DEPT. OF ELECTRONICS & TELECOMMUNICATION ENGINEERING
GOVERNMENT POLYTECHNIC, BALASORE
QUESTION BANK
ON
TH4B- BASIC ELECTRONICS

SEMESTER & BRANCH : – 1ST & 2ND SEM, COMMON TO ALL

SHORT QUESTIONS:

1. Write application of electronics.
2. Define electronics.
3. What is electron emission?
4. Define forbidden energy gap and work function.
5. Which type of impurity used in p-type semiconductor?
6. Name different terminals of transistor.
7. List different types of transistor and draw its symbol.
8. Draw the symbols of BJT.
9. What is efficiency? Write down the efficiency of Half-wave and Full-wave rectifier.
10. What is transistor?
11. What is biasing?
12. Define oscillator. State its types.
13. What is demodulation?
14. Define modulation and write down the type of modulation.
15. What is the need for modulation?
16. Write the applications of Multimeter.
17. What is transducer? Give two examples of it.
18. Define Multimeter.
19. What is sensor?
20. Define active and passive transducer.
21. What is photo emissive transducer?

LONG QUESTIONS:

1. What is electron emission? Discuss the type of electron emission.
2. Classify solids with respect to energy band diagram.
3. Describe the working of pn-junction.
4. Define semiconductor and explain briefly about intrinsic and extrinsic semiconductor.
5. Explain the V-I characteristics of pn-junction diode
6. Explain the operation of LED with a neat diagram.
7. What is the role of filter circuit in rectifier circuit? Explain different types of filters.
8. Draw the block diagram of a DC regulated power supply and explain the function of each block.
9. With neat sketch, explain the principle of working of a bridge rectifier.
10. Explain the working principle of half wave rectifier with its advantage and disadvantages.
11. Explain CB, CE and CC transistor configuration with its input and output characteristic.
12. Find α, β and γ and derive the relation between them.
13. Distinguish between a Centre tapped and a bridge type full wave rectifier.
14. Explain the operation of capacitor input filter.
15. Describe the operation of Centre-tapped rectifier with its advantages.
16. What is transistor? Describe the operation of NPN transistor with a neat diagram.
17. Define modulation? Explain the process of amplitude modulation (AM) with the help of waveform.
18. Explain the communication system with the help of block diagram.
19. What is the need for modulation? Explain different types of modulation techniques.
20. Discuss amplitude, frequency and phase modulation with its waveforms.
21. Draw and explain block diagram of CRO with its application.
22. Discuss the difference between analog and digital Multimeter.
23. Explain the working principle of Multimeter with the block diagram.
24. What is transducer? Explain the working principle of photo emissive, photoconductive and photovoltaic transducer.