Polynomial and Function Spaces MCQ Questions

Q1. A set of all the real integrable functions numbers forms a vector space.   
 True/False

Q2. Let V be a set of all the non zero functions over a real field, then V forms a  
 vector space.   
 True/False

Q3. (i) The degree of a constant polynomial is 0.  
 (ii) A set of polynomials with the real coefficients doesn’t form a vector space.

1. Only (ii) is correct
2. Only (i) is correct
3. Both (i) and (ii) are correct
4. All are incorrect

Q4. Let V be a vector space over a **ℝ** and if we define two functions  
 *f* : A → V and *g* : A → V, then V forms a vector space when

1. *( f + g )(x) = f( x ) + g( x ),* where *x* ϵ A
2. *( c f )( x ) = c f ( x ),* where *c* ϵ **ℝ**
3. Both a and b
4. None of the above

Q5. The vector space V over a field F is said to be a Finite-Dimensional Vector  
 Space if it is spanned by a finite set of vectors.  
 True/False

ANSWER KEY

Q1. True

Q2. False

Q3. Only (i) is correct

Q4. Both a and b

Q5. True