SUBJECT: BOTANY

COURSE UNIT: FORESTRY (BOT 3162)

Time: One hour and 30 minutes

Answer any **three (3)** questions **including the question number 01**

For question 01 use the space provided.

01.

A. Answer the following questions based on your knowledge on Forestry.

I. State five operations that are carried out in the tending process of a forest stand.

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15 marks

II. List three major cutting steps used in Shelterwood system?

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9 marks

III. What are the major purposes of retaining shelter trees in Shelterwood system?

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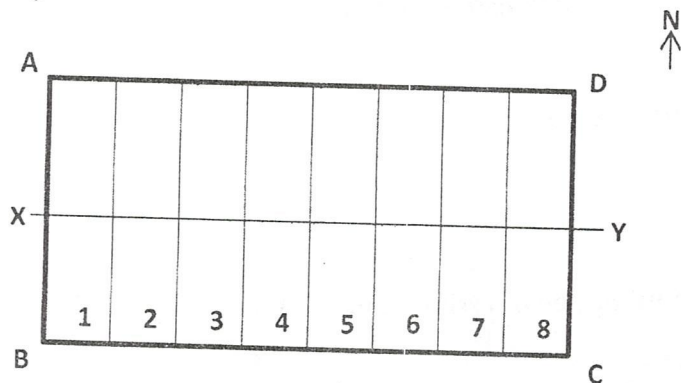
10 marks

IV. What are the reasons to keep the height of the stumps neither too short nor too tall when felling the trees those are maintaining under coppice system?

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10 marks

B. ABCD is a rectangular area of *Eucalyptus* plantation which manages under Shelterwood strip silvicultural system.

I. If the wind direction is from west to east, mark the cutting direction **under the figure** using an arrow and point out the purposes of using that direction.

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4 + 15 = 19 marks

II. Draw the profile diagram along the **XY axis** labeled in the figure, just after the first cut made in the second and the sixth strips.

10 marks

III.	State five Sri Lankan forest types those can be found in lower than 1000 m elevation from the sea level.

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	15 marks

IV.	List four ecological benefits of **Shelterwood** system over **clearfelling** system.

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	12 marks

02.

I.	State the direct and indirect drivers of deforestation and forest degradation.
II.	Briefly discuss the role of Forest Policies to improve forest resources in Sri Lanka.

03. In measuring the height of a standing tree, the merchantable height was obtained as 3 logs of 16 foot.

I.	Calculate possible integer values in feet, those can be the minimum and maximum value for the merchantable height.

II.	If the GBH is 44 inches and the plant is neiloidic in shape; calculate the timber volume of that tree in board feet using the minimum integer value for the merchantable height in **part I**.
	(1 inch = 0.083 feet)

III.	What do you mean by '**form factor**' in forest mensuration?

04.

I.	Briefly explain how do you determine the **rotation age** in a forest cultivation.
II.	Comment on the factors which are taken into account in determining a suitable silvicultural system.

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