**UNIVERSITY OF RUHUNA**

**BACHELOR OF SCIENCE (GENERAL DEGREE) LEVEL I (SEMESTER I) EXAMINATION – August 2017**

SUBJECT: BOTANY
COURSE UNIT: **BOT1131 (Plant Anatomy)**

Time: **One (01) hour**

Answer **two (02)** questions including question **No 1**

**Index No:**

| Question No. | Marks |
|---|---|
| $Q_1$ | |
| $Q_2$ | |
| $Q_3$ | |
| Total | |

---

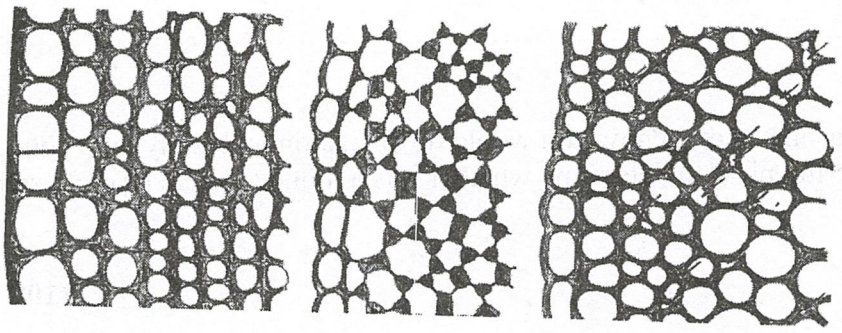
**1.** Write short notes on,

i. Structure and function of xylem tissue in a typical flowering plant
ii. Ecological anatomy of plants
iii. Characteristic features of meristematic tissues
iv. External secretory structures of plants
v. Secondary growth of the stem of a typical dicot plant

**(100 marks)**

**2.** i. What are the three tissue systems occur in a body of a flowering plant?

ii. Identify and label the figures given below.



A..... B..... C.....

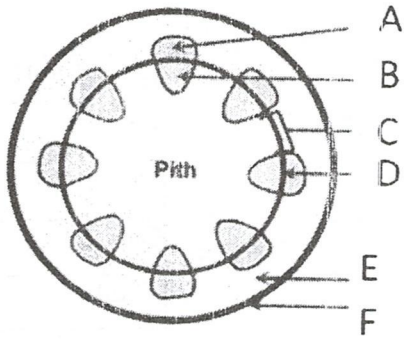
iii. Discuss how the different epidermal cell types given below are adapted to face the external environment successfully by explaining their structure and function.

a. Bulliform cells
b. guard cells and subsidiary cells
c. Typical epidermal cells

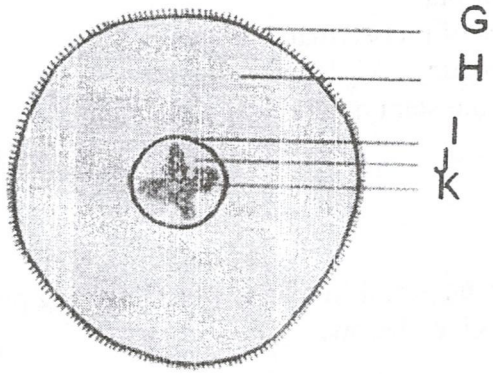
**(100 marks)**

**3.** i. What are the major cell types found in the ground tissue of a flowering plant?

ii. Identify the following diagram and label the figures given below.




X.....




Y.....

iii. Giving reasons, explain how you would do an anatomical study on a young stem of a flowering plant to determine whether it is a monocot stem or dicot stem.

**(100 marks)**