BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY
Question Bank (K - Scheme)

Name of subject: Analog Electronics **Unit Test :I**
Subject code: 313324 **Course : EJ**
Semester: III

Unit - I - Power Amplifiers (12 M)

2 Marks

1.Classify Power amplifiers.
2.Compare push pull and complementary symmetry amplifiers on the basis of i) Type of transistors ii) Transformer required
3. Explain heat sink in power amplifier.
4. Define Gain and Distortion.

4 Marks

5.Draw and Explain class B push pull amplifier with input output waveforms.
6.Compare Class A , Class B, Class AB, and Class C

Unit – II- Op-amp and its Applications (18 M)

2 Marks

1. Define CMRR, Slew Rate.
2. Define Input Offset voltage, Output Offset Voltage.
3. Draw and label the symbol of OP-AMP.
4. Draw ideal and practical transfer characteristic of OP-AMP.
5. State the need of signal conditioning
6. Draw voltage to current converter with grounded load.
7. List two applications of current to voltage converter.

4 Marks

8. Draw the block diagram of an op-amp and write the function of each block.

9. Write ideal and practical values of any four characteristics of an op –amp.
10. Describe the concept of virtual ground and virtual short.
11. Draw the closed loop circuit of OP-AMP with feedback in inverting mode. Give expression for output.
12. Draw the circuit diagram and output voltage relation for inverting summing amplifier.
13. Draw the circuit diagram of Op-Amp as a subtractor and write the equation for output voltage.
14. Compare Integrator and differentiator (any 4 points).
15. Draw the circuit diagram of basic integrator derive expression of its output voltage with its input and output waveforms.
16. Draw the circuit diagram of basic differentiator and derive expression of its output voltage.
17. Draw the circuit of closed loop difference amplifier using one op-amp. Derive the expression of its output voltage
18. Draw the circuit of a V-I converter and derive an expression for the output current in terms of input voltage.
19. Explain current to voltage converter. Write its applications
20. Draw and Explain Schmitt trigger.
21. Draw and Explain Inverting Zero Crossing Detector with neat waveforms.
22. Draw and explain sample and hold circuit.

Unit – III - Waveform Generators (14 M)

2 Marks

1. Define feedback amplifier. State types of feedback.
2. State the meaning of positive and negative feedback.

4 Marks

3. List the types of feedback connection. Draw any one connection diagram.
4. State advantages and disadvantages of negative feedback.