

## **W-3314**

### **M.A./M.Sc. (Fourth Semester) Examination, June-2020**

#### **MATHEMATICS**

##### **Paper - 404**

##### **Mathematics of Finance and Insurance**

*Time : Three Hours*

Maximum Marks : 85 (For Regular)

Minimum Pass Marks : 29

Maximum Marks : 100 (For Private)

Minimum Pass Marks : 34

**Note :** Attempt **all** questions.

#### **Unit-I**

- Q.1. Explain simple interest. A firm anticipates a capital expenditure of rupees 10,000 for a new equipment in 5 years. How much should be deposited quarterly in a sinking fund at 10% per 5 years compounded quarterly to provide for the purchase?

#### **Unit-II**

- Q.2. Explain life table and insurance model including expenses.

#### **Unit-III**

- Q.3. Explain bonds and their valuation. Also explain types of bonds.

#### **Unit-IV**

- Q.4. State and prove Ito's Lemma.

#### **Unit-V**

- Q.5. Explain one step Binomial Tree.

