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Reg. No. :

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Question Paper Code: 54A02

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Fourth Semester

Agriculture Engineering

15UAG402-POST HARVEST TECHNOLOGY

(Regulation 2015)

(Psychurometry chart should provided)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The tension developed at the drive pulley in transmitting the required power to move the loaded belt is known as_____   CO1- U

    (a) Electrical resistance   (b) Belt tension

    (c) Effective tension   (d) None of these

2. The heat which causes an increases or decreases in the temperature of a body without changing its state is _____   CO1- R

    (a) Latent heat   (b) Sensible heat   (c) Total heat   (d) None of these

3. The pneumatic conveyor moves granular materials in a closed duct by   CO2 -R

    (a) High velocity air stream   (b) Low velocity air stream

    (c) by air   (d) None of these

4. Physical separation of contaminants from foods is possible when the food has a regular well-defined   CO2- R

    (a) Shape   (b) Color   (c) Size   (d) None

5. The percentage of void space in the bulk grain which is not occupied by the grain can be calculated by _____   CO3- R

   (a) Porosity   (b) Bulk density

   (c) True density   (d) Angle of repose

6. Wheels of a rubber roll sheller rotates in_____   CO3- R

   (a) Linear   (b) Non -linear   (c) time variant   (d) time invariant

7. Pneumatic separator works based on_____   CO4- R

   (a) Aero dynamic properties   (b) Electromagnetic waves

   (c) Electromagnetic Induction   (d) None

8. Parboiling of paddy involves_____   CO4- R

   (a) Complete boiling   (b) Partial boiling   (c) Heavy boiling   (d) Dehydration

9. Which of the following conveyor used for bulk containers _____   CO5- R

   (a) Flat bed conveyor   (b) Roller conveyor

   (c) Chain conveyor   (d) Pneumatic conveyor

10. The process of removing the hulls (or chaff) from beans and other seeds   CO5- R

    (a) Cleaning   (b) Removing

    (c) Read/write memory   (d) Byte organized memory

PART – B (5 x 2= 10Marks)

11. Define equilibrium moisture content   CO1- R

12. Define dew point temperature   CO2- R

13. Define enthalpy   CO3- R

14. Write down the principle of cyclone separator.   CO4- R

15.   CO5-U

    What are the factor is involved in oil extraction?

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PART – C (5 x 16= 80Marks)

16. (a) Explain the principles of threshers and types in detail. CO1- U (16)

Or

(b) Atmospheric air at 1.0132 bar has a dry bulb temperature of 30° C CO1- U (16)
and wet bulb temperature of 25°C. compute.

    1. Partial pressure

    2. Specific humidity

    3. Dew point temperature

    4. RH

    5. Degree of saturation

    6. Density of air in the mixture

    7. Density of vapour in the mixture

    8. Enthalpy of the mixture

17. (a) Explain the pneumatic separator and cyclone separator. CO2- U (16)

Or

(b) Explain LSU and Fluidized bed driers with neat sketches. CO2- U (16)

18. (a) (i) Explain the moisture content determination in grains and CO3-U (8)
methods.

(ii) Explain inclined belt separator with neat sketch. CO3-U (8)

Or

(b) Explain the working principles of pneumatic conveyor and CO3- U (16)
limitation of pneumatic conveyor.

19. (a) Define pulses milling and explain different types of milling. CO4- U (16)

Or

(b) Explain modern rice mill and lay out with neat sketch. CO4-U (16)

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20. (a) (i) Explain principles of size reduction. CO5-U (8)

(ii) Explain different types of size reduction machinery. CO5-U (8)

Or

(b) (i) Explain the working principle of a oil expeller. CO5-U (8)

(ii) Explain rice milling process with neat sketch. CO5-U (8)

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