

COURSE CODE - 3050106

PG DIPLOMA EXAMINATION- JAN 2009

PGDCA

COMPUTER ARCHITECTURE & SYSTEM SOFTWARE

(For the Candidates Admitted from Calendar 2007 onwards)

Time: 3 hours

Max. Marks: 75

Section-A

Answer All Questions:

15 X 1=15

1. Convert the following $(1010.011)_2 \rightarrow (\text{decimal})_{10}$
2. What is the octal equivalent of decimal number 363?
3. Simplify the expression $AB + \bar{A}B + ABC + A\bar{B}C$
4. Define encoder.
5. Define decoder.
6. What is Mux?
7. What is De-Multiplexer?
8. What is flipflop?
9. What is an ALU?
10. Define Full adder.
11. What is static RAM?
12. What is dynamic Ram?
13. What is peripheral devices?
14. What is an Interrupt?
15. Define DMA

Section – B

Answer any Five Questions:

5 X 6 = 30

16. a. Convert $(630.4)_8 \rightarrow (?)_{10}$, $(1234.89)_{10} \rightarrow (?)_2$

(Or)

b. Explain the 1's, 2's, 9's and 10's complement each with an example

17. a. Convert the expression to sum – of – products form:

$(A+B)(\bar{B}+C)(\bar{A}+C)$

(Or)

b. State and prove Demorgan's law

18. a. Write about Master – Slave flip flops.

(Or)

b. Write about full adder.

19. a. Write about decoders.

(Or)

b. Briefly explain about control unit.

20. a. Write about Input / Output Interface.

(Or)

b. Write about priority Interrupts.

Section – C

Answer any Two Questions:

2 X 15 = 30

21. Discuss the various number systems with their conversions.
22. Explain multiplexer & De-multiplexer with suitable diagram.
23. Explain the working of shift register.
24. Write about memory organization.
25. Briefly explain about DMA.