SAQs with more than one part have the **proportion of marks** indicated for each part.
- (F) Record your **candidate number** and each **question number** on the cover of each book and hand in question papers and all answer books.
- (G) PLEASE **DO NOT** WRITE IN THE BLUE MARGINS OF THE ANSWER BOOK.

MULTIPLE CHOICE QUESTIONS (MCQs)

- (A) Please indicate your answers on the **ORANGE MCQ answer sheet**.
- (B) You should aim to allow **50 minutes** to answer MCQs.
- (C) Do **NOT** fold or bend the answer sheet paper.
- (D) Use a **2B pencil** only.
- (E) Select **ONE** answer from four options. Do **NOT** select multiple answers for the same question.
- (F) Erase any mistakes **completely** using an eraser.
- (G) At the end of the exam hand the **ORANGE MCQ answer sheet** and **question papers** in to the **Invigilator**.

Answer questions 11 and 12 in a separate booklet

11. Describe the changes in the circulatory system that occur during exercise.
12. Describe the physiology (50% marks) and pharmacology (50% marks) of albumin.

Answer questions 13 and 14 in a separate booklet

13. Describe the anatomical (20% marks) and physiological (80% marks) features of the pulmonary circulation.
14. Describe the anatomy of the larynx.

Answer questions 15 and 16 in a separate booklet

15. Compare and contrast the pharmacology of dobutamine and levosimendan.
16. Describe the formation of gastric acid (50% marks) and the regulation of gastric acid secretion (50% marks).

Answer questions 17 and 18 in a separate booklet

17. Describe the pharmacology of inhaled nitric oxide (NO).
18. Define afterload (10% marks) and describe the physiological factors that may affect afterload on the left ventricle (90% marks).

Answer questions 19 and 20 in a separate booklet

19. Explain how the kidney handles an acid load.
20. Describe the pharmacology of intravenous sodium nitroprusside.