Joints & Movement Worksheet

Read your notes and answer the following;

1. **What are joints?**
   A joint is the area where two or more bones meet.  
   (2 marks)

2. **What are fixed joints? What is their other name?**
   Fixed joints are joints where there is no movement between the bones.
   Fixed joints are also called immovable joints or fibrous joints.
   (2 marks)

3. **What are slightly moveable joints? What is their other name?**
   Slightly movable joints allow a slight amount of movement.
   They are also called cartilaginous joints.
   (2 marks)

4. **Name the type of joints shown below.**
   a. **Fixed joint**
   
   b. **Slightly Moveable**

5. **What are freely moveable joints? What is their other name?**
   Freely moveable joints allow a wide range of movements.
   They are also called synovial joints.
   (2 marks)

6. **What type of joint is shown in the following diagram?**
   A synovial joint.
   (1 mark)

Label the diagram.

![Knee Joint Diagram]
7. How many types of freely moveable joints are there?  
   There are six types of synovial joints

8. Under each picture write the names of the **synovial** joints shown.  
   (8 marks)
   
   a. **Hinge joint**  
   b. **Saddle joint**  
   c. **Ball and socket joint**
   
   d. **Gliding joint**  
   e. **Pivot joint**  
   f. **Condyloid**

Identify one area in the body where the following joints can be found.  
   (6 marks)

- **Ball and socket**: hips and shoulder
- **Hinge**: elbow, knee
- **Pivot**: neck (where the atlas & axis meet), upper forearm (where the radius & ulna meet)
- **Condyloid**: wrist
- **Cartilaginous**: spine (vertebral column), between ribs and sternum
- **Fixed**: skull
Complete the following sentences (4 marks)

- **Ligaments** link bones together and limit the range of movement of a joint.
- **Cartilage** protects bones and prevents them from wearing each other down.

Describe the following types of movement. (12 marks)

- **Flexion** is a movement which bends, thereby decreasing the angle at the joint between the bones.
- **Extension** is a movement which straightens, thereby increasing the angle at the joint between the bones.
- **Abduction** is a sideways movement of a bone/limb away from the centre line of the body.
- **Adduction** is a sideways movement towards the centre line of the body.
- **Circumduction** is a movement where the end of the bone makes a circle.
- **Rotation** is a turning movement around an imaginary line or central axis.
Below each picture name the movement that is shown. (6 marks)

a. flexion  
b. circumduction  
c. extension  
d. abduction  
e. rotation  
f. adduction

Identify the type of movements that are allowed by the following joints. (8 marks)

<table>
<thead>
<tr>
<th>Type of joint</th>
<th>Movement allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ball and socket</td>
<td>Flexion and extension, Abduction and adduction,</td>
</tr>
<tr>
<td></td>
<td>Rotation and Circumduction</td>
</tr>
<tr>
<td>Pivot</td>
<td>Rotation only</td>
</tr>
<tr>
<td>Hinge</td>
<td>Flexion and extension</td>
</tr>
<tr>
<td>Condyloid</td>
<td>Flexion and extension, Abduction and adduction</td>
</tr>
</tbody>
</table>