In [1]: `#컴퓨터공학과-2020610129-문보경`
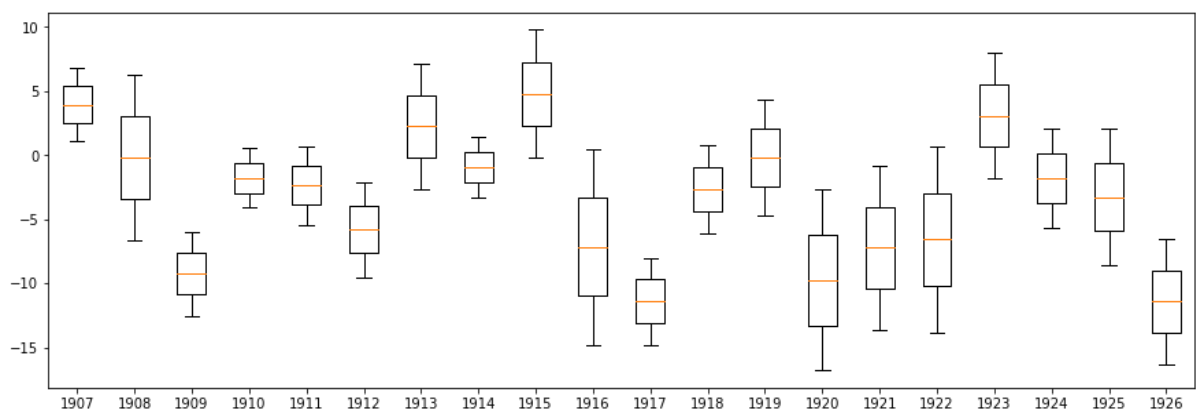
In [121]:
```python
import csv
import matplotlib.pyplot as plt
f = open('/Users/bokyungmoon/desktop/python_homework/seoul.csv')
data = csv.reader(f)
next(data)
year = []
for row in data :
    month = row[0].split('/')[0]
    #print(month)
    day = row[0].split('/')[1]
    #print(day)
    if row[-1] != '':
        if month == '12' and day == '25':
            year.append([float(row[-2]), float(row[-1])])

#print(year)
```

In [122]:
```python
print('How many years?: ' + str(len(year)+3)) #Because of Korean War, no
data between 1950 to 1952
print('First 20 years: 1907 - 1926')
plt.figure(figsize=(15,5))
plt.boxplot(year[0:20])
plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 1
8, 19, 20], ['1907', '1908', '1909', '1910', '1911','1912', '1913', '191
4', '1915', '1916', '1917', '1918', '1919', '1920', '1921', '1922', '192
3', '1924', '1925', '1926'])
plt.show()
```
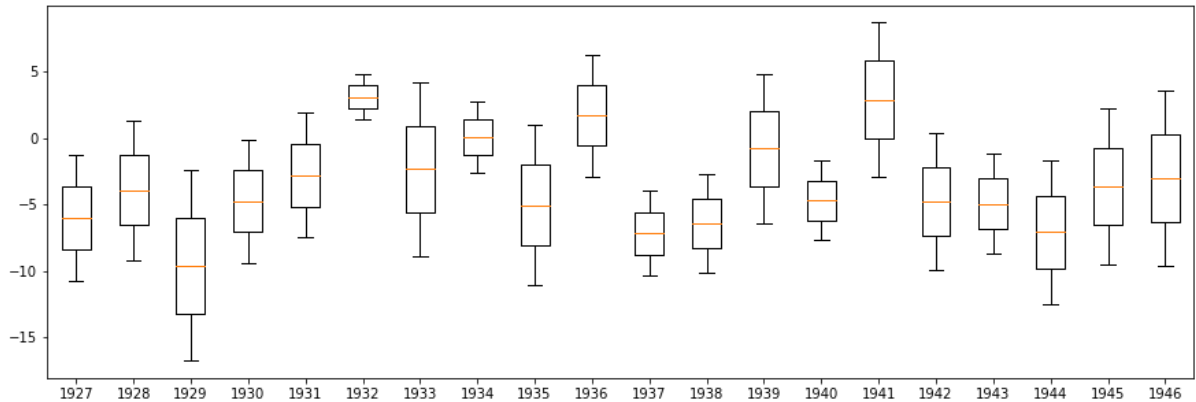
```
How many years?: 113
First 20 years: 1907 - 1926
```

```
In [123]: print('Second 20 years: 1927 – 1946')
          plt.figure(figsize=(15,5))
          plt.boxplot(year[20:40])
          plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 1
          8, 19, 20], ['1927', '1928', '1929', '1930', '1931','1932', '1933', '193
          4', '1935', '1936', '1937', '1938', '1939', '1940', '1941', '1942', '194
          3', '1944', '1945', '1946'])
          plt.show()
```
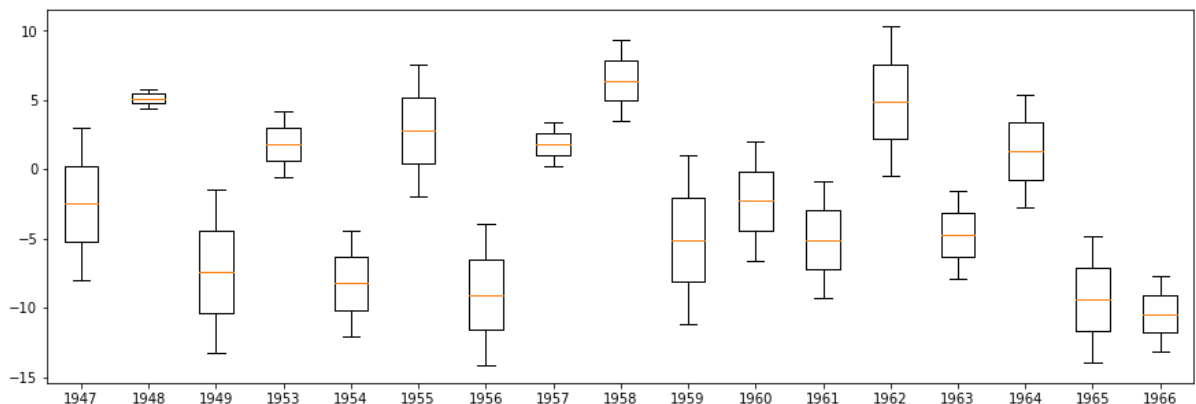
Second 20 years: 1927 – 1946


```
In [124]: print('Third 20 years: 1947 – 1966')
          print('No data between 1950-1952 due to Korean War')
          plt.figure(figsize=(15,5))
          plt.boxplot(year[40:57])
          plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17],
          ['1947', '1948', '1949', '1953', '1954', '1955', '1956', '1957', '1958',
          '1959', '1960', '1961', '1962', '1963', '1964', '1965', '1966', ])
          plt.show()
```
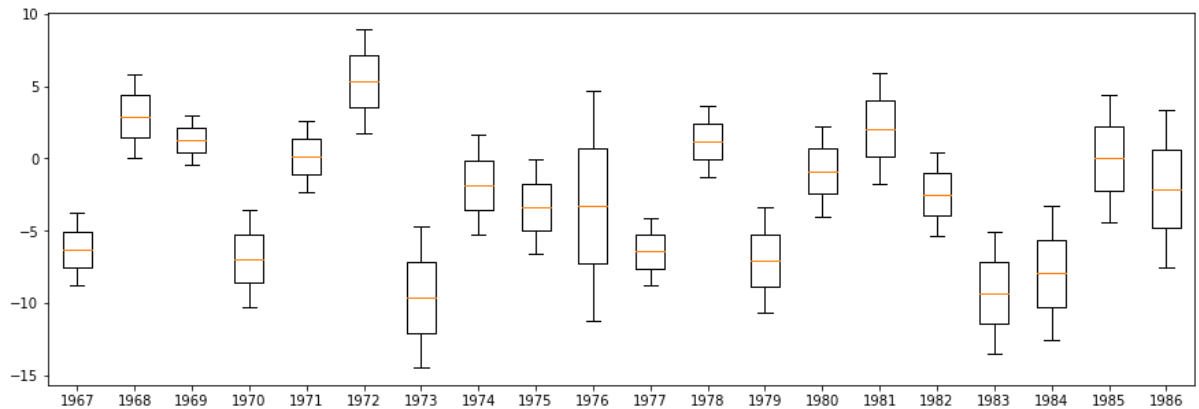
Third 20 years: 1947 – 1966
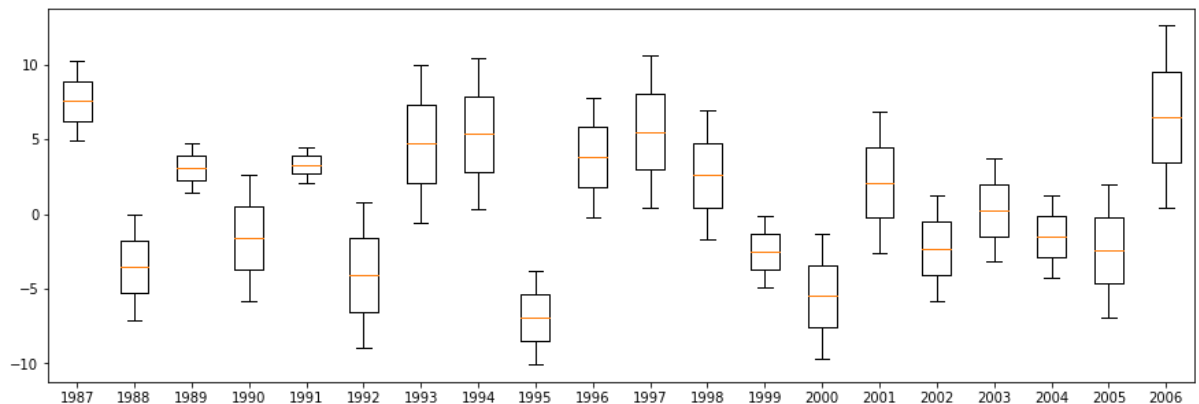No data between 1950-1952 due to Korean War

In [125]:
```python
print('Fourth 20 years: 1967 - 1986')
plt.figure(figsize=(15,5))
plt.boxplot(year[57:77])
plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 1
8, 19, 20], ['1967', '1968', '1969', '1970', '1971','1972', '1973', '197
4', '1975', '1976', '1977', '1978', '1979', '1980', '1981', '1982', '198
3', '1984', '1985', '1986'])
plt.show()
```
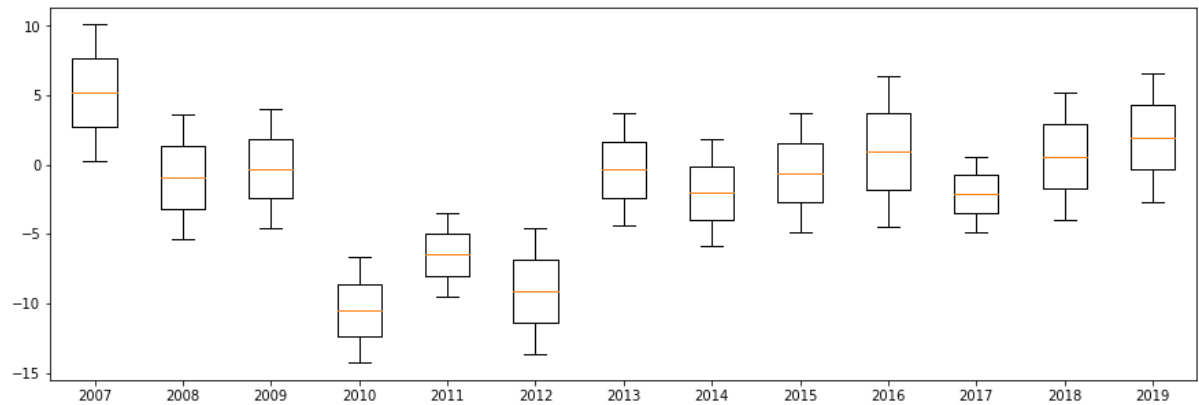
Fourth 20 years: 1967 - 1986

In [126]:
```python
print('Fifth 20 years: 1987 - 2006')
plt.figure(figsize=(15,5))
plt.boxplot(year[77:97])
plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 1
8, 19, 20], ['1987', '1988', '1989', '1990', '1991','1992', '1993', '199
4', '1995', '1996', '1997', '1998', '1999', '2000', '2001', '2002', '200
3', '2004', '2005', '2006'])
plt.show()
```

Fifth 20 years: 1987 - 2006

In [127]:
```python
print('to present: 2007 - 2019 ')
plt.figure(figsize=(15,5))
plt.boxplot(year[97:])
plt.xticks([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13], ['2007', '2008',
'2009', '2010', '2011','2012', '2013', '2014', '2015', '2016', '2017',
'2018', '2019'])
plt.show()
f.close()
```

to present: 2007 - 2019

In [ ]: