



SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : FMRE (16AG712)

Course & Branch: B.Tech – AG

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

Regulation: R16

UNIT-I

INTRODUCTION TO HARVESTING, MOWERS, WINDROWING

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| 1. What is harvesting and explain principle of cutting of a crop? | 10 M |
| 2. Explain in briefly about manual harvesting using sickle | 10 M |
| 3. What are the different types of impact cutter? Explain them | 10 M |
| 4. Explain about different components of reciprocating mower | 10 M |
| 5. Explain in briefly about cutter bar of mower with neat sketch | 10 M |
| 6. What is reaper? Explain about animal drawn reaper | 10 M |
| 7. Explain about methods of windrowing | 10 M |
| 8. Explain about self-propelled reaper binder | 10 M |
| 9. What is registration and alignment? Explain them with neat sketch | 10 M |
| 10. What are the different types of mower? Explain them | 10 M |

UNIT-II
THRESHING

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| 1. Explain about calculation for testing of thresher | 10 M |
| 2. a. What is threshing? | 2 M |
| b. Explain about principle of threshing and different methods of threshing | 08 M |
| 3. a. How do you make cylinder adjustment of thresher? | 05 M |
| b. Mention what are the factors affect threshing efficiency? | 05 M |
| 4. a. What is cleaning efficiency and threshing efficiency? | 04 M |
| b. Describe about different parts of power thresher with a neat sketch | 06 M |
| 5. Explain about different types of power thresher | 10 M |
| 6. Distinguish between olpad thresher and power thresher | 10 M |
| 7. a. What is power thresher? | 02 M |
| b. Explain about multi crop thresher | 08 M |
| 8. What are the different types of threshing cylinders? Explain them with neat sketch | 10 M |
| 9. Write short notes on | |
| i) cleaning unit | 03 M |
| ii) seed damage | 03 M |
| iii) Aspirator & Blower | 04 M |
| 10. How do you differ wheat thresher and groundnut thresher? | 10 M |

UNIT – III**HARVESTER, ROOT CROP HARVESTING EQUIPMENT**

1. Where do you use combine harvester? Explain in briefly about development history of combine 10 M
2. How do you differ pull type and self-propelled type combine? Explain about them 10 M
3. Explain working principle of self-propelled type combine with neat sketch 10 M
4. What are the advantage and disadvantage of combine? 10 M
5. Write a short notes on
 - a) Threshing mechanism 03 M
 - b) Cleaning mechanism 03 M
 - c) Separating mechanism 04 M
6. a) How many hectares per day of 10 h can be cut by a combine with 4 m cutter bar, when it is running at 4 km/h. 05 M
b) Calculate the total time required to harvest 2.5 ha of grass by means of a 2 m mower being operated at 4 km/h. Take field efficiency of mower as 80%. 05 M
7. Explain in briefly about combine losses 10 M
8. What are the different types of farm machinery testing systems? Explain them 10 M
9. Explain in briefly about different methods of fruit harvesting 10 M
10. Distinguish between groundnut digger shaker and potato harvester? 10 M

UNIT – IV**RENEWABLE ENERGY SOURCES, SOLAR ENERGY**

1. What are the concepts & limitations of renewable energy sources? 10 M
2. How do you utilize renewable energy sources? Explain in any one renewable energy source 10 M
3. Explain in briefly about classification of renewable energy sources 10 M
4. Explain in briefly about solar photovoltaic system 10 M
5. Distinguish between flat plate and concentric plate collector with neat sketch 10 M
6. Write a short notes on
 - a) P-n junction 03 M
 - b) Solar cell 03 M
 - c) PV system 04 M
7. Explain in briefly about grid connected solar power station 10 M
8. Explain in briefly about solar radiation at the earth surface 10 M
9. Distinguish between renewable energy sources and non-renewable energy sources 10 M
10. Explain in briefly about principle of natural and forced convection drying system 10 M

UNIT – V**WIND ENERGY AND BIOGAS**

1. What is biogas? Explain in briefly about different types of biogas plants 10 M
2. Explain in briefly about factors affecting biogas generation 10 M
3. What are the advantage and disadvantages of fixed dome type and floating drum type biogas plant? 10 M
4. Explain in briefly about power in the wind 10 M
5. A village consisting of 98 families, each family consisting of 5 persons(adults). Two children are equivalent to one person. Village survey report gives the following information about cattles. Cows=102, Oxes=124, Buffalo=52, Pig=3. A community bogas plants is to be designed only for cooking an house lighting 10 M
6. 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 10 M
 - a) Time to cover one ha
 - b) Maximum draft
 - c) Required power
7. Explain in briefly about components of wind energy conversion systems 10 M
8. Distinguish between savonius and darrieus type wind mill 10 M
9. Explain in briefly about lift and drag forces 10 M
10. Explain in briefly about different types of wind mill 10 M

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