February 13th TT #6

11.2 Describe the roles of nerves, muscles and bones in producing movement. [6]

A. Motor neurones carry impulses / messages to muscle;
B. Nerves / neurones stimulate muscles to contract;
C. Neurones control the timing of muscle contraction;
D. Muscles provide the force for / cause movement;
E. Muscles are attached to bone by tendons;
F. Bones act as levers;
G. Joints between bones control the range of movement;
H. Antagonistic muscles cause opposite movements;

February 14th WW #6

6.2.U11 Outline the control of the heartbeat. [6]

A. The heart is myogenic / beats on its own accord;
B. 60-80 times a minute (at rest);
C. Coordination of heartbeat is under the control of pacemaker;
D. Located in the muscle / walls;
E. Sends out signal for contraction of heart muscle;
F. Atria contract followed by ventricular contraction;
G. Fibres / electrical impulses cause chambers to contract;
H. Nerve from brain can cause heart rate to speed up;
I. Nerve from brain can cause heart rate to slow down;
J. Adrenalin (carried by blood) speeds up heart rate;
K. Artificial pacemakers can control the heartbeat;

February 15th TTh #6

3.4.U7 Outline sex linkage. [4]

A. Gene carried on sex chromosome / X chromosome / Y chromosome;
B. Inheritance different in males than in females;
C. Males have only one X chromosome therefore, only one copy of the gene;
D. Mutation on Y chromosome can only be inherited by males;
E. Women can be carriers if only one X chromosome affected;
F. Example of sex linked characteristics (e.g. hemophilia / color blindness);
G. Example of cross involving linkage;

February 16th FF #6

6.2.S2 Draw a labelled diagram to show the internal structure of the heart. [6]

A. Left and right ventricle;
B. Left and right atria;
C. Atrioventricular valves / bicuspid / mitral and tricuspid valves;
D. Semilunar valves;
E. Aorta and vena cava;
F. Pulmonary artery and pulmonary vein;
G. Ventricle wall thicker than atria;
H. Left ventricle wall thicker than right ventricle wall;