Q. 1 Choose the best answer.

1. The cell occurs in pairs:
   a) Guard cell  
   b) Palisade cell  
   c) Root hair cell  
   d) Sperm cell

2. The cell has many branched endings:
   a) Sperm cell  
   b) Root cell  
   c) Red blood cell  
   d) Nerve cells.

4. Which system is primarily responsible for getting oxygen into your blood?
   a) Circulatory system  
   b) Respiratory system  
   c) Digestive system  
   d) Nervous system

5. Cytoplasm is a gel-like substance inside the:
   a) Cell membrane  
   b) Vacuole  
   c) Cell wall  
   d) Nucleus

6. What is the job of a cell wall?
   a) To control what substances go into and out of the cell.  
   b) To give plant cells a shape.  
   c) It is where photosynthesis happens.  
   d) To control the activities of the cell.
7. What type of a cell is this likely to be?
   a) Animal cell 
   b) Plant cell 
   c) Blood cell 
   d) Muscle cell.

8. What sort of a structure is a heart?
   a) A cell 
   b) A tissue 
   c) An organ 
   d) An organ system.

9. The Nervous system consists of:
   a) Heart, arteries and veins. 
   b) Brain, nerves and spinal cord. 
   c) Lungs, trachea and bronchi. 
   d) Bones, Liver and Muscles.

Q.2 Write whether the statement is true or false and rewrite the false statement.

1. A group of cells which do the same job is called ‘Organ’.  (   )

2. Microscopes are used for looking at very small things like cells.  (   )

3. Digestive system helps to take oxygen into the body.  (   )

4. Animal cell contains cell wall made up of cellulose.  (   )

5. Cell is the basic building block of life.  (   )
Q.3 Plant and animal cells look different. Put a tick or a cross in the two columns to show if the organelle is present in the plant cell or the animal cell.

<table>
<thead>
<tr>
<th>Organelle</th>
<th>Animal cell</th>
<th>Plant cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cytoplasm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloroplast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell membrane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuole</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q.4a Label the following parts of the microscope:

b. Janna observed an object whose eye piece lens has a magnification of 10X and Objective lens has a magnification of 100 x. Calculate the total magnification.

__________________________________________________________________
__________________________________________________________________
Q.5a When a cell divides it makes two new cells. Rearrange these pictures by giving correct number to the sequence.

![Picture of cell division images]

b. What is the significance of cell division?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

c. Who proposed the cell theory and what does it state?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Q.6 Scientists from the Natural History Museum spent the year 1996 in the Gobi Desert in Mongolia. Whilst there, they found a group of fossilized cells which are drawn in the picture below.

a) Are these plant or animal cells? Justify your answer.
________________________________________________________________________
________________________________________________________________________

b) Which group contains some cells which have just divided?
________________________________________________________________________
Q.7 Bleeding or blockage in this system can lead to stroke.

a) Identify the system and state its function.

____________________________________________________________________
____________________________________________________________________

b) Name the main organ of this system. ________________

c) What tissues make up this organ and which cells in turn make these tissues?

____________________________________________________________________

Q.8a The diagrams show some specialized cells. Identify each cell and explain how each one is adapted to perform its function.

<table>
<thead>
<tr>
<th>Name of the cell</th>
<th>Is it a plant cell or an animal cell?</th>
<th>Function</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) What does the word ‘specialized’ mean?

____________________________________________________________________
Q.9 Differentiate between the following:

<table>
<thead>
<tr>
<th>Cells</th>
<th>Tissues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle cell</td>
<td>Palisade cell</td>
</tr>
<tr>
<td>Chloroplast</td>
<td>Chlorophyll</td>
</tr>
</tbody>
</table>

Q.10a Identify the parts of the cell.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>It stores extra water</td>
<td>It stores extra water and sap to help keep the cell turgid and give it extra support.</td>
</tr>
<tr>
<td>and sap to help keep</td>
<td>This is rigid and made of cellulose and gives the cell shape and strength.</td>
</tr>
<tr>
<td>the cell turgid and give</td>
<td>A thin membrane that controls the movement of materials into and out of the cell.</td>
</tr>
<tr>
<td>it extra support.</td>
<td>It contains all the genetic information for the cell and controls all the cell’s functions.</td>
</tr>
</tbody>
</table>

b. Differentiate between unicellular and multicellular organisms. Give at least one example of each type.

_________________________________________________________________________
_________________________________________________________________________

Q.11 Identify the cells and label the parts.