A local trust hospital have launched a voluntary blood donor register (VBDR). Any local resident can access VBDR website and register themselves as a donor by providing their details like name, phone number, date of birth, address and blood group. When a patient at the hospital requires blood transfusion, staff can use VBDR to get a list of donors with a compatible blood group, and then contact them.

Question Group A	Question Group B
1. For the given case study, identify and discuss a possible threat against authenticity. Be specific to the case study! Secondly, propose a security measure against that threat. 2. Decrypt the ciphertext VVEQSQ using keyword KNOW according to Vigenère cipher. Show workings. [4 + 2 + 4 marks]	1. For the given case study, discuss how you could apply the following principles to improve system security: separation of privilege and fail-safe defaults. Give specific examples relevant to this system. 2. Decipher the message LRDLAEAIONHPO using columnar transposition with keyword UNDER. Show workings. [3 + 3 + 4 marks]

Group A

Q2

ciphertext	V	V	E	Q	S	Q
Key	K=10	N=13	O=14	W=23	K=10	N=13
plaintext	L	I	Q	U	I	D

Group B

Q2

UNDER = 5, 3, 1, 2, 4

5	3	1	2	4
H	E	L	L	O
P	A	R	A	N
O	I	D		

Answer: HELLOPARANOID