**CHIRANJEEVI REDDY INSTITUTE OF ENGG & TECHNOLOGY**

(Approved by AICTE, New Delhi & Affiliated to JNTU, Anantapur)

BELLARY ROAD, ANANTAPUR.

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**SUB: LDIC Branch: EEE Year: III-II Exam: I-MID Marks: 20 Time: 90 min**

1. a) List out AC characteristics of an operational amplifier and discuss about them?

b) Explain about DC characteristics of Op-Amp?

2. Discuss about presion diode (or) presion rectifier in detail?.

3. Design an circuit and explain in detail for an differentiator op-amp ?

4. Design a 4-input CMOS AND-OR inverter (AOI) gate. Draw the logic function and functional table?

5. Draw the circuit for CMOS OR logic gate and explain its working clearly.

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1). Op-amp can amplify \_\_\_\_\_\_\_\_signals [ c ]

A) AC only B) D.C only C) AC&DC D) Noise only

2). If V1>V2 of an open loop op-amp,then V0 = \_\_\_\_\_\_ (V1 at non-inverting terminal ) [ b ]

A) + Vsat B) – Vsat C) V1 D) V2

3). If the same input is applied to both inputs, the operation is called \_\_\_\_\_\_\_\_. [ c ]

A) double-ended B) single-ended

C) common-mode D) All of the above

4). A comparator is an example of a [ d ]

A) active filter B) current source C) linear circuit D) nonlinear circuit

5). What is the scale multiplier (factor) of a basic integrator? [ d ]

A) R / C B) C / R C) –RC D) –1 / RC

6). Quality factor Q= [ a ]

A) fc /band width B) band width / fc C) 2fL \*band width D) 2fL

7). Astable multivibrator has [ c ]

A) One stable state & other quasi stable state B) Both are quasi stable state

C) Both are stable state D) None of the above

8). For an ideal op-amp output voltage is 0 when input voltages V1, V2 as [ a ]

A)V1 = V2 B)V1 ≠ V2 C) V 1≥ V2 D)V1 ≤ V2

9). Square root of the signal can be done using [ c ]

A)Multiplier B)adder C)divider D) subtractor

10 Physical quantities are converted to electrical signal is done by using [ c ]

A) multiplier B) instrumentation amplifier C) transducer D) both b & c.

11).Power supply rejection ratio (PSRR) is given as [ d ]

a)Δ Vios/ Δ Vcc b)Δ Vios/ Δ Vout c)Δ Vios/ Δ Vee d) both A&c

12). Comparator means [ a ]

a). compares signal voltage applied at one input b)compares signal voltage applied at output

c) Both A & B d) none

13.float load is a source of \_\_\_\_\_\_\_\_\_\_ converter [ a ]

a).V-I converter b) I-V converter c) both d) none

14).CMOS means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15)in a CMOS logic level range from 0-1.5 is considered as [ a ]

a) logic 0 b)logic 1 c) both d ) none

16.)when both voltages Vcc & Vee power supplys are balanced in sames magnitude of op-amp is known as [ a ]

a). balance dual supply b)un balanced dual supply c) both d) none

17. A op-amp circuit which the out put voltage follows input voltage is called as\_\_\_\_\_ [ c ]

a) voltage follower b) Buffer c) both d) none

18.)an inverting amplifier uses \_\_\_\_\_\_\_\_\_\_\_\_ feedback

19. AN ideal voltage buffer has \_\_\_\_\_\_\_\_\_\_\_\_input resistance [a]

a) infinite b) finite c) zero d) none

20) A triangular wave can be obtained by \_\_\_\_\_\_\_\_\_\_\_square wave of op-amp output [ a ]

a) intenerating b) differentiating c) both d) none