

**GOA UNIVERSITY**

**M.Sc. Electronics Ranking Test, 2018-19**

**Date: 07/06/2018**

**Time: 12.00 noon to 1.30 pm**

**Max.Marks:100**

- Instructions:** 1) All questions are compulsory and carry 2 Marks each  
2) Darken the bubble completely using Black Ball pen only  
3) Half-filled or over-filled bubbles will not be read by the software.  
3) Select the most appropriate Answer  
4) ½ Mark will be deducted for each wrong Answer

**SECTION I**

1. In pulse amplitude modulation,  
A. Amplitude of the pulse train is varied                      B. Width of the pulse train is varied  
C. Frequency of the pulse train is varied                      D. None of the above
2. What is the full form of LOS in communication?  
A. Line Of Signal    B. Line Of Sight  
C. Loss Of Signal    D. Loss Of Sight
3. The number of hardware interrupts in 8085 is  
A. 1            B. 3            C. 5            D. 7
4. Luminance refers to \_\_\_\_\_  
A. Contrast            B. Color            C. Brightness            D. Chroma
5. SIN wave is \_\_\_\_\_  
A. A periodic Signal            B. Periodic Signal  
C. Random Signal            D. Deterministic Signal
6. Which of the following is an analog transducer?  
A. Encoders            B. Strain gauge  
C. GPS            D. Limit switches
7. Which Bus is a bidirectional in 8085?  
A. Address Bus            B. Data bus  
C. Address bus and data bus            D. Control Bus
8. In a Personal Computer, if the displayed system time and date is wrong, you can reset it using  
A. Write    B. Reset    C. Write file            D. Control panel
9. What is the address range of SFR Registers bank in 8051 microcontroller?  
A. 00H-77H            B. 40H-80H            C. 80H-7FH            D. 80H-FFH

10. Which of the following instructions will move the contents of the accumulator to register 6?  
A. MOV 6R, A      B. MOV R6,A      C.MOV A,6R      D.MOV A,R6
11. NADC is a 2G standard for  
A. TDMA      B. CDMA      C. WDMA      D. Both a & b
12. Envelope Detector is a/an \_\_\_\_\_  
A. Coherent detector      B. Asynchronous Detector  
C. Synchronous Detector      D. Product Demodulator
13. With the increase in the intensity of light, the resistance of a photovoltaic cell  
A. Increases      B. Decreases      C. Remains same      D. Becomes zero
14. In amplitude modulation, if we compare LSB to the USB, the information in LSB is  
A. different      B. twice      C. same      D. little different
15. The shape of the cellular region for maximum radio coverage is  
A. Circular      B. Square      C. Oval      D. Hexagon

## SECTION II

16. The difference between spectrometer and spectrophotometer is due to  
A. Detector      B. Source      C. Type of sample      D. Range
17. Which of the amplifier is used for impedance matching?  
A. Common Base      B. Common Emitter  
C. Common Collector      D. Differential
18. The LVDT transducer is  
A. Inductive transducer      B. Non-inductive transducer  
C. Capacitive transducer      D. Resistive transducer
19. Piezoelectric transducers are used for the measurement of  
A. Pressure      B. Displacement      C. Humidity      D. Temperature
20. What is the required baud rate for an efficient operation of serial port devices in 8051 microcontroller?  
A.1200      B. 2400      C. 4800      D. 9600
21. On power up, the 8051 uses which RAM locations for register R0- R7  
A. 00-2F      B. 00-07      C. 00-7F      D. 00-0F
22. The extra bit in a transmitted frame of MODEM is used for  
A. Error correction      B. Error detection      C. Noise      D. Distortion

23. When aliasing will takes place?
- Sampling signals less than Nyquist Rate
  - Sampling signals more than Nyquist Rate
  - Sampling signals equal to Nyquist Rate
  - Sampling signals at a rate which is twice of Nyquist Rate
24. Which kind of multiplexing scheme is adopted by Von-Newman architecture especially for program and data fetching purposes?
- Time Division Multiplexing
  - Frequency Division Multiplexing
  - Statistical Time Division Multiplexing
  - Code Division Multiplexing
25. The most important part of a PCM encoder is,
- Display device
  - ADC
  - Memory
  - Shift register
26. Process is
- Program in High level language kept on disk
  - Contents of main memory
  - A program in execution
  - A job in secondary memory
27. Which operations are performed by the bit manipulating instructions of Boolean processor?
- complement bit
  - set bit
  - clear bit
  - All of the above
28. Which general purpose register holds eight bit divisor and store the remainder especially after the execution of division operation?
- A-Register
  - B-Register
  - Registers R0 through R7
  - All of the above
29. After reset, SP register is initialized to address \_\_\_\_\_
- 8H
  - 9H
  - 7H
  - 6H
30. Mass spectrometers are used to determine which of the following?
- Magnetic spin of the sample
  - Concentration of elements in sample
  - Relative mass of atoms
  - Mass of the magnet

### SECTION III

31. The sampling technique having the minimum noise interference is
- Instantaneous sampling
  - Natural sampling
  - Flat top sampling
  - Random Sampling

32. Calculate the Nyquist rate for sampling when a continuous time signal is given by  $x(t) = 5 \cos 100\pi t + 10 \cos 200\pi t - 15 \cos 300\pi t$
- A. 300Hz      B. 600Hz      C. 150Hz      D. 200Hz
33. A function  $f(x)$  is even, when?
- A.  $f(x) = -f(x)$       B.  $f(x) = f(-x)$   
 C.  $f(x) = -f(x)f(-x)$       D.  $f(x) = f(x)f(-x)$
34. To avoid the race condition, the number of processes that need be present inside their critical section is/are
- A. 8      B. 1      C. 16      D. 0
35. Carrier spacing in a Bluetooth protocol
- A. 1 MHz      B. 2 MHz      C. 3 MHz      D. 4 MHz
36. Which of the following condition is required for deadlock to be possible?
- A. mutual exclusion  
 B. a process may hold allocated resources while awaiting assignment of other resources  
 C. no resource can be forcibly removed from a process holding it  
 D. all of the mentioned
37. The most accurate temperature transducer is?
- A. Thermistor      B. Thermocouple  
 C. Semiconductor      D. Resistance
38. A shell is an interface between the \_\_\_\_\_
- A. kernel and the hardware      B. user and the kernel.  
 C. client and server      D. compiler and use
39. Which one of the following is not a vectored interrupt?
- A. TRAP      B. INTR      C. RST 7.5      D. RST 3
40. The \_\_\_\_\_ ensures that only one I/O is active at a time to avoid a bus conflict caused by two I/Os writing different data to the same bus.
- A. control bus      B. Control instructions      C. address decoder      D. CPU
41. Which of the following components are used to generate X-rays?
- A. Meyer tube      B. West tube      C. Anger tube      D. Coolidge tube
42. Which architectural scheme has a provision of two sets for address & data buses between CPU and memory?
- A. Harvard architecture      B. Von-Neumann architecture  
 C. Princeton architecture      D. All of the above
43. The number of clockcycles that take, to wait until the length of instruction is known in order to start decoding is
- A. 0      B. 1      C. 2      D. 3
44. Wavefront is basically a locus of points acquiring similar \_\_\_\_\_

A. Phase      B Frequency      C. Amplitude      D. Wave equation

45. Power density is basically termed as \_\_\_\_\_ power per unit area

- A. Reflected      B. Refracted  
C. Radiated      D. Diffracted

46. How will a class protect the code inside it?

- A. Using Access specifiers      B. Abstraction  
C. Use of Inheritance      D. All of the mentioned

47. What is the output of following code

```
class Test {  
    int a;  
    public int b;  
    private int c;  
}
```

```
class AccessTest {  
    public static void main(String args[])  
    {  
        Test ob=new Test();  
        ob.a=10;  
        ob.b=20;  
        ob.c=30;  
        System.out.println(" Output :a, b, and c"+ob.a+" "+ob.b+" "+ob.c);  
    }  
}
```

- A. Compilation error      B. Run time error  
C. Output: a, b and c 10 20 30      D. Output: a, b and c 30 20 10

48. Which bit/s play/s a significant role in the selection of a bank register of Program Status Word (PSW)?

- A. RS0      B. RS1  
C. F0      D. RS0,RS1

49. Co-channel reuse ratio depends upon

- A. Radius of the cell      B. Distance between the centers of the co channel cells  
C. Frequency allocation of nearest cells      D. Both a and b

50. Bits are packaged into frames at which layer of the OSI model?

- A. data link      B. transport      C. Physical      D. Presentation

\*\*\*\*\*END\*\*\*\*\*

