

PRIFYSGOL CYMRU

Y Drindod Dewi Sant

UNIVERSITY OF WALES

Trinity Saint David

Examination Answer Book

24 Pages

Instructions to candidates

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right and seal to hide your name.
3. The answers must be **legibly** written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

1	Student Number	
2	Title of Examination Paper	
3	Module Code	
4	Date and Time of Examination	
5	Examination Venue	
6	Seat Number	

7	Number of Answer Books handed in	
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[illegible]

Please complete this section and SEAL before the examination starts.

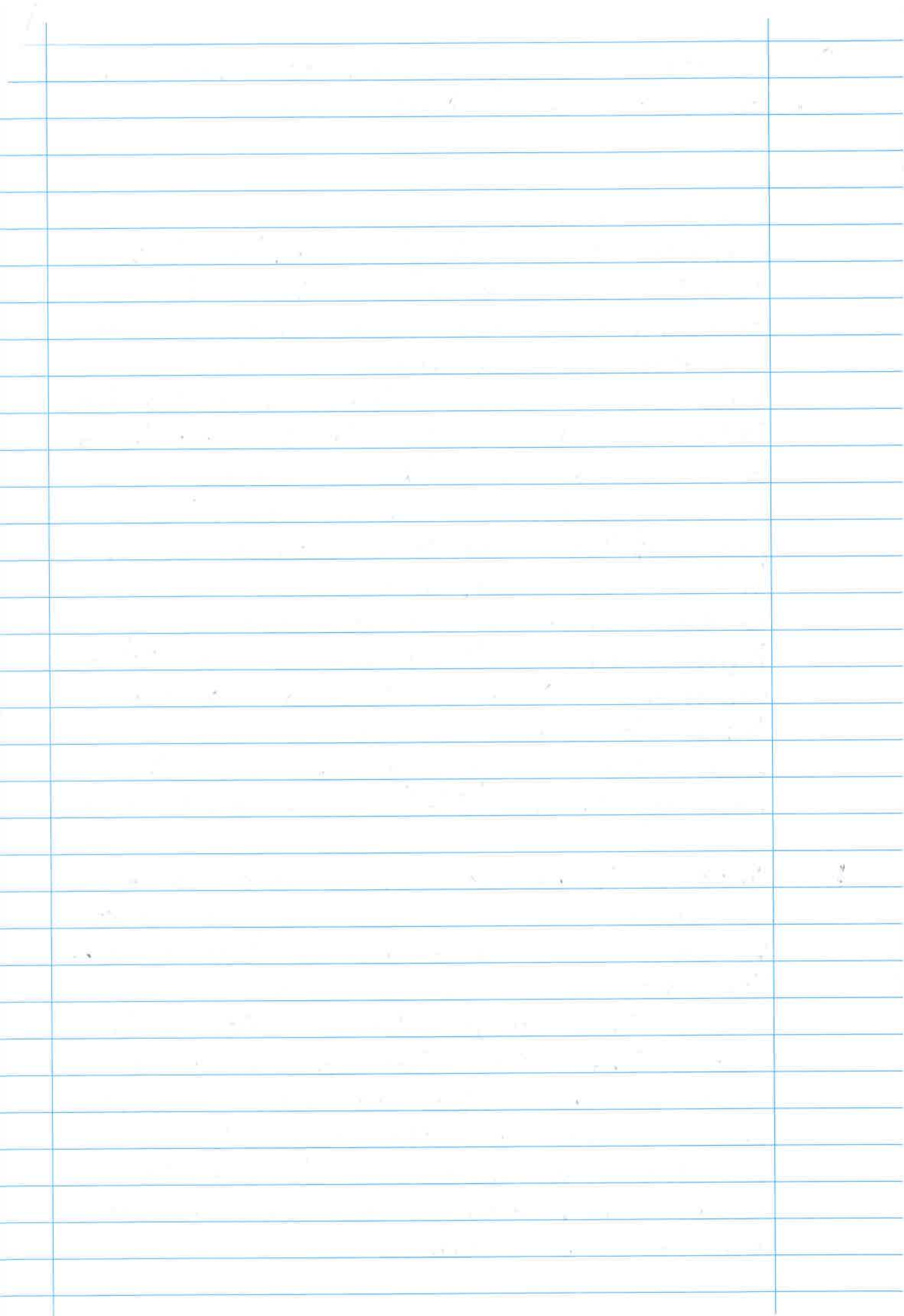
Surname TERZ (Block Capitals) Forename(s) LARA

FOLD

Complete
section,
remove
strip, fold as
indicated
and SEAL

PULL & TEAR

FOR ADMINISTRATIVE USE ONLY, CAREFULLY REMOVE PERFORATED STRIP



Q2. ~~Static~~ memory allocation uses heap memory
a) to save STATIC functions and data. *not necessary*

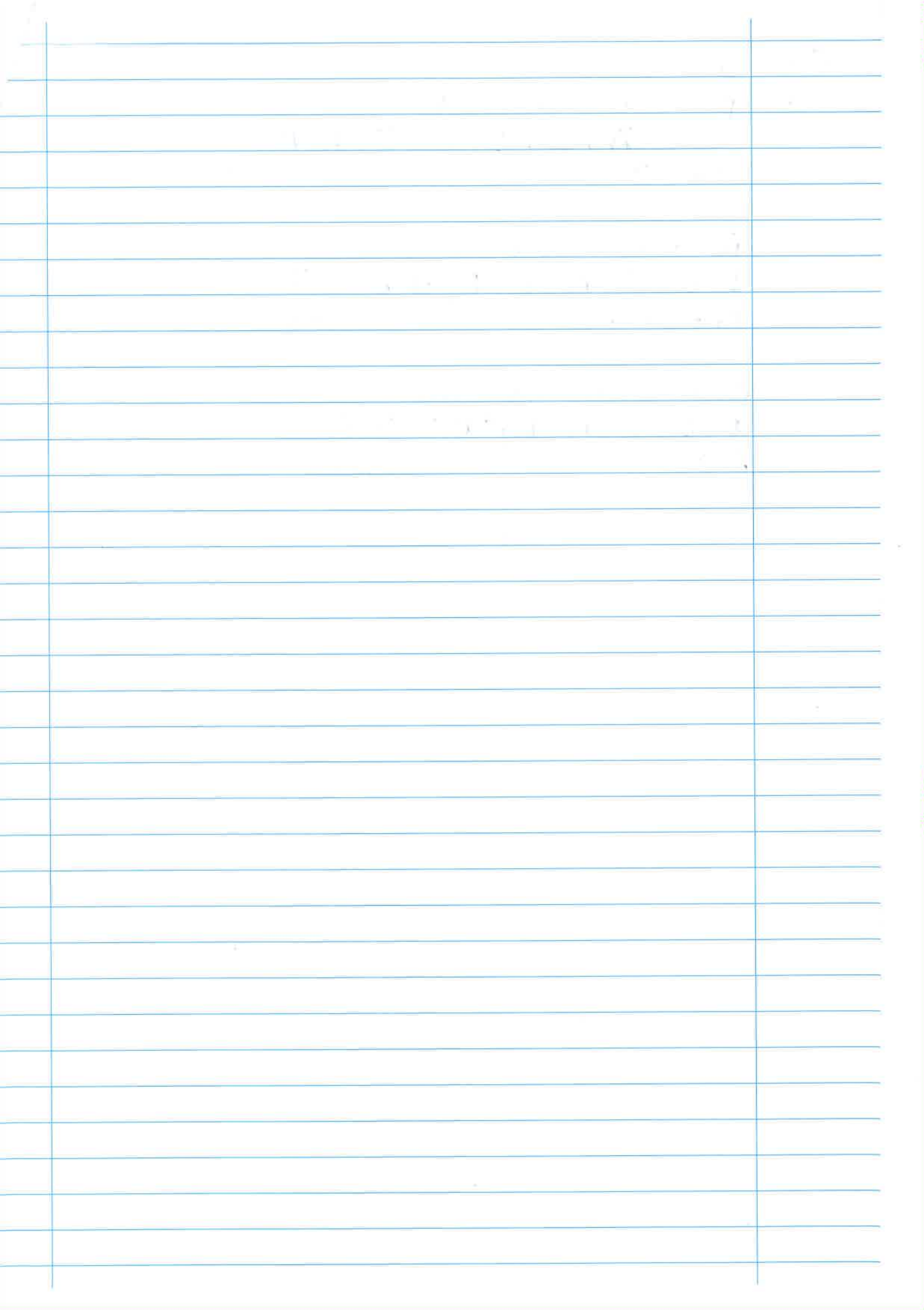
2/4
confused
dynamic memory allocation is allocated by the user & uses ~~heap~~ stack memory. This is usually used temporarily as memory has to be manually allocated using the 'new' function in C++ and then manually deleted to make sure there are no memory leaks. using the ~~test~~ 'delete' function in C++. In C, these functions are 'malloc' and 'dalloc'. Dynamic memory allocation is usually used with programs ^{files} that need to be executed only once or a few times, the memory is freed up so that something else can take its place. Dynamic memory allocation uses the FIFO placement (First in, first out) on the stack to execute files. One should always ensure there is space in the memory by ensuring the null ^{pointer} value is not equal to ~~equal~~ NULL.

6/5
vague?
b) linearly linked list defines data stored in a similar way to an array. A list can be seen as a table and a linearly linked list has nodes for each item in the 'table' that ensure the next item in the list is known. The first item on the list must be known, the last item must be known & the item the program is on must be known, as well as the next item after that, without these nodes, the items' order will be unknown.

c = 0/10 d = 0/8

2/25

2/25



Q3. a

a) pre-order traversal:

S, E, ~~A~~, C, E, E, R, H, R, T
first $\longrightarrow$ last

in-order traversal

E, E, C, A, E, R, H, R, S, T
first $\longrightarrow$ last

post-order traversal

E, E, C, A, R, H, R, E, T, S
first $\longrightarrow$ last

b) 0/8

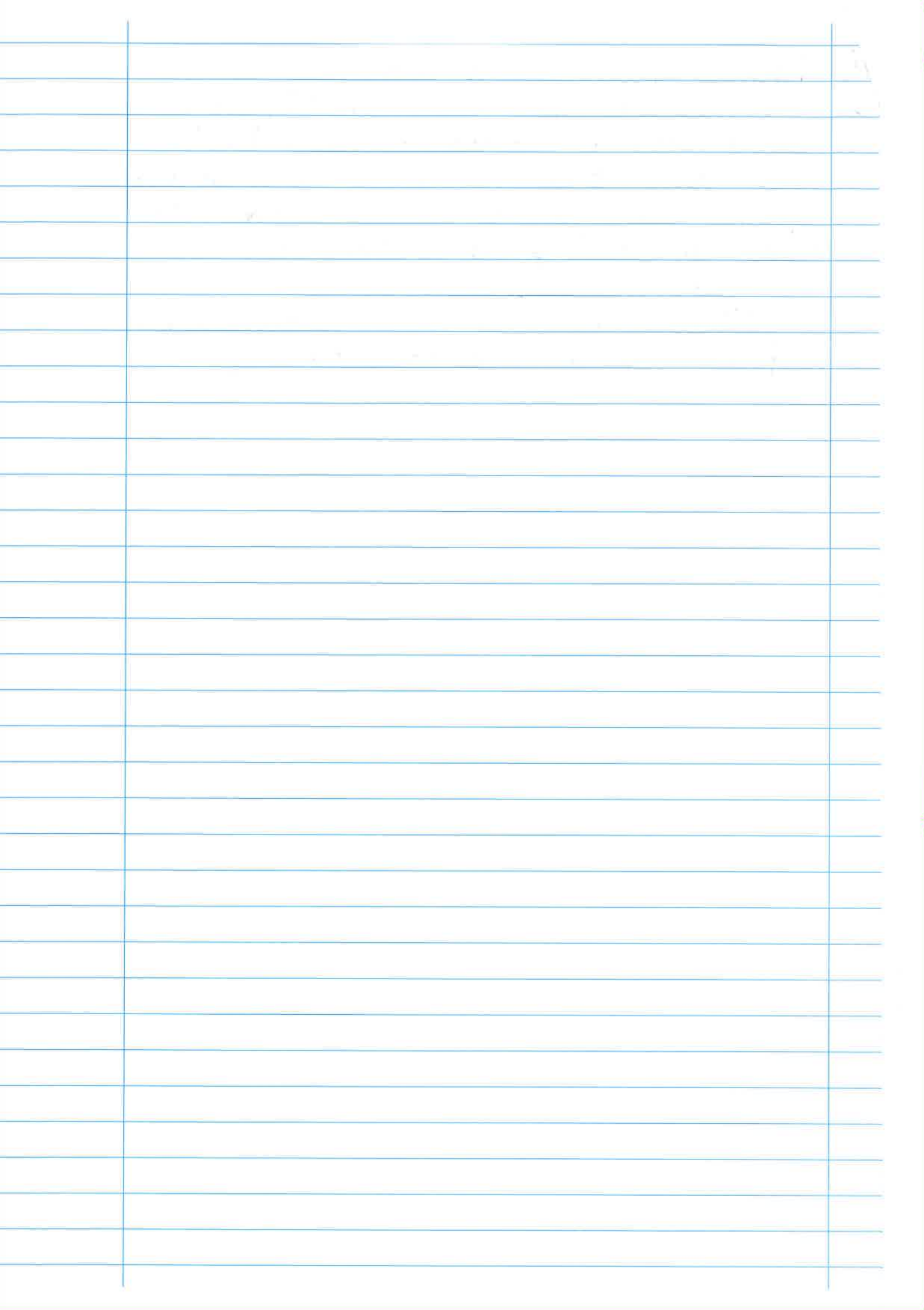
c) 0/5

Q3 $\rightarrow$ 10/25

10/25

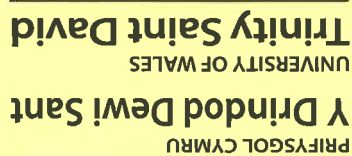
10/12

- 4) hashing is a way of referencing by
a) algorithm so that each ~~func~~ piece of
data ~~can be called at any~~ has its
own name & memory. This is done so that
specific data can be called without the
need for calling data that will not
be used. Usually, a prime number
algorithm is used so that as the number
is prime, the dividends won't come up.



TYNNWCH A
RHWYGWCH

AR GYFER DEFNYDD GWEINYDDOL YN UNIG, TYNNWCH Y STRIBYN TYLLOG I FFWRDD YN OFALUS



24 Tudalen

1. Rhowch yr holl wybodaeth y gofynnir amdani yn y blychau isod.
2. Rhowch eich enw yn y lle a ddarperir i'r dde a seliwrch i guddio eich enw.
3. Rhaid i'r atebion fod mewn llawysgrifen **ddarlennadwy**. Gall yr Arholwyr naill ai anwybyddu sgrïpt annarllennadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.

5. Dechreuwch bob ateb ar dudalen newydd. Gwnewch unrhyw ffras nodiadau yn y llyfr atebion a thynnu llinell drwyddynt.
5. Ni ddylid rhwygo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
7. Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwylt/gwylwyr.

8. Rhaid dychwelyd pob llyfr. Ni chaniateir mynd â llyfrau aiebion, wedi eu defnyddio neu heb eu defnyddio, allan o'r lleoliad arholi o dan unrhyw amgylchiadau.

1	Rhif Myfyriwr	
2	Teitl y Papur Arholiad	
3	Cod y Modwl	
4	Dyddiad ac Amser yr Arholiad	
5	Lleoliad yr Arholiad	
6	Rhif Sedd	
7	Nifer y Llyfrau Atebion a gyflwynwyd	

[illegible]

(See the other side for English version)

A wneuch chi lenw'r rhan hon a'i SELIO cyn i'r arholiad ddechrau.

Cyfenw

(LLYTHRENNAU BREISION) Enw(au) cyntaf

PLYGWCH

Llenwch y
 rhan hon,
 tynwch y
 strîbyn,
 plygwch fel
 a ddangosir
 a SELWCH