**SET II ANALOG SYSTEMS AND APPLICATIONS PAPER (C): 10**

**GROUP A Objective 15x 2=30**

1.When the reverse voltage increases, the junction capacitance

a) decreases b) stays the same c) increases d) has more band width

2. The reverse current in a diode is of the order of

a) kA b) mA c) µA d) A

3. A zener diode is always ……………… connected.

a) reverse b) forward c) either reverse or forward d) none of the above

4. The element that has the biggest size in a transistor is

a) collector b) base c) emitter d) collector-base junction

5. A transistor is a ……. Operated device

a) current  b) voltage c) both voltage and current d) none of the above

6. If the value of α is 0.9 , then the value of β is ……….

a) 9 b) 0.9 c)900 d) 90

7. Transistor biasing represents……. conditions.

a) a.c b) d.c c) both a.c and d.c d) none of the above

8.The point of intersection of d.c. and a.c. load lines represents

a) operating point b) current gain c) voltage gain d) none of the above

9. When negative voltage feedback is applied to an amplifier , its voltage gain……

a) is increased b) is reduced c) remains the same d) none of the above

10. A feedback circuit usually employs …… network.

a) resistive b) capacitive c) inductive d) none of the above

11. In a Colpitt’s oscillator, feedback is obtained

a) by magnetic induction b) by a tickler coil c) from the center of splitcapacitors d) none

12. A differential amplifier

a) is a part of an OP-amp b) has one input and one output c) has two output d) answer a & b

13. The common-mode gain is

a) very high b) very low c) always unity d) unpredictable

14. For an OP-amp with negative feedback, the output is

a) equal to the input b) increased c) fed back to the inverting input d) fed back to the non-inverting input

15. If ADM= 3500 and ACM=0.35, the CMRR is

a) 1225 b) 10,000 c) 80 dB d) b & c

**GROUP B VERY SHORT ANSWER TYPE 4 X 5= 20**

16. What is the use of Zener diode as a voltage regulator?

17. What are the effects of feedback?

18. What is the effect of biasing circuit on the input resistance of an emitter follower?

19.What disadvantage does a phase shift oscillator have?

**Group C Short answer type 1x 10**

20. What are the distinguish features of Hartley and Colpitts oscillator?

21. Define the following terms in connection with an Operational amplifier: CMRR

 and Slew rate.