Combined Logic Coding Worksheet - With Answers

Q1: Count and Print Vowels in Reverse

Input: 'elephant'

```python
word = "elephant"
vowels = "aeiouAEIOU"
count = 0
for char in reversed(word):
    if char in vowels:
        print(char)
        count += 1
print("Total vowels:", count)
```

Q2: Print Prime Numbers Between 1 to N

Input: N = 20

```python
n = 20
for num in range(2, n+1):
    is_prime = True
    for i in range(2, int(num**0.5)+1):
        if num % i == 0:
            is_prime = False
            break
    if is_prime:
        print(num)
```

Q3: Vowel Index Printer

Input: 'amazing'

```python
word = "amazing"
vowels = "aeiouAEIOU"
for index, char in enumerate(word):
    if char in vowels:
        print(f"Vowel {char} found at index {index}")
```

Q4: FizzBuzz but for Characters

Input: 'EduCation'

```python
word = "EduCation"
vowels = "aeiouAEIOU"
for char in word:
    if char in vowels:
        print("Vowel")
    elif char.isupper():
        print("Uppercase")
```

```
    else:
        print(char)
```

Q5: Word Mirror

Input: 'hello world'

```
sentence = "hello world"
words = sentence.split()
reversed_words = [word[::-1] for word in words]
print(" ".join(reversed_words))
```

Q6: Sum of Even Digits in a String

Input: 'abc1234xyz5'

```
s = "abc1234xyz5"
total = 0
for char in s:
    if char.isdigit() and int(char) % 2 == 0:
        total += int(char)
print("Sum of even digits is", total)
```

Q7: Word Pyramid

Input: 'code'

```
word = "code"
for i in range(1, len(word)+1):
    print(word[:i])
```

Q8: Count Words and Vowels

Input: 'This is a test'

```
sentence = "This is a test"
words = sentence.split()
vowels = "aeiouAEIOU"
vowel_count = sum(1 for char in sentence if char in vowels)
print("Total words:", len(words))
print("Total vowels:", vowel_count)
```

Q9: Character Frequency Counter

Input: 'banana'

```
word = "banana"
for char in set(word):
    print(f"{char}: {word.count(char)}")
```

Q10: Alternate Case Output

Input: 'codingisfun'

```
word = "codingisfun"
result = ""
for i in range(len(word)):
    if i % 2 == 0:
        result += word[i].upper()
    else:
        result += word[i].lower()
print(result)
```