

Human Biology Unit 2 Pregnancy Investigation

NAME: _____

WEIGHTING:

DUE DATE: _____

MARK: _____ / 60 = _____ %

PART A – EXERCISING DURING PREGNANCY

[TOTAL = 18 MARKS]

1. Some observations have indicated that mothers who exercise during pregnancy seem more likely to avoid a premature birth than those who do little or no exercise
 - a. Propose a hypothesis that states a relationship between the two variables – exercise during pregnancy and time of birth
 - b. Design, compile and produce a questionnaire leaflet that could be given to mothers after the birth of their babies. The questions should be designed so that the answers will either support or disprove your hypothesis. The questionnaire must contain at least 15 questions. When designing your questions, keep the following points in mind:
 - The questions need to be concise and clear, the mothers should not have to try to guess or interpret what the question means
 - Frame the questions to include a variety of answers, ie, yes, no, multiple choice, short answer
 - Ensure that you obtain enough information from your questionnaire to support or disprove your hypothesis about exercising and time of giving birth
 - c. There are many websites that give advice on making up questionnaires – use a search engine to look for ‘questionnaire design’. Much of the advice is concerned with marketing surveys but the principles can be applied to your questionnaire
 - d. What pattern of answers to your questions would support your hypothesis ?
 - e. How would you go about conducting your survey ? In particular, how would you select participants ?
 - f. How many participants would be necessary to enable you to decide whether your hypothesis was supported or disproved ?

PART B – MAINTAINING A HEALTHY PREGNANCY

[TOTAL = 42 MARKS]

2. To meet the requirements of the developing foetus a large quantity of blood needs to flow through the placenta. Describe the changes in the mother’s body that make it possible for a lot of blood to flow through the placenta ? [3 marks]
3. List the dietary factors (including daily requirements and or limits) that a pregnant woman should consider in her diet ? [5 marks]
4. Weight gain during pregnancy is necessary and healthy. In addition to the growing foetus, what else contributes to the weight gain ? [5 marks]
5. Describe three benefits of exercise for a pregnant woman ? [3 marks]
6. What is a congenital disorder ? Explain your answer with an example ? [4 marks]

7. Why should pregnant women be particularly careful about smoking, consuming alcohol and taking other drugs ? [2 marks]
8. Define a teratogen and give three examples of teratogens ? [4 marks]
9. What environmental factors can affect the development of the foetus ? Give examples to illustrate how the environmental factors you have mentioned can affect development [6 marks]
10. Why should pregnant women read labels of prepared foods and medicinal products ? [1 mark]
11. What is foetal monitoring and why is it used ? [4 marks]
12. Describe five different techniques (including how they are used) that are available to check the embryo, foetus or newborn for congenital disorders [5 marks]