

**COLLEGE OF AGRICULTURE, FISHERIES & FORESTRY  
BACHELOR OF VETERINARY SCIENCE AND ANIMAL  
HUSBANDARY**

**LPM 503 FODDER PRODUCTION AND PASTURE  
MANAGEMENT**

**FINAL EXAMINATION TRIMESTER. 2 2017**

[Total Marks: 100]

**Time Allowed** : 3 hours plus 10 minutes reading time

**Instructions** :

- This paper consists of 07 pages.
- Please check to see that your paper is complete.
- Answer ALL questions in the answer booklet.
- Number your answers correctly in the answer booklet.
- Write your student number on all the pages that you use including any additional sheet of paper.
- Printed or written material is not allowed into the examination hall.
- Mark values appear at the end of each question or part thereof.
- Non-programmable calculators are permitted.

**“MOBILE PHONES ARE STRICTLY NOT ALLOWED”**

<b>SECTION</b>	<b>DESCRIPTION AND MARK ALLOCATION</b>
<b>SECTION A</b>	<b>40 Marks</b> Part 1 - Multiple Choice Questions – 10 Marks Part 2 – Matching – 10 Marks Part 3 – True or False – 10 Marks Part 4 – Fill in the Blanks – 10 Marks
<b>SECTION B</b>	Short Answer Questions – <b>40 Marks</b>
<b>SECTION C</b>	Long Answer Questions – <b>20 Marks</b>

**SECTION A      PART 1      MULTIPLE CHOICE**  
**[10 Marks]**

**Write the most appropriate answer of your choice in the answer booklet.**

1. Agricultural food stuff used specifically to feed domesticated livestock is known as
  - A. Fodder.
  - B. Cereals.
  - C. Legumes.
  - D. Grasses.
  
2. Land covered with grass and other low plants suitable for grazing animals, especially cattle or sheep is known as
  - A. Hay.
  - B. Pasture.
  - C. Silage.
  - D. Legumes.
  
3. The amount of crude protein provided by legumes is
  - A. 5-10 %
  - B. 8-12 %
  - C. 20-25 %
  - D. 30-35 %
  
4. Grasses which form from below- ground horizontal stems are called
  - A. Plumule.
  - B. Radicle.
  - C. Bulbs.
  - D. Rhizomes.
  
5. The process of detachment of soil particles from its original site to a new site is known as
  - A. Soil erosion.
  - B. Fixation.
  - C. Coppicing.
  - D. Persistence.
  
6. \_\_\_\_\_ accounts for 70% or more of the composition of most plants and animals
  - A. Protein
  - B. Water
  - C. Minerals
  - D. carbohydrate

7. \_\_\_\_\_ defined as the ability of perennial plants to remain alive and productive over a long periods of time.
- A. Maturation
  - B. Digestibility
  - C. Persistence
  - D. None of the above.
8. Silage is produced by controlled fermentation while hay involves
- A. Hay making
  - B. Distillation
  - C. Foraging
  - D. dehydration
9. One horse power is equal to
- A. 746 watts
  - B. 846 watts
  - C. 946 watts
  - D. 849 watts
10. The type of irrigation system given below is known as
- A. Splash
  - B. Furrow
  - C. Tunnel
  - D. Drip



**PART 2****MATCHING****[10 Marks]****Match the followings and write in space given in front of each.****List A**

1. Centro
2. Guinea grass
3. Green leaf desmodium
4. Guatemala grass
5. Leucaena
6. Nadi blue grass
7. Calliandra
8. Para grass
9. Elephant grass
10. Cowpea

**List B**

- a) *Calliandra calothyrsus*
- b) *Brachiaria mutica*
- c) *Dichanthium caricosum*
- d) *Pennisetum purpureum*
- e) *Vigna unguiculata L.*
- f) *Desmodium intortum*
- g) *Centrosema pubescens*
- h) *Panicum maximum*
- i) *Tripsacum dactyloides*
- j) *Leucaena leucocephala*

**PART 3****TRUE OR FALSE****[10****Marks]****Fill in the blacks to complete the following statements. Write your answers in the answer booklet.**

1. Legumes viability and persistence is always problematic in alkaline soil.
2. Conservation tillage reduces soil erosion.
3. Protein is needed for growth and repair.
4. Disc harrow is a primary tillage implement.
5. Guatemala grass contains tannins that can lower the digestibility.
6. Centro was introduced into Fiji in 1936.
7. Feed is what your animals consume by grazing.
8. Making footprints in pasture is a good way to evaluate regrowth.
9. In central division, irrigation is more important than drainage.
10. Season long grazing is a good strategy of grazing management.

Fill in the blanks to complete the following statements. Write your answers in the answer booklet.

27-34	STOCKING RATE	
PERSISTENCE	OVERGRAZING	FIXATION
DRAINAGE	COPPicing	900 - 1275mm
BIOFUEL	SECONDARY	

1. Leucaena is a highly nutritious leguminous tree fodder with \_\_\_\_\_ per cent protein.
2. \_\_\_\_\_ is the feed demand, or the amount of grass or forage that your animals are going to eat.
3. \_\_\_\_\_ is the ability of perennial plants to remain alive and productive over a long period of time.
4. \_\_\_\_\_ means that a plant was regrazed before it had recovered from a previous grazing.
5. Leguminous species can fix nitrogen in their root nodules through nitrogen \_\_\_\_\_.
6. Drainage system where the objective is to drain surplus water from a large area by such means as excavating large open drains, erecting dykes and levees is called land \_\_\_\_\_.
7. \_\_\_\_\_ involves cutting back the shoots close to the base of the tree so as to include new growth and production of multiple stem to give plenty of forage.
8. Green leaf desmodium is best suited to sub-tropical coastal areas with an annual rainfall of \_\_\_\_\_.
9. Plant and animal waste is used to produce fuels such as \_\_\_\_\_.
10. Tillage operations following initial cultivation which are performed to create proper soil tilth for seeding and planting is \_\_\_\_\_ tillage.

## SECTION B

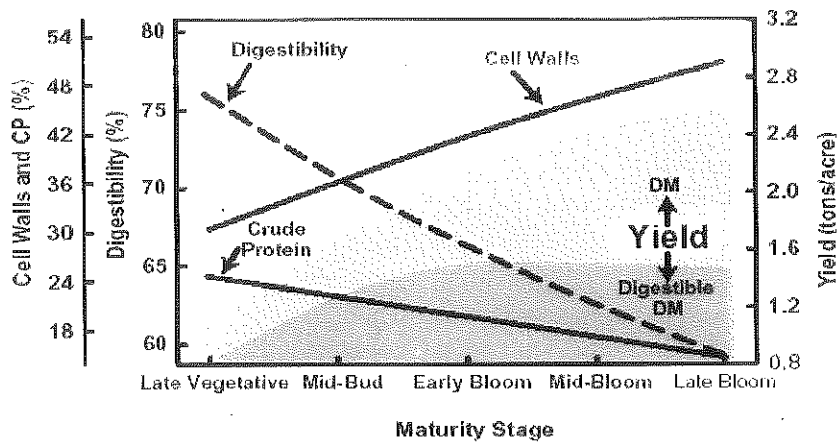
## SHORT ANSWER QUESTIONS

[40 Marks]

[Each question is worth 4 marks and all the questions are compulsory]

1. Define pasture and fodder with an example of each?
2. Briefly explain two advantages of legumes in pasture system with examples?
3. Distinguish between haylage and silage with examples?
4. List the different sources of farm power.?

5. Differentiate between a primary and secondary tillage implement with examples?
6. List and discuss the different types of feeding systems.
7. Discuss the climatic requirement and cultural practices of Guatemala grass?
8. Discuss two advantages and disadvantages of silage making?
9. Study the graph given below and answer the question that follows:



Relate maturity of pasture with digestibility?

10. List the main factors affecting the feed value and deterioration.

Answer only two questions from the following questions. Each question carries 10 marks.  
( 250 word limit)

1. Discuss any one of the following leguminous pasture species (Siratro, Leucaena, Cowpeas) under following sub headings:
  - (a) Climatic requirements.
  - (b) Soil requirements.
  - (c) Cultural practices,
  - (d) Fertilizer management.
  - (e) Harvesting.
  
2. Discuss any one of the following non-leguminous pasture species (Para-grass, Setaria, Guatemala grass) under following sub headings:
  - (a) Climatic requirements.
  - (b) Soil requirements.
  - (c) Cultural practices.
  - (d) Fertilizer management.
  - (e) Harvesting.
  
3. List and discuss the types of grazing management for livestock.
  
4. Discuss the importance of farm power and agro-energy to agriculture.
  
5. List and discuss the benefits of vermicomposting.

**THE END**