
Exam Name: Zombies in Popular Media and Mathematics

Unit refs: ZPMM

INSTRUCTIONS TO CANDIDATES:

See Front Page Instruction Samples document [\[here\]](#).

This could include information about:

- If question paper needs to be handed in
- Questions to answer
- Allocation of marks
- Where / how to answer questions (e.g. answer books / MCQ answer sheet etc)
- Supplied materials
- Permitted materials / equipment

SECTION A

Answer ALL Questions

1 Zombies in films (15)

Consider Zombies in films.

1.a Name some films with Zombies

[5]

Solution:

- Pride and Prejudice... with Zombies!
- Abraham Lincoln... Zombie Hunter!
- etc.

1.b State the average number of characters eaten by a single Zombie in "28 Days Later". Use the following formula:

$$\bar{x} = \frac{1}{n} \cdot \sum_{i=1}^n x_i$$

[10]

Solution: At least 3. Zombies are awesome.

SECTION B

Answer Only ODD numbered questions

2 Zombie Programming (20)

Consider the following code segment:

```
1  #include <iostream>
2  using namespace std;
3
4  int main ()
5  {
6      cout << "Hello World!";
7      return 0;
8  }
```

2.a In your own words, explain:

2.a.i Was this code produced by a Zombie? If so, why?

[5]

Solution: Clearly, the lameness indicates that it is Zombie generated code (ZGC).

2.a.ii How would you improve on the above code?

[5]

Solution: Don't use the std namespace! Better to give your fingers exercise and type it every time.

2.b Write a page essay on any topic you like. Appropriate use of references required.

[10]

Solution: Blah Blah Blah

3 Zombie Algorithms(15)

3.a Consider the following algorithm:

Require: $n \geq 0$

Ensure: $y = x^n$

$y \leftarrow 1$

$X \leftarrow x$

$N \leftarrow n$

while $N \neq 0$ **do**

if N is even **then**

$X \leftarrow X \times X$

$N \leftarrow N/2$

else $\{N$ is odd $\}$

$y \leftarrow y \times X$

$N \leftarrow N - 1$

end if

end while

Describe in your own words the thought processes required for a Zombie to generate this algorithm. How can the promise of fresh brains serve as a motivators?

[10]

Solution: Blah blah blah.

3.b Admire our institution's mighty logo:



Draw this in a manner similar to a Zombie. Coloured pens are provided.

[5]

Solution: Blah blah blah.

Name of Unit leader....	Anne Onymous
Ext No.....	60000
Name of PSO	John Doe
Ext No.....	60000