



**SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
(AUTONOMOUS)**

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : FM-I (18AG0706)

Course & Branch: B.Tech – AG

Year & Sem: III-B.Tech & I-Sem

Regulation: R18

UNIT-I

INTRODUCTION TO FARM MECHANIZATION

1	a	Define farm mechanization?	[L1][CO1]	[2M]
	b	List out the various operations involved in agriculture	[L1][CO1]	[2M]
	c	Classify the different sources of farm power	[L2][CO1]	[2M]
	d	What are the constraints involved in farm mechanization?	[L1][CO1]	[2M]
	e	Define tractor and custom hiring?	[L1][CO1]	[2M]
2	Explain in briefly about heat treatment of steel		[L5][CO1]	[10M]
3	Explain about objectives of farm mechanization and classification of farm machines		[L1][CO1]	[10M]
4	Explain in briefly about selection of tractor		[L1][CO1]	[10M]
5	Discuss about cost calculation of farm tractor by using straight line method		[L6][CO1]	[10M]
6	Distinguish benefits and limitations of farm mechanization		[L4][CO1]	[10M]
7	Illustrate about materials of construction of agricultural implement		[L2][CO1]	[10M]
8	What are the different sources of farm power? Explain them		[L1][CO1]	[10M]
9	How do use discuss about scope of farm mechanization?		[L1][CO1]	[10M]
10	What are the merit and demerits of source of farm power?		[L1][CO1]	[10M]

UNIT-II
TILLAGE

1	a	Define tillage?	[L1][CO1]	[2M]
	b	List out the different types of tillage	[L1][CO1]	[2M]
	c	Classify the tillage?	[L2][CO1]	[2M]
	d	What are the constraints in tillage?	[L1][CO1]	[2M]
	e	Define harrowing and harrow?	[L1][CO1]	[2M]
2	Explain in briefly about classification and types of tillage		[L5][CO1]	[10M]
3	Solve the problem consists of a three bottom 40 cm MB plough has a working depth of 15 cm and draft is 1200 kg. field efficiency is 80% and working speed is 4 km/h. Find i) Unit draft ii) Power required iii) Actual field capacity		[L6][CO1]	[10M]
4	Explain in briefly about accessories of mould board plough		[L1][CO1]	[10M]
5	Discuss about spring tooth harrow and spike tooth harrow?		[L6][CO1]	[10M]
6	Distinguish between mould board plough and disc plough with neat sketches		[L4][CO1]	[10M]
7	Illustrate about advantage and disadvantages of disc plough?		[L2][CO1]	[10M]
8	Where do you use disc harrow? Explain about different types of disc harrow		[L1][CO1]	[10M]
9	Distinguish between standard disc plough and vertical disc plough		[L4][CO1]	[10M]
10	What are the functions of mould board plough? Describe its different parts with the help of neat sketch		[L1][CO1]	[10M]

UNIT – III

EARTH MOVING EQUIPMENT

1	a	Define earth moving operation?	[L1][CO1]	[2M]
	b	List out the different types of scraper	[L1][CO1]	[2M]
	c	Classify the different earth moving machineries	[L2][CO1]	[2M]
	d	What is actual and theoretical filed capacity?	[L1][CO1]	[2M]
	e	Define draft and unit draft?	[L1][CO1]	[2M]
2	Explain in briefly about operation of scraper and mention their parts		[L5][CO1]	[10M]
3	Solve the problem: The following results were obtained while calibrating a seed drill. Calculate the seed rate per hectare a) Number of furrows =10 b) Spacing between furrows=20 cm c) Diameter of drive wheel = 1.5 m d) Speed = 500 rev/min e) Seed collected = 20 kg		[L6][CO1]	[10M]
4	A farmer purchased a tractor of 25 kW power at a total cost of Rs. 500000 and a three bottom plough of 30 cm bottom width at Rs. 30000/- only. The fuel consumption of the tractor was 6 ltr/h at the ploughing speed of 5 km/h. Calculate the area ploughed per hour and determine the cost of ploughing per ha. Make necessary assumptions if any.		[L5][CO1]	[10M]
5	Discuss about different towed scraper and motor scraper		[L6][CO1]	[10M]
6	Distinguish between wheel type and ladder type trenching machines		[L4][CO1]	[10M]
7	Illustrate about rimpull and drawbar power?		[L2][CO1]	[10M]
8	What are the earth moving equipment's commonly used for handling of earth? Explain about trenchers		[L1][CO1]	[10M]
9	How do you differ excaloader and bulldozer? Explain about shovels		[L1][CO1]	[10M]
10	Where do you use scraper? Explain in briefly about different types of scraper		[L1][CO1]	[10M]

UNIT – IV
SEEDING METHOD

1	a	Define sowing?	[L1][CO1]	[2M]
	b	List the various seeding methods	[L1][CO1]	[2M]
	c	Classify the different seed metering mechanism	[L2][CO1]	[2M]
	d	What is broadcasting operation?	[L1][CO1]	[2M]
	e	Define seed drill and seed cum fertilizer drill?	[L1][CO1]	[2M]
2	Explain in briefly about fluted feed type seed metering mechanism with neat sketch		[L5][CO1]	[10M]
3	What are the functions of sprayers? Explain its application		[L1][CO1]	[10M]
4	Explain in briefly about different types of seed metering mechanism		[L1][CO1]	[10M]
5	Discuss about nozzle of sprayer		[L6][CO1]	[10M]
6	Distinguish between sprayers and dusters		[L4][CO1]	[10M]
7	Illustrate about different types of sprayer		[L2][CO1]	[10M]
8	What are the functions of furrow openers in seed drill? Explain in briefly about different types of furrow openers		[L1][CO1]	[10M]
9	How do use discuss about calibration of sprayer? Explain in briefly about calibration of sprayer		[L1][CO1]	[10M]
10	Define calibration of seed drill? Explain in briefly about calibration of seed drill		[L1][CO1]	[10M]

UNIT – V**TRANSPLANTING METHODS**

1	a	Define transplanting?	[L1][CO1]	[2M]
	b	List out the different types of transplanter	[L1][CO1]	[2M]
	c	Classify the different types of cultivator	[L2][CO1]	[2M]
	d	What is actual and theoretical filed capacity?	[L1][CO1]	[2M]
	e	Define side draft and unit draft?	[L1][CO1]	[2M]
2	A seven tyne cultivator having tine spacing 8 cm, working depth of 8 cm and speed is 3 km/h. turning loss is 10%. Soil resistance is 0.6 kg/cm ² . Width of each furrow is 5 cm. calculate a) Time to cover one ha b) Maximum draft c) Required power		[L5][CO1]	[10M]
3	Solve the problem: Line of pull of a MB plough is 15° with the horizontal & is in a vertical plane which is at an angle of 12° with the direction of travel. Calculate a) required pull if draft of plough is 1000 kg & b) side draft (given cos 15°=0.96, cos 12°=0.97 & sin12°=0.20)		[L6][CO1]	[10M]
4	A farmer purchased a tractor of 35 kW power at a total cost of Rs. 500000 and a three bottom plough of 30 cm bottom width at Rs. 30000/- only. The fuel consumption of the tractor was 6 ltr/h at the ploughing speed of 5 km/h. Calculate the area ploughed per hour and determine the cost of ploughing per ha. Make necessary assumptions if any.		[L5][CO1]	[10M]
5	Explain in briefly about different types of seedling mat transplanter		[L1][CO1]	[10M]
6	Distinguish between spike tooth harrow and spring tooth harrow		[L4][CO1]	[10M]
7	Illustrate about different intercultural equipment's		[L2][CO1]	[10M]
8	Explain in briefly about different types of disc harrow		[L1][CO1]	[10M]
9	Explain in briefly about different types of fertilizer application equipment		[L1][CO1]	[10M]
10	Explain in briefly about fertilizer metering mechanism		[L1][CO1]	[10M]

Prepared by: **Dr SHASHIKUMAR**