

- b) Write a program to determine the sum of the following harmonic series for a given value of 'n'.

$$1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} \quad (8)$$

### Unit - V

5. a) What is meant by initializing a file stream object? What are the ways of doing it? Give example code for each of them? (8)
- b) Modify the program to produce the following form of Floyd's triangle?

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

(8)

### OR

- a) It is required to compute sum of the following series correct upto 6 decimal places. Write a Java program.

$$\text{Sum} = x + \frac{x^3}{3!} + \frac{x^5}{5!} + \frac{x^7}{7!} + \dots \quad (8)$$

- b) Explain the following.

- i) Java applet
- ii) Java byte code
- iii) Bit wise operator
- iv) I/O streams in Java. (2x4)