

**Homeostasis**  
**Topic test – Marking Guideline**

**Question 1**

- 1.1 C ✓✓  
1.2 B ✓✓  
1.3 C ✓✓

**(3x2) = (6)**

**Question 2**

2.1	Negative feedback mechanism ✓
2.2	Vasodilation ✓
2.3	Homeostasis ✓
2.4	Vasoconstriction ✓

**(4)**

**Question 3**

- 3.1 (a) Volume of urine ✓ (1)
- (b) - Decide on a time ✓/date/place to conduct the investigation  
- Decide on the apparatus ✓/materials that need to be used  
- Decide how to record the data ✓  
- Advertise for volunteers to participate ✓  
- Decide on the number of participants to include ✓  
- Decide what factors to keep constant ✓/example of factor to be kept constant  
**(Mark first TWO only)** Any (2)
- (c) - The same room ✓/environment/ temperature  
- The same apparatus ✓  
- The same investigator ✓  
- No other liquid intake by both groups ✓  
- The same level of activity ✓  
**(Mark first TWO only)** Any (2)
- (d) - They used a large sample ✓/12 men/6 men in each group  
- The average volume of urine produced was calculated ✓  
**(Mark first TWO only)** (2)
- 3.2 - Alcohol inhibits/reduces the secretion of ADH ✓  
- Less ADH in the blood causes the renal tubules ✓/distal convoluted tubules and collecting ducts  
- to become less permeable to water ✓  
- Less water is reabsorbed ✓ back into the blood  
- A larger volume of urine is produced ✓ Any (4)

**(11)**

**Question 4**

- 4.1 Sweat gland. ✓ (1)
  - 4.2 Diagrams 2 ✓ and 3 ✓ (2)
  - 4.3 Diagram 3 ✓ (1)
  - 4.4 Diagram 1 ✓ (1)
  - 4.5 Hypothalamus ✓ (1)
- (6)**

**Question 5**

- 5.1 Cold conditions ✓ / any temperature considerably lower than room temperature (1)
- 5.2 Heat loss ✓ / radiation (1)
- 5.3 Thermoregulation ✓ (1)

**(3)**  
**[30]**