

AU-192

B.C.A. (Part-I) Semester-II Examination
DIGITAL TECHNIQUES—II
Paper—2ST3

Time : Three Hours]

[Maximum Marks : 60

Note :—(1) **ALL** questions are compulsory.

(2) Draw neat diagrams wherever necessary.

(3) Due credit will be given to neatness.

1. (A) What is multivibrator ? Explain working of transistorized Astable multivibrator with neat diagram. 6
- (B) What is flip-flop ? Explain Clock-RS flip flop with logic diagram and truth table. 6

OR

2. (P) Draw and explain JKMS flip-flop with neat logic diagram and truth table. 8
- (Q) Explain D-flip flop with diagram and truth table. 4
3. (A) What is counter ? Explain working of 4-bit asynchronous counter with diagram and truth table. 6
- (B) Draw diagram of IC 7490 and explain its operation. 6

OR

4. (P) What is up/down counter ? Explain 3 bit up/down counter. 6
- (Q) What are Synchronous and Asynchronous counters ? State applications of counter. 6
5. (A) Explain the working of Ring counter with neat diagram. 6
- (B) What is shift register ? Explain the working of 4-bit SISO right shift register. 6

OR

6. (P) What is PIPO shift register ? Explain its operation with neat diagram. 6
- (Q) Draw block diagram of IC 7495 and explain in detail. 6

7. (A) Explain various types of Read Only Memory (ROM). 6
(B) Explain :
(i) Floppy Disk
(ii) Compact Disk
(iii) DVD. 6

OR

8. (P) What is memory ? Explain memory hierarchy with neat diagram. 6
(Q) Explain static RAM cell with neat diagram. 6
9. (A) Explain the construction and working of R-2R type D/A converter. 6
(B) Draw and explain IC ADC 0808 with block diagram. 6

OR

10. (P) What is A/D and D/A converter ? Explain the working of weighted resistor type D/A converter. 6
(Q) Draw the block diagram of successive approximation type A/D converter and explain. 6