LH5

UNIVERSITY OF BOLTON

SCHOOL OF SPORT AND BIOLOGICAL SCIENCES

BSc (HONS) MEDICAL BIOLOGY WITH FOUNDATION

SEMESTER TWO EXAMINATIONS 2018/19

CELL AND MOLECULAR BIOLOGY

MODULE NO: BIO3024

Date: Tuesday 21 May 2019 **Time: 2.00 pm – 3.30 pm**

INSTRUCTIONS TO CANDIDATES:

Candidates are advised that the examiners attach importance to legibility of writing and clarity of expression. YOU ARE STRONGLY ADVISED TO PLAN YOUR ANSWERS

Answer ALL questions.

Write all answers in answer booklet.

Marks for parts of questions are shown in brackets.

This examination paper carries a total of 80 marks.

All working must be shown. A numerical solution to a question obtained by programming an electronic calculator will not be accepted.

Sport and Biological Sciences
BSc (Hons) Medical Biology with Foundation
Semester Two Examination 2018/19
Cell and Molecular Biology
Module No. BIO3024

1. In health and safety, what does MSDS stand for?

[4 marks]

2. Define ‘hazard’ giving one named example.

[2 marks]

3. Draw a large plant cell in your answer booklet and label the following;

   a) Cell wall
   b) Cell membrane
   c) Cytoplasm
   d) Nucleus
   e) Nucleolus
   f) Nuclear membrane
   g) Sap vacuole
   h) Mitochondria
   i) Rough endoplasmic reticulum
   j) Ribosomes
   k) Chloroplast
   l) Golgi apparatus

(6 marks - diagram)

(12 marks - labels)

[Total 18 Marks]

4. The cytoskeleton is comprised of which three molecular structures?

[3 marks]

5. Name the four stages of mitosis, and describe one process that occurs at each stage.

[8 marks]

6. What is a chromosome?

[3 marks]

7. Explain the term ‘diploid’.

[2 marks]

8. Distinguish between the terms genotype and phenotype giving a named example of each.

[4 marks]

9. What is the principal end product of glycolysis?

[2 marks]

10. In respiration, what does TCA stand for?

[2 marks]

11. Explain the function of the electron transport chain in mitochondria.

[4 marks]

12. ATP is used in the cell to perform three main kinds of work. Name all three, and provide an example of each.

[6 marks]

13. With reference to stem cells, what does the term “potency” refer to?

[5 marks]

PLEASE TURN OVER

14. Explain what happens during the process of transcription.

[6 marks]

15. What role does the molecule tRNA play in translation?

[5 marks]

16. Describe the structure of the plasma membrane.

[6 marks]

END OF QUESTIONS