

SHIVAJI SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR

Std. – 11th (Computer Science)

Paper-II

Time: 3Hrs

Max. Marks: 50

- Instructions:**
1. All questions are compulsory.
 2. Figures to right indicate full marks.
 3. Use of any type of calculator is not allowed.
 4. Draw neat diagrams wherever necessary.

Q.1- Select the correct alternatives and rewrite the following.

[04]

- a) Rheostat is _____ resistor .
 - i) Fixed.
 - ii) Variable
 - iii) passive
 - iv) Active
- b) _____ it emits light when it conducts .
 - i) LED
 - ii) Photo diode
 - iii) capacitor.
 - iv) Resistor
- c) Zener diode is designed to get stable voltage and it operated is in _____.
 - i) reverse bias.
 - ii) forward bias
 - iii) high voltage
 - iv) low voltage
- d) the circuit which has multiple input and one output is _____.
 - i) Multiplexer
 - ii) Demultiplexer
 - iii) Decoder
 - iv) Encoder.

(B) Answer **any two** of the following.

[06]

- a) What is register? Explain any one type?
- b) write advantage and disadvantage of smps?
- c) State different types of system buses and explain two?

Q.2-(A) Answer **any two** of the following.

[06]

- a) what is multiplexer? Explain its working and truth table?
- b) Explain how transistor used as switch?
- c) explain difference types of non-volatile memory?

(B) Answer **any one** of the following.

[04]

- a) Draw logic diagram J-K flip flop and writes its truth table?
- b) write difference between diode and transistor.

Q.3-(A) Answer **any two** of the following.

[06]

- a) what is basic requirement for multiplexer?
- b) Explain construction of transistor and its types?.
- c) Explain physical and logical memory?

(B) Answer **any one** of the following.

[04]

- a) Draw diagram of decimal to bcd encoder and its working?
- b) compare LED with photo diode.

Q.4-(A) Answer **any two** of the following. [06]

- a) What is Flip-Flop? state types with their truth table.
- b) Draw P-N diode in forward and reverse bias and explain?
- c) explain concept of interrupt.

(B) Answer **any one** of the following. [04]

- a) Write the difference between n-type and p-type semiconductor
- b) write difference between software and hardware

Q.5- Answer **any two** of the following. [10]

- a) state different types of semiconductor memory and explain two?.
- b) explain secondary storage devices?
- c) Explain input and output device?
- b) Explain use of modem

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