

**32031 Feedback Quiz, 2022/23, Week 11: General Revision II**

Open books. 10–15 minutes. Not for credit. To be marked in class.

Question 1 ♣ Select trivial codes:

- ☐ $\text{Ham}(q, q)$
- ☐ A binary linear code C such that $C \supseteq E_4$ and $C \ni 1101$
- ☐ $\text{Rep}(7, \mathbb{F}_2)^\perp$
- ☐ A ternary code with generator matrix $\begin{bmatrix} 2 & 1 \\ 1 & 1 \end{bmatrix}$
- ☐ The cyclic code in \mathbb{F}_q^n with generator polynomial $x^n - 1$

Question 2 ♣ Select self-dual codes:

- ☐ $\text{Ham}(2, 3)$
- ☐ $\text{Ham}(3, 3)$
- ☐ $\text{Ham}(4, 3)$
- ☐ $\text{Ham}(6, 3)$
- ☐ G_{23}

Question 3 The code $C \subseteq \mathbb{F}_3^6$ is cyclic with generator polynomial $g(x) = (x-1)^3$. What is the check polynomial of C ?

- ☐ 1
- ☐ $(x-1)(x+1)^2$
- ☐ $(x-1)^2(x+1)$
- ☐ $(x-1)^3$
- ☐ $(x+1)^3$