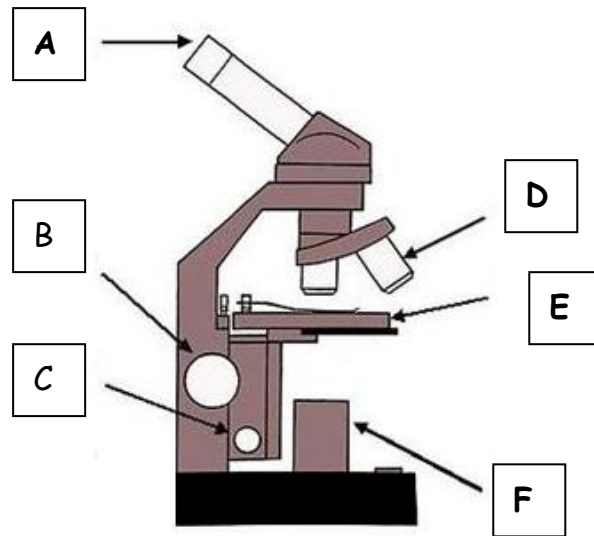


Biology

Homework 1

1.



Name parts of the microscope A-F in your jotter (6)

2. Copy and complete the following table:

Part of Microscope	Description
	Platform where slide is placed
	Lens closest to the eye
	These make the view of the specimen sharp and clear
	These lenses can magnify x4, x10 or x40

(4)

3. A microscope has a 40x objective lens and 10x eyepiece. What is the magnification of the microscope? (show your working) (1)

4. What is the name given to the basic units of life? (1)

5. What is the purpose of staining a cell? (1)

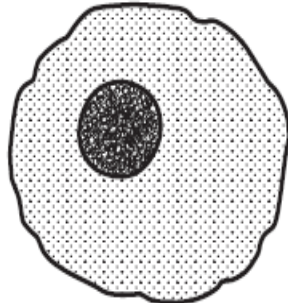
Total (13)

Biology

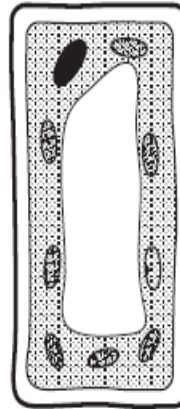
Homework 2

Use the following diagrams to help you answer the questions:

Animal Cell



Plant Cell



1. Name 3 structural features common to both a typical plant cell and a typical animal cell. (3)
2. Give 3 ways in which the plant cells differ in structure from animal cells. (3)
3. Present the following information as a **bar** chart:

Cell Type	Cell length or diameter (in micrometres)
Onion	150
Human egg	100
Human liver	20
Red blood	7

(3)

4. Copy and complete the following table, using the correct structure to match with the definitions:

Structure	Definition
	Controls entry and exit of materials
	Controls the cell activities
	Site of photosynthesis
	Contains water, sugar and salts
	Site of biochemical reactions in the cell
	Maintains cell shape

Structures:

Nucleus, Cell Membrane, Vacuole, Cytoplasm, Chloroplast, Cell Wall (6)

Total (15)

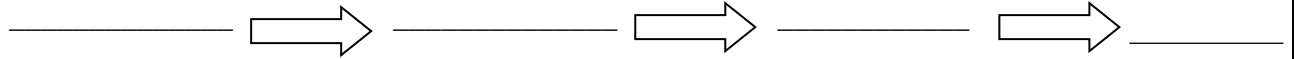
Biology

Homework 3

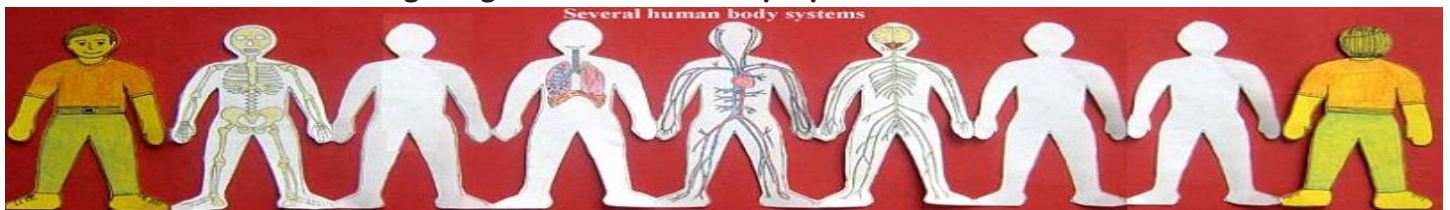
1. Copy and complete the information in the box below using the word bank. (2)

The parts of the body should be in order from least to most complex.

WORD BANK: Body system Organ Tissue Cell



2. The following diagram shows 4 body systems.



- a. What is a body system? (1)
- b. Name the 4 body systems shown. (1)
- c. State the function of 2 of the body systems shown. (2)
- d. Name the 3 missing body systems. (1)

3. Match the body system to the correct organ. (3)

Body system

Reproductive

Skeletal & muscle

Digestive

Respiratory

Circulatory

Nervous

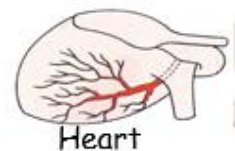
Immune

Organ

Lung



Brain



Heart



Arm bones



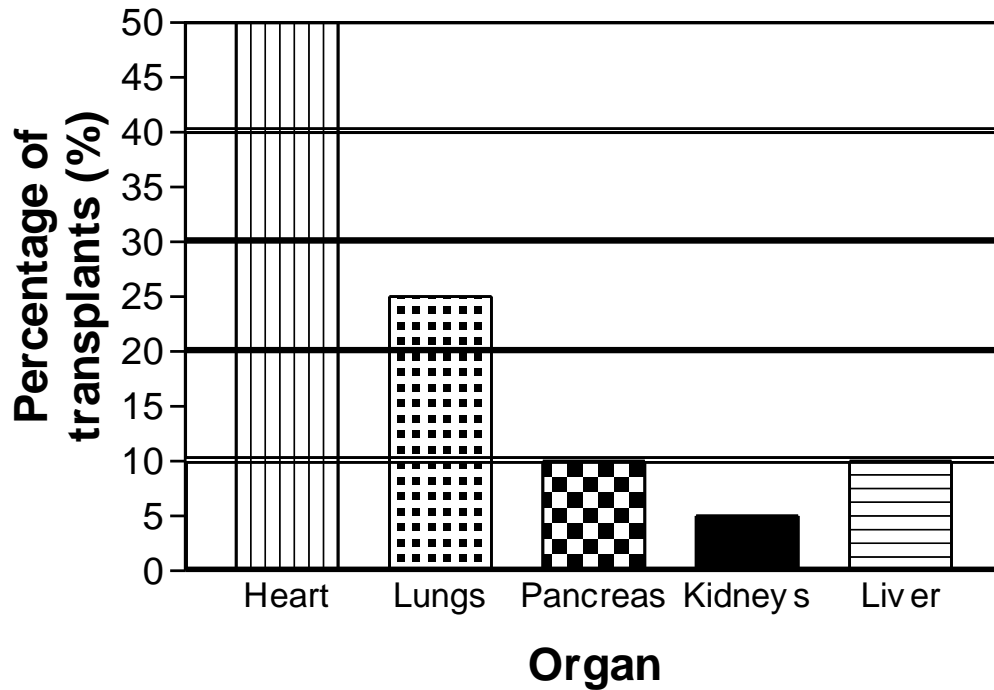
Skin



Stomach

Turn over for Question 4

4. The graph shows the percentage of organs transplanted in a hospital in one year.



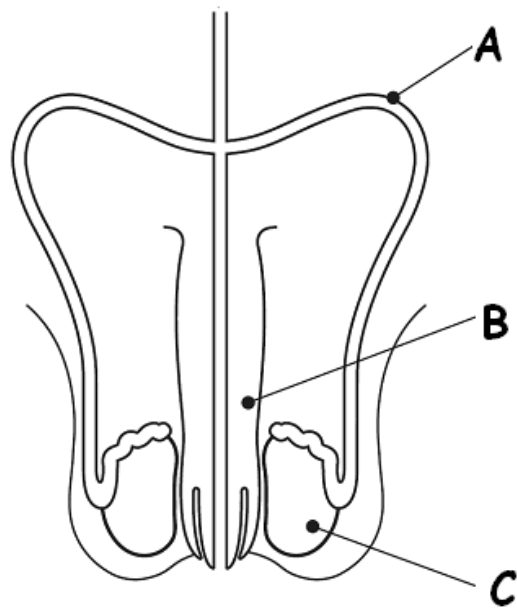
- Which organ was transplanted most often? (1)
- What was the percentage of pancreas transplanted? (1)
- Calculate the total percentage of organ transplants from the circulatory AND respiratory system (2)
- Which organ is transplanted least often? (1)
- Name one organ that cannot be transplanted? (1)

Total Marks 15

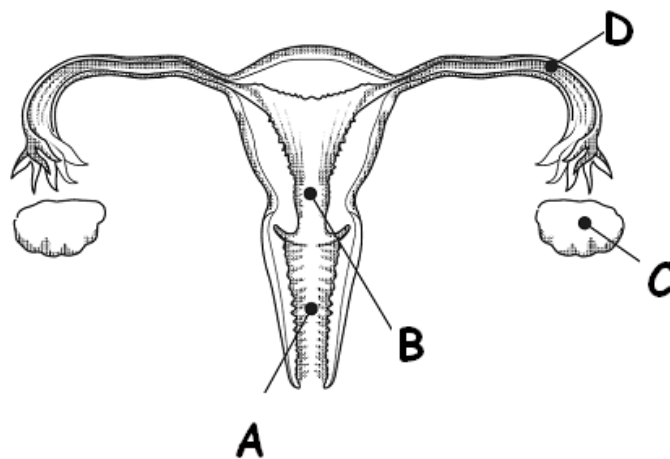
Biology

Homework 4

- 1 What are the names given to the male and female sex cells? (1)
- 2 Where does fertilisation take place? (1)
- 3 Look at the male reproductive system. In your jotter name the parts A, B and C. Give their functions. (6)



- 4 Look at the female reproductive system. In your jotter name the parts A, B and C. Give their functions. (8)



Total Marks (16)

Biology

Homework 5

1. The gestation period of a species is the length of time that the foetus spends developing from fertilisation until birth. Different species have different gestation periods.

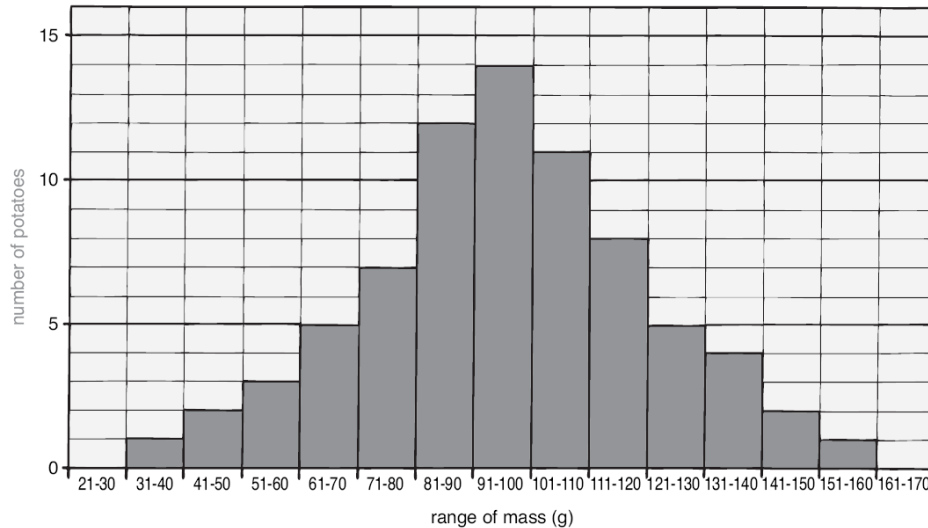
The table below shows the gestation period of some different species.

Species	Gestation Period (months)
Human	9
Elephant	22
Whale	19
Sheep	5
Rabbit	1
Rhino	15

- a) Use this information to draw a bar graph on the graph paper provided. Use a pencil and a ruler and make sure that you include labels for each axis and a scale for the vertical axis. (3)
- b) How many species have a gestation period longer than humans? (1)
- c) Which species has a gestation period that is 3 times as long as a sheep's gestation period? (1)
- d) Which species has a gestation period that is the closest to the human gestation period? (1)

Total (6)

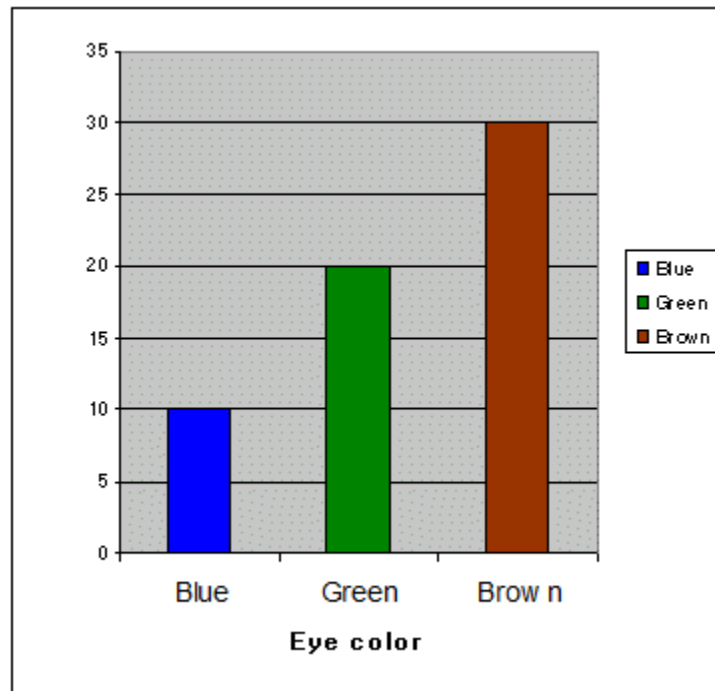
1. Farmer Jim measured the mass of a sample of his potatoes. His results are shown in this histogram below.



- How many potatoes have a mass in the range of 111-120g?
- What is the most common mass of potato?
- How many potatoes fall into the most common range?
- How many potatoes have a mass of 90g or less?
- How many potatoes have a mass of 101g or more?
- How many potatoes are included in the whole sample?
- Does this data show continuous or discrete variation?

Turn over for Question 2

2. Melissa checked the eye colours of everyone in 3 science classes. Her results are shown below.



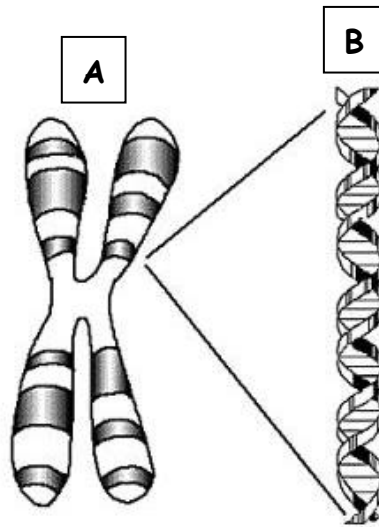
- Does the data show continuous or discrete variation?
- How many pupils have blue eyes?
- What is the most common eye colour?

Total Marks 10

Biology

Homework 7

1. Look at the diagram below and name structure A and B. (2)



2. Where in a cell is DNA found? (1)
3. Genes are made up of DNA and humans have around 30,000 genes. What do genes do? (1)
4. How many chromosomes do humans have? (1)
5. How many chromosomes do humans inherit from each parent? (1)
6. Copy and complete the following, choosing one of the options in bold to make the statements correct. (4)

DNA is made up of **one/two** strands and is described as a **double helix/double ladder**. DNA contains **two/four** chemical bases which contain the genetic code. The order of bases is the **same/different** in everyone.

Total Marks (10)