(4) Code No. : **S-176**

Q.4 Explain R-S flip flop using NOR gate.

OR

Explain master slave flip flop.

Q.5 Explain different types of secondary memory.

OR

Explain the working of shift rigister.

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Roll No...................... Total No. of Sections   : 03
Total No. of Printed Pages : 04

Code No. : S-176

Annual Examination - 2018

B. Sc. -I

COMPUTER SCIENCE

Paper - I

COMPUTER HARDWARE

Max.Marks : 50
Time : 3 Hrs. Min.Marks : 17

Note : Section 'A', containing 10 very short-answer-type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

Section - 'A'

Answer the following very short-answer-type questions in one or two sentences : **(1 × 10=10)**

Q.1 Name any 4 operation system.

Q.2 Write any 2 features of UNIX operating system.

Q.3 Full form of ASC II.

Q.4 Full form of EBCDIC.

Q.5 What is De-morgans theorem?

Q.6 Full form of MOS.

Q.7 What is preset and clear?

Q.8 Define demultiplexer.

P.T.O.

Q.9   Write full form of EEPROM.

Q.10   Define SDRAM.

Section - 'B'

Answer the following short-answer-type questions with word limit 150-200 :   **(3 × 5=15)**

Q.1   Explain 1's and 2's complement with help of example.

OR

Differentiate between application software and system software.

Q.2   Explain parity code.

OR

Explain the following gates with boolean equation and logic symbol.

(i)   NUR

(ii) NAND

Q.3   Add -10 and -20 using 2's complement.

OR

Explain half adder.

Q.4   Explain encoder.

OR

Explain 4 - bit binary decoder.

Q.5   Explain PROM and EPROM.

OR

Explain applications of shift register.

Section - 'C'

Answer the following long-answer-type questions with word limit 300-350 :   **(5 × 5=25)**

Q.1   Explain following DOS command

(i)   md

(ii)   attrib

(iii) cd

(iv)   Dir

(v)   Path

OR

Convert

$$Y = \sum (2, 3, 6, 8, 10, 11, 15)$$

(i) $(11010.110)_2 = (?)_{10}$

(ii) $(11001)_{BCD} = (?)_{Excers3}$

(iii) $(AB.CD)_{16} = (?)_2$

(iv) $(701)_8 = (?)_2$

(v) $(10111101)_2 = (?)_{16}$

Q.2   Explain excess-3 code with help of example.

OR

Explain AND, OR and NOT gates.

Q.3   Simplily the boolean function using k-map, find SOP (sum of product) with don't care conditions as:-

OR

Explain full adder.

P.T.O.