



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Tech.(Food Technology) 2023 Admission**  
**II Semester Final Examination – July 2024**

Beas.1206

**Basic Electronics Engineering (2+1)**

**Marks: 50**  
**Time: 2 hours**

**I Fill in the blanks**

**(10x1=10)**

1. ....bonds are present in a semiconductor.
2. In a p-type semiconductor, the current conduction is due to.....
3. Full form of RTD is .....
4. Colpitts oscillator uses which type of feedback .....
5. Phase shift provided by one phase shift network in RC phase shift oscillator in 3 stage is .....
6. Bridge rectifier is a better alternative for .....
7. Total number of inputs in a half adder is .....
8. A transducer converting ground movement or velocity to voltage is known as .....
9. Pneumatic load cells are suitable for measuring .....

**Answer the following**

10. Determine the total discharge time for the capacitor in a clamper having  $C = 0.01 \mu\text{F}$  and  $R = 500 \text{ k}\Omega$ .

**II Write short notes on ANY FIVE of the following**

**(5x2=10)**

1. Explain the effect of temperature on Barrier voltage.
2. Explain avalanche breakdown.
3. What do you mean by clipper?
4. Explain bipolar junction transistor.
5. List the linear applications of OP-AMP.
6. What do you mean by Pressure measurement?
7. What do you mean by strain gauge?

**III Answer ANY FIVE of the following**

**(5x4=20)**

1. With a neat diagram explain Center tapped full wave rectifier.
2. Explain Hartley oscillator with neat circuit diagram.
3. With a neat diagram explain Phase shift oscillator.
4. Explain Op-Amp Integrator with neat circuit diagram.
5. Explain binary adders.
6. Difference between Sensor and Transducer
7. Explain with neat characteristics graph Junction Breakdown

**IV Write an essay on ANY ONE of the following**

**(1x10=10)**

1. Explain filter circuits Diode circuits for OR and AND (both positive and negative logic)
2. Explain thermistor and pyrometers with neat diagram.

\*\*\*\*\*