Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

****

**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CS2045** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SYSTEM SOFTWARE** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | What is system software? Give examples. | CO1 | 5 |
| b. | How do you calculate the target address in direct and indirect address mode of SIC/XE architecture? | CO2 | 5 |
| c. | Highlight the salient features of SIC/XE machine architecture. | CO2 | 10 |
| (OR) | | | | |
| 2. | a. | Write the difference between RESW and WORD with an example. | CO1 | 5 |
| b. | Write the sequence of instructions in SIC/XE to perform ALPHA+INCR-1 in BETA and GAMMA+INCR-1 in DELTA. | CO1 | 5 |
| c. | Explain about traditional CISC machines with examples. | CO2 | 10 |
| 3. | a. | Write a sample program segment to indicate the arithmetic operation for the SIC machine. Explain the instructions. | CO2 | 15 |
|  | b. | How are a floating point value represented in SIC/XE? | CO2 | 5 |
| (OR) | | | | |
| 4. | a. | Write short note on UltraSPARC Architecture. | CO2 | 15 |
|  | b. | How input and output operation is performed in Cray T3E architecture? | CO2 | 5 |
| 5. | a. | What is the difference between the instructions LDA # 3 and LDA THREE? | CO1 | 3 |
|  | b. | Generate the object program for the following program with help of the given opcode table.  ADD START 2000  LDA N1 ADD N2  STA RES  RES RESW 1  N1 RESW 2  N2 RESW 2  END  OPTABLE  LDA 00  STA OC  ADD 18 | CO1 | 7 |
|  | c. | What are functions performed in Pass 1 by a two pass assembler? | CO3 | 10 |
| (OR) | | | | |
| 6. | a. | What are functions performed in Pass 2 by a two pass assembler? | CO3 | 10 |
|  | b. | What are the machine independent assembler features? | CO3 | 10 |
| 7. | a. | Explain about machine dependent loader features with an example. | CO3 | 20 |
| (OR) | | | | |
| 8. | a. | What are the disadvantages of an absolute loader and machine dependent loader? | CO3 | 10 |
|  | b. | What is a relocating or relative loader? | CO3 | 10 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Explain editor structure with neat diagram. | CO3 | 10 |
|  | b. | Compare DBMS with file systems. Explain DBMS functions and its uses with an example. | CO3 | 10 |

ALL THE BEST