BOOKLET 2

HUMAN BIOLOGICAL SCIENCE

SEMESTER 1 EXAM

MULTIPLE CHOICE ANSWER SHEET

STUDENT NAME: _____

TEACHER NAME: _____

Please indicate your answer with a cross (X) within the box.

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D

21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D
26	A	B	C	D
27	A	B	C	D
28	A	B	C	D
29	A	B	C	D
30	A	B	C	D
31	A	B	C	D
32	A	B	C	D
33	A	B	C	D
34	A	B	C	D
35	A	B	C	D
36	A	B	C	D
37	A	B	C	D
38	A	B	C	D
39	A	B	C	D
40	A	B	C	D

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SECTION C EXTENDED ANSWER QUESTIONS (40 marks)

Answer questions on the paper provided in Booklet 2. Illustrate your answers with diagrams where appropriate. Up to TWO MARKS may be deducted for poorly structured answers, ie answers in point form or diagrams not explained in the text of your answer.

DO NOT WRITE YOUR ANSWERS IN PENCIL.

ANSWER 2 QUESTIONS: QUESTION 1 OR 2 AND **QUESTION 3 OR 4**

QUESTION 1:

Once a muscle is stimulated, it requires energy to contract. The energy comes from a series of chemical reactions. Describe the processes, which produce energy for the muscles of a runner in a sprint race, and also during an endurance race.

(Total 20 marks)

OR

QUESTION 2:

(a) Cells need energy that is stored in the ATP molecule for a variety of function. List and explain the way the cell uses energy in the cell. (15 marks)

(b) Compare the differences between Mitosis and Meiosis (5 marks)

(Total 20 marks)

AND

QUESTION 3:

The circulatory system plays a vital role in our bodies.

(a) Describe the pathway of a red blood cell from when it enters the heart through the vena cava to when it leaves the heart. (4 marks)

(b) Using the terms diastole and systole, describe the action of the heart muscle during the cardiac cycle. (8 marks)

(c) What causes the sounds made during a heartbeat? (2 marks)

(d) Relate the structures of arteries, veins and capillaries to their different functions within the circulatory system. (6 marks)

(Total 20 marks)

OR

QUESTION 4:

(a) Describe the structure of a DNA molecule and explain how the genetic code can be interpreted from the original message. (6 marks)

(b) Transcription and translation allow for protein synthesis to occur. Explain how these processes work for the production of a haemoglobin molecule using the appropriate terminology. (14 marks)

(Total 20 marks)

END OF SECTION C

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SECTION C EXTENDED ANSWERS (40 marks)

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