



DEPARTMENT OF AGRICULTURAL ENGINEERING

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Course: 19AGT203 Automation Techniques
in Agriculture Engineering

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MCQS

1. How much does the processed food industry contribute to the nation's GDP?
 - a) 3%
 - b) 6.3%
 - c) 7.4%
 - d) 2.1%
2. How much area is the cultivable land out of India's total geographical area?
 - a) 186 million hectares
 - b) 145 million hectares
 - c) 166 million hectares
 - d) 200 million hectares
3. How much percent of farm holding belong to small and marginal farmers?
 - a) 75%
 - b) 25%
 - c) 64%
 - d) 36%
4. Mechanization indicator has been expressed in which of the following form?
 - a) $M_i = M_p + (A_p + M_p)$
 - b) $M_i = M_p * (A_p + M_p)$
 - c) $M_i = M_p - (A_p + M_p)$
 - d) $M_i = M_p A_p + M_p$
5. What is the field capacity of traditional implements?
 - a) 0.3-0.4 ha/day
 - b) 0.7-0.8 ha/day
 - c) 0.8-0.9 ha/day
 - d) 0.5-0.6 ha/day
6. The production of indigenous tractors in India started in the year?
 - a) 1947
 - b) 1950
 - c) 1989
 - d) 1961
7. Which of the following does farm mechanization reduces?
 - a) Drudgery
 - b) Population
 - c) Pollution
 - d) Corruption

8. How much percent of fertilizers is lost, if not applied properly?

- a) 40%
- b) 80%
- c) 30%
- d) 10%

9. Which part operates the tractor drawn semi-mounted or mounted type mowers?

- a) PTO shaft
- b) Cutter
- c) Pitman
- d) Grass board

10. Which clutch is used in the driving unit of a mower?

- a) Fluid coupling
- b) Dog clutch
- c) Friction clutch
- d) Single plate

11. What is the difference between each knife clips?

- a) 5-15 cm
- b) 40-50 cm
- c) 35-45 cm
- d) 20-30 cm

12. When the knife section stops in the centre of its guard on every stroke, it is known as?

- a) Re-embankment
- b) Reinforcement
- c) Registration
- d) Rescue

13. Calculate the total time required to harvest 2.5 hectares of grass by means of a 2 metre mower being operated at 4 km/hr. (Field efficiency=80%)

- a) 2.5 hrs
- b) 1.2 hrs
- c) 3.9 hrs
- d) 7 hrs

14. What power is required to pull 1.2 metre mower working at a speed of 4.8 km/hr, if there is a load of 50 kg per metre length of mower and mechanical efficiency is 80%?

- a) 1 KW
- b) 0.98 KW
- c) 0.23 KW
- d) 2 KW

15. How many hectares per day of 10 hours can be cut by a combine with 4 metre cutter bar, when it is running at 4 k/hr?

- a) 16ha
- b) 20 ha
- c) 28 ha
- d) 8 ha

16. A mower has drive wheel of 60 cm diameter. The crank of the mower makes 600 rev/min when it is driven by a tractor, moving at a speed of 2.3 km/hr. If the speed ratio between the crank wheel and land wheel is changed to 27:1, calculate the increase in speed of mower to maintain same speed

of crank.

- a) 0.19 km/hr
- b) 0.67 km/hr
- c) 0.11 km/hr
- d) 0.21 km/hr

17. Which part of mower is used to regulate the height of cut above the ground?

- a) Ledger plate
- b) Wearing plate
- c) Shoe
- d) Grass board

18. Which sprayers are operated usually with Internal Combustion engines?

- a) Power sprayer
- b) Hydraulic sprayer
- c) Commercial sprayer
- d) Foot sprayer

19. What is the pressure at which Power sprayers are operated?

- a) 68-103 kg/cm²
- b) 20-55 kg/cm²
- c) 106-141 kg/cm²
- d) 120-155 kg/cm²

20. What is the rotating speed of an agitator in a power sprayer?

- a) 400-500 rev/min
- b) 900-1000 rev/min
- c) 600-700 rev/min
- d) 100-200 rev/min

21. In which nozzle narrow elliptical spray pattern is formed?

- a) Hollow cone nozzle
- b) Solid cone nozzle
- c) Fan type nozzle
- d) Nozzle boss

22. The operating pressure of fan nozzle, which is undesirable is _____

- a) 1.2 kg/cm²
- b) 1.5 kg/cm²
- c) 9 kg/cm²
- d) 5.9 kg/cm²

23. Which nozzle covers the entire area at small range?

- a) Solid cone nozzle
- b) Fan nozzle
- c) Hollow cone
- d) Nozzle tip

24. Which part of power sprayer is used to prevent corrosion?

- a) Agitator
- b) Strainer
- c) Prime mover
- d) Tank

25. Which part of power sprayer is used to break the liquid into desired spray and deliver to plants?
- Boom
 - Nozzle
 - Strainer
 - Pressure gauge
26. What is rate of the spinning disc, attached to the motor, in Ultra low volume sprayer?
- 4000-9000
 - 1000-3000
 - 750-1000
 - 10000-15000
27. Who invented world's first self-propelled sprayer?
- Ray Hagie
 - Elon Musk
 - John Deere
 - Rachel Carson
28. Aldrin is the _____
- inorganic compound
 - oil compound as spray material
 - organic compound as spray material
 - solution
29. The tank capacity of hydro-pneumatic sprayers, is about _____
- 1135.5 l
 - 2000 l
 - 750 l
 - 1000 l or less
30. By using a knapsack sprayer, a man can spray over the area of about _____
- 1 ha per day
 - 0.75 ha per day
 - 1.25 ha per day
 - 0.4 ha per day
31. Who invented duster?
- H.D. Norman
 - C.E. Ramser
 - Susan Hibbard
 - W.H. Sleeper
32. A tractor sprayer is fitted with 20 hollow cones nozzles to attain application rate of 200 l/hr. During the calibration test, the nozzle flow rate was found to be 1.25 l/min whereas, the rated nozzle flow rate was found to be 0.473 l/min was available at 275 kPa. If the nozzle produces droplets with volume median diameter 200 μm at 1 Mg Pascal, the droplet at the desire flow rate is?
- 161 μm
 - 164 μm
 - 167 μm
 - 170 μm
33. Food processing in India is concentrated in which sector, maximum?
- Organized Sector
 - Unorganized sector

- c) Small Scale
- d) None of the mentioned

34. Which among these is a factor for processed food in India?

- a) Changing lifestyles
- b) Food habits
- c) Organized food retail
- d) All of the mentioned

35. There has been a shift from carbohydrate staple to animal sources and sugar in developed countries.

- a) True
- b) False

36. Statement 1: There will be a shift of demand snacks, convenience food and organic and diet food.

Statement 2: High taxation is a constraint for the food processing industry.

- a) True, False
- b) True, True
- c) False, False
- d) False, True

37. Which of the following are NOT key constraints of the food processing industry?

- a) Inadequate quality control
- b) High packaging cost
- c) Low demand
- d) Poor infrastructure as in no cold storage, warehouse etc

38. Which of the following is untrue?

- a) Basmati rice has gained international recognition
- b) Wine industry is gaining support in India, especially Maharashtra
- c) Dairy industry of India is the largest in the world
- d) None of the mentioned

39. Which of the following comes under grain processing in India?

- a) Oil seed processing
- b) Wheat processing
- c) Oil seed & Wheat processing
- d) None of the mentioned

40. The biggest processing segment under food processing is the meat, poultry, vegetables and oil industry.

- a) True
- b) False

41. Export of marine products has been on a decline.

- a) True
- b) False

42. Which of the following do you think is a valid reason for decline of export of marine products to USA?

- a) Emerging markets in USA
- b) Anti- dumping procedure by US government on many marine products
- c) Emerging markets in USA & Anti- dumping procedure by US government on many marine

products

d) None of the mentioned

43. Which of the following is an advantage of food processing?

- a) Availability of seasonal food throughout the year
- b) Removal of toxins and preserving food for longer
- c) Adds extra nutrients to some food items
- d) All of the mentioned

44. Which of the following is a disadvantage of food processing?

- a) Canning of food leads to loss of Vitamin C
- b) Processed food adds empty calories to food constituting junk
- c) Some chemicals make the human and animal cells grow rapidly which is unhealthy
- d) All of the mentioned

45. Which of the following is a performance parameter for the food industry?

- a) Hygiene
- b) Labour Used
- c) Hygiene & Labour Used
- d) None of the mentioned

46. XYZ Company takes its customer feedback very seriously. Hence when suggestions such as – food processed product should have minimum lost of actual flavour, no added colour etc., the company planned on shifting to the latest trend in the industry called _____

- a) Minimal Optimization
- b) None of the mentioned
- c) Minimal Processing
- d) All of the mentioned

47. Certain traditional thermal processing techniques affect the nutritional properties of food.

- a) True
- b) False

48. XYZ Company wanted to reduce the microbial risk involved with its fresh fruits and vegetables. Hence it introduced Ultra-violet C process which is a photochemical process which reduces the number of microbes (not completely sterilizing them). What else do you think this does?

- a) Induces the synthesis of certain health promoting compounds
- b) Resistance against pathogens
- c) DNA damage
- d) All of the mentioned

49. Since excess UV-C causes DNA damage, which of the following methods can be used to apply this technique itself in spite of this drawback?

- a) Reduce the exposure time to this process by combining two or more methods
- b) There is no solution
- c) All of the mentioned
- d) None of the mentioned

50. Statement 1: Advanced Oxidation Processes convert non-biodegradable organic materials into biodegradable organic forms.

Statement 2: Advanced Oxidation Processes are non-environmental friendly.

- a) True, False
- b) True, True

c) False, False

d) False, True