

EXAMINATION FOR QUALIFIED MEDICAL LABORATORY TECHNICIAN



Subject: MORTUARY

Examination Date: 7 October 2023

Time Allowed: 3 hours – 9.30am – 12.40pm
10 minutes extra time for reading the Paper

Candidate Name: _____

Candidate Numer: _____

General Instructions

1. Total marks for paper = 100.
2. Marks for each question are as indicated,
3. The paper consists of:

	<i>Common</i>	<i>Discipline Specific</i>
Section A, questions 1-30 = Total Marks 15	<i>6 Marks</i>	<i>9 Marks</i>
Section B, questions 31-34 = Total Marks 10	<i>5 Marks</i>	<i>5 Marks</i>
Section C, questions 35-38 = Total Marks 10	<i>4 Marks</i>	<i>6 Marks</i>
Section D, questions 39-42 = Total Marks 05	<i>5 Marks</i>	<i>0</i>
Section E, questions 43-62 = Total Marks 40	<i>10 Marks</i>	<i>30 Marks</i>
Section F, questions 63-64 = Total Marks 20	<i>0</i>	<i>20 Marks</i>
4. All questions are to be attempted.
5. Use of calculator is permitted.
6. Put all answers into the examination booklet provided.

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WORD DEFINITIONS	
Calculate	Perform a mathematical process to get the answer
Classify	Be able to designate to a group
Compare	Detail both the differences and the similarities
Complete	Finish, have all the necessary parts
Convert	Express in alternative units
Define	State meaning clearly and concisely
Describe	Give a complete account demonstrating a thorough practical knowledge
Discuss	Give details, explaining both the positives and negatives
Distinguish	To briefly point out the main differences
Expand	To express at length or in a greater detail
Identify	Recognise according to established criteria
Indicate	Briefly point out
Interpret	Express the results of a test or series of tests in a meaningful format
Label	Give a name to
List	Headings only
Match	Find one that closely resembles another
Name	A word or group of words used to describe or evaluate
Outline	Write brief notes incorporating the essential facts
State	Give the relevant points briefly

SECTION A

Section A – Question 1 to Question 30 = Total Marks: 15

Multi choice questions

Multi choice questions – choose one answer for each question

(0.5mark per correct answer)

Circle the letter for the correct answer

Example. Which of the below is a primary colour?

- a. Green
- b. Purple
- ☒ c. Red
- d. Orange

C.1 A synovial fluid is taken from

- a. The eye
- b. A vein
- c. A joint
- d. An artery

C.2 The cardiovascular system is also referred to as the:

- a. Circulatory system
- b. Endocrine system
- c. Respiratory system
- d. Lymphatic system

C.3 The Medical Sciences Council is responsible for:

- a. Offering a CPD programme
- b. Issuing an Annual Practicing Certificate
- c. Providing QMLT examinations
- d. Laboratory auditing

C.4 Leukemia is primarily diagnosed in which department in the laboratory?

- a. Haematology
- b. Histology
- c. Microbiology
- d. Biochemistry

- C.5 The prefix “hypo” refers to:
- a. Inflammation
 - b. Excessive
 - c. Increased
 - d. Decreased
- C.6 Standard precautions refers to:
- a. Cleaning the laboratory regularly with an appropriate disinfectant
 - b. Treating all blood and body fluids as potentially infectious
 - c. Following the rules set by the Health and Safety Officer
 - d. Compulsory use of Personal Protective Equipment
- C.7 Which best describes confidential information?
- a. Information given on the understanding that it will not be passed on to others.
 - b. Information that is stamped or marked as “Confidential”
 - c. Information that can only be passed on to a doctor or family member.
 - d. Clinical details written on a form
- C.8 A pathologist is a:
- a. Registered Medical Practitioner
 - b. An advanced Medical Laboratory Scientist
 - c. A specialised Scientific Officer
 - d. Registered Clinical Scientist
- C.9 Within the complaints process of The Code of Health & Disability Services and Consumer Rights, the complaint must be acknowledged in writing within how many working days?
- a. 7 days
 - b. 10 days
 - c. 5 days
 - d. 20 days
- C.10 A method of representing data in a visual, machine-readable form describes:
- a. A histogram
 - b. A cell scanner
 - c. A flow chart
 - d. A barcode

- C.11 “It is the duty of Members to uphold the dignity and honour of the profession, to accept its ethical principles and not engage in any activity that would discredit the profession” is part of:
- HPCA Act 2003
 - Health and Disabilities requirement of all staff
 - NZIMLS code of ethics
 - Medical Sciences Council of New Zealand practitioner requirement
- C.12 Venesection, venipuncture, phlebotomy and blood collection all come under what scope of practice?
- Medical Laboratory Scientist
 - Medical Laboratory Technician
 - Pre analytical Technician
 - Health Care Assistant
- D.13 What is a Cor26 Document?
- Coroners order to dispose of samples.
 - Immediate Post Mortem direction.
 - Coroners order to return samples to family.
 - Authority to release the body.
- D.14 What Post-mortem procedure are you likely to make an incision into the popliteal fossa?
- DVT exploration
 - Pneumothorax investigation
 - Vertebral artery dissection
 - Posterior spinal cord removal
- D.15 Algor mortis refers to what?
- Haemorrhage in the abdomen
 - Post mortem drying of mucosal membranes.
 - The cause of death
 - Post mortem cooling of the body
- D.16 The deceased should be stored at a temperature of
- Between 2 and 6 degrees
 - Between 6 and 10 degrees
 - Between -4 and 0 degrees
 - Anywhere below 10 degrees

- D.17 Which of the following is NOT a post mortem change
- a. Mummification
 - b. Tache noir de la sclerotique
 - c. Petechial haemorrhage
 - d. Adipocere
- D.18 Why is it best practice to remove the brain and internal organs before performing a layered neck dissection?
- a. Allows for more space to perform the dissection.
 - b. Reduces the potential for post mortem technical artefact.
 - c. So the pathologist can speed up the autopsy
 - d. It is impossible to perform this technique with the thoracic organs in situ.
- D.19 What does the pathologist require before retaining a “non-minute” tissue sample as part of a coronial autopsy?
- a. A container large enough to hold the tissue.
 - b. Consent from the Next of Kin
 - c. A hermetically sealed container
 - d. Permission from the coroner
- D.20 What does PPM stand for?
- a. Provisional Post Mortem
 - b. Personal Preventative Maintenance
 - c. Perforated Pleural Mediastinum
 - d. Perinatal Post Mortem
- D.21 What evisceration method is also referred to as “en masse”?
- a. Letulle
 - b. Virchow
 - c. Ghon
 - d. Rokitansky
- D.22 What section of the Coroners Act deals with the retention of tissue?
- a. Section 5
 - b. Section 17
 - c. Section 48
 - d. Section 51

D.23 Post mortem photographs should always contain:

- a. A probe or pointer
- b. A PM case number
- c. Labels indicating left and right
- d. The deceased

D.24 The fingers are _____ to the elbow?

- a. Medial
- b. Superior
- c. Proximal
- d. Distal

D.25 A Cor3 document authorises the _____?

- a. Release of the body
- b. Removal of a pacemaker
- c. Cremation of the body
- d. Lesser post mortem examination

D.26 A Fossa is best described as a:

- a. A groove or depression
- b. A Lump or protrusion
- c. A hole or opening
- d. A fused body part

D.27 What substances are used in ESR blood collection bottles?

- a. Sodium Chloride and Potassium Oxalate
- b. Sodium Fluoride and Potassium Nitrate
- c. Sodium Nitrate and Potassium Carbonate
- d. Sodium Fluoride and Potassium Oxalate

D.28 What is the posture taken on by a deceased with extreme thermal injuries known as?

- a. The fetal position
- b. The running man position
- c. The pugilistic attitude
- d. The crouched position

D.29 Rigor mortis is the:

- a. Contraction of the muscles after death
- b. Relaxation of Muscles after death
- c. Hardening of the muscles after death
- d. Stiffening of the muscles after death

D.30 Aspiration of fluid from the sphenoidal sinus is typically in what kind of death?

- a. Immersion death
- b. Drug overdose death
- c. Natural Cardiac death
- d. Asphyxiation death

END OF SECTION

(Total: 15 marks)

SECTION B

Labelling of diagrams e.g. anatomy, hazard identification, instrument



Section B – Question 31 to Question 34 = Total Marks: 10

(Answer all questions)

C.31 Name the following hazard symbols

(1 mark)

(0.5 marks per correct answer)

a.		b.	
----	---	----	--



a. _____

b. _____

C.32 Name the instruments and describe their use

(2 marks)

(1 mark per correct answer)

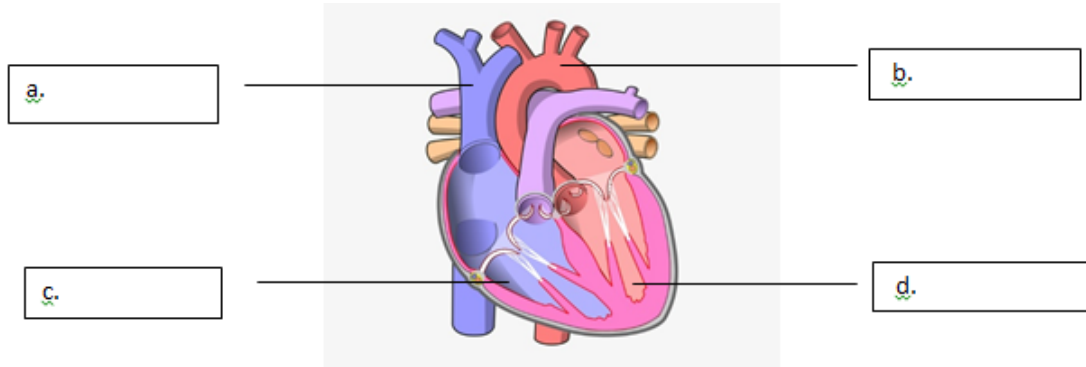
a.		b.	
----	---	----	--

a. _____

b. _____

C.33 Label the following diagram:

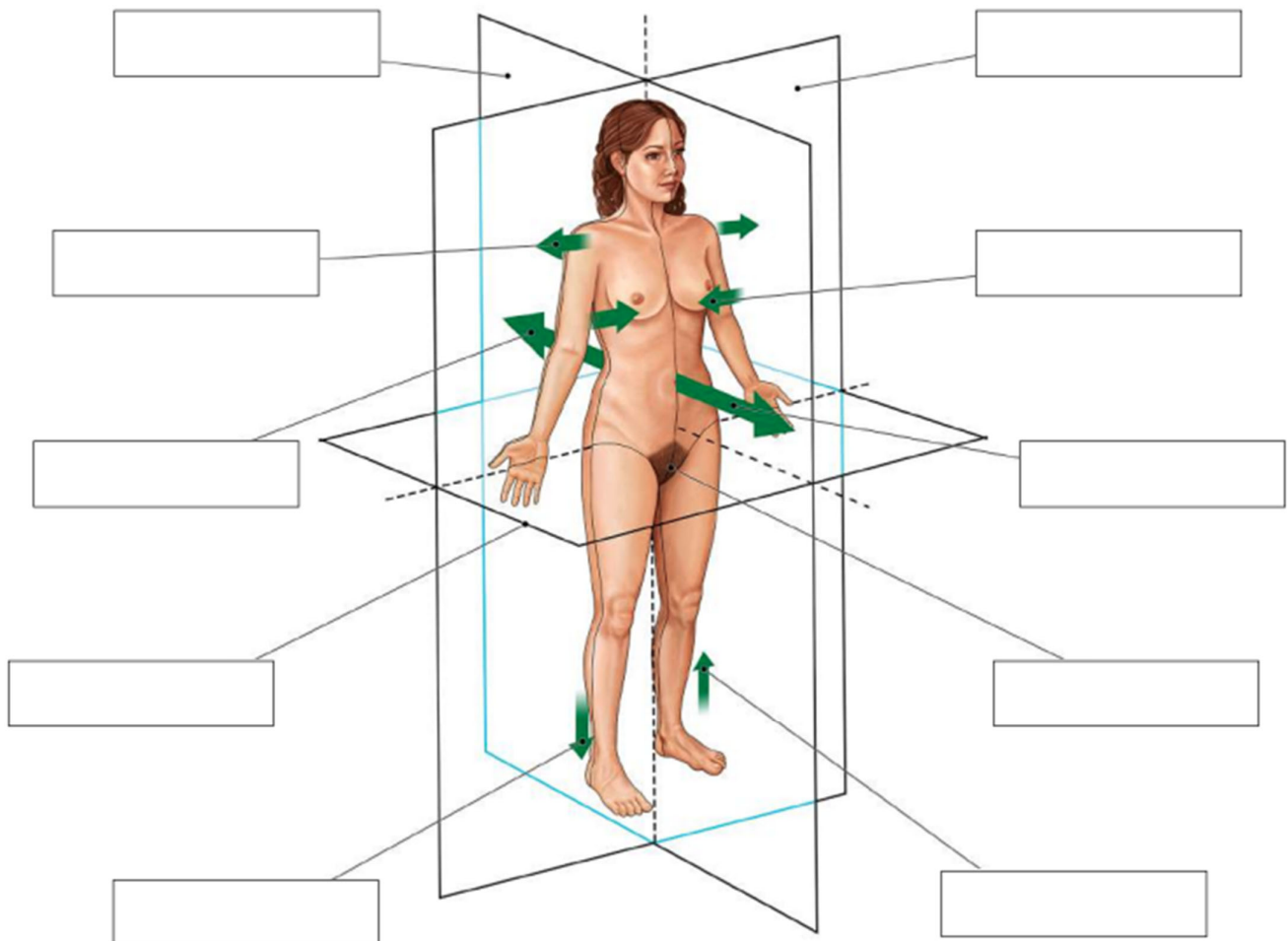
(2 marks)



- a. _____
- b. _____
- c. _____

D.34 Label the following diagram using the correct anatomical terms:

(5 marks)



(Total: 10 marks)

END OF SECTION

SECTION C

Tables, match column definition

Section C – Question 35 to Question 38 = Total Marks: 10

(Answer all questions)

- C.35 Match the columns by **writing the Roman numeral from list B** against the correct match in Column A **(2 marks)**

Column A	Column B
A. Hepatic	i. Knee
B. Nephritis	ii. Liver
C. Patella	iii. Molecular
D. PCR	iv. Kidney

Column A	Column B
A. Hepatic	
B. Nephritis	
C. Patella	
D. PCR	

- C.36 Expand the common abbreviations: **(2 marks)**

A.	B.
a. ACF	
b. CML	
c. COPD	
d. NAAT	

D.37 Match the columns by **writing the Roman numeral from list B** against the correct match in Column A **(3 marks)**

Column A	Column B
A. Peri	i. After
B. Post	ii. Below
C. Epi	iii. Inside
D. Ante	iv. Around
E. Sub	v. Before
F. Intra	vi. On surface of

Column A	Column B
A. Peri	
B. Post	
C. Epi	
D. Ante	
E. Sub	
F. Intra	

D.38 Briefly describe the pathologies in column A **(3 marks)**

Pathology	Description
A. Hemopericardium	
B. Subdural haemorrhage	
C. Myocarditis	
D. Pneumothorax	
E. Pulmonary Embolism	
F. Hypoxic brain injury	

END OF SECTION

SECTION D*Calculations***Section D – Question 39 to Question 42 = Total Marks: 5****Calculations**

C.39 A patient has had daily Sodium and Potassium tests done for one week, the results are as follows:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Sodium	135.7	135.9	136.3	136.9	137.2	136.5	135.4
Potassium	3.9	4.2	4.8	4.1	3.8	4.0	3.6

Calculate the mean Sodium and Potassium for the week. (Show all workings)

(2 marks)

C.40 Convert:

(1.5 marks)

32.7 mg to _____ kg

$\frac{5}{8}$ to _____ %

200 uL to _____ mL

C.41 A test has been set up at 1730hrs and has an incubation time of 18 hours, the requester is asking what time they could expect the result (assume the result can be given as soon as the incubation period is complete).

(0.5 marks)

C.42 A colleague accidentally made one litre of 20% solution of Trigene, you have been asked to use that solution and make one litre of 2% Trigene.

Explain your process and show any calculations or workings.

(1 mark)

(Total: 5 marks)

END OF SECTION

SECTION E

Short answer questions (answers = one or more words, short sentences)

Section E – Question 43 to Question 62 = Total Marks: 40

Short Answer Questions

C.43 Define document control. **(2 marks)**

C.44 Outline the First Aid and Treatment for fainting or unconscious episode of a staff member or patient you are working with. **(1.5 marks)**

C.45 When referring to laboratory results the term “accuracy” is best described as: **(0.5 marks)**

C.46 Outline the principle purpose of the Health Practitioners Competency Assurance Act 2003. **(1.5 marks)**

C.47 Describe why user specific passwords are important when using a Laboratory Information System (Computer System) **(1.5 marks)**

C.48 Describe why it is important for the laboratory to have a robust specimen labelling policy.

(1.5 marks)

C.49 Define Patient/Donor confidentiality

(1.5 marks)

D.50 Describe the difference between a laceration and an incision and state TWO characteristics of each.

(3 marks)

D.51 List **FOUR** (4) ways that sharps injuries can be avoided.

(2 marks)

D.52 Outline **ONE** method for checking for the presence of a pneumothorax and what sign indicates the presence of this condition for your chosen method?

(1 marks)

D.53 What makes up the Axial skeleton and describe TWO of its functions. **(2 marks)**

D.54 What samples would you expect to be collected and submitted to ESR for toxicology on a case involving death from suspected solvent abuse? **(2 marks)**

D.55 List in order, the chambers, and valves blood travels through starting from the vena cava and ending at the aorta. **(4 marks)**

D.56 List all the required forms for a HOSPITAL post mortem and who needs to complete each form. **(3 marks)**

D.57 Define chain of custody and list 5 ways that this can be maintained in the context of mortuary processes. **(3 marks)**

D.58 Outline the process for performing a refrigerator alarm test and state how often this must be performed. **(2 marks)**

D.59 A pathogen that falls into “Hazard Group 3” is defined as what? Would this be considered a high-risk or standard-risk autopsy? **(2.5 marks)**

D.60 List one example, for each of the following, that a mortuary must incorporate into the building design as stated by the NPAAC guidelines and Managing Health and Safety risks In NZ mortuaries documents. **(2.5 marks)**

Flooring: _____

Lighting and Electrical supply: _____

Ventilation: _____

Security and Access: _____

Body storage: _____

D.61 State **TWO** purposes of a post mortem examination. (Not including the cause of death). **(1 mark)**

D.62 Name the four sections of the aorta. **(2 marks)**

(Total: 40 marks)

END OF SECTION

ESSAY

Section F – Question 63 to Question 64 = Total Marks: 20

Essay Questions

ESSAY

Section F – Question 63 to Question 64 = Total Marks: 20

Essay Questions

ESSAY

Section F – Question 63 to Question 64 = Total Marks: 20

Essay Questions

D.63 In essay format, describe what impact Covid19 and the subsequent lockdowns may have had on the ability to accommodate families/Whanau in a culturally sensitive manner. **(10 Marks)**

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[illegible]

D.64 In essay format, describe in detail, any one of the four recognised evisceration methods starting with an intact deceased body to the complete evisceration of the organs and removal of the brain. **(10 marks)**

[illegible]

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END OF SECTION