Vth sem



# ANJUMAN-I-ISLAM'S KALSEKAR TECHNICAL CAMPUS, NEW PANVEL 2016-17

# School of Engineering & Technology

Subject: CN Marks: 20 Marks

Class: TE

Date: 03/09/2016 Duration: 1 Hr/s

**Branch: COMPUTER ENGG** 

#### Instructions:

- 1) Question No.1 is compulsory.
- 2) Assume suitable data wherever necessary.

### Q1: Define any five. [10M]

- 1. Protocol
- 2. Hamming Distance.
- 3. Character Stuffing
- 4. ALOHA
- 5. Unicasting and Multicasting
- 6. NIC
- 7. Encapsulation

# Q2: Attempt any one. [5M]

- 1. Write short notes on Bluetooth.
- 2. Describe ISO-OSI Reference Model in detail.

# Q3: Attempt any one. [5M]

- 1. Describe VLAN in detail.
- 2. Explain CSMA protocol. Also explain how collisions are handled in CSMA/CD.



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|--|--|--|--|--|--|
| Subject: SOOAD Marks: 20 Class: TE   | Date: Duration: 1 Hr/s Branch: CO      |  |  |  |  |
| Instructions:  |  |  |  |  |  |
| <ol> <li>Attending Q1. is compulsory.</li> <li>Any one from Q2 or Q3.</li> </ol> |  |  |  |  |  |
| Q1. Attempt any 4 (3 x 2 & 2 x 2).   | [10]                                   |  |  |  |  |
| a) What is the role of System Analyst?   | [03]                                   |  |  |  |  |
| b) List out different requirement gathering Techn                                | iques. [02]                            |  |  |  |  |
| c) Draw the SDLC process cycle.  | [03]                                   |  |  |  |  |
| d) Describe why the system needs to be analyzed?                                 | [02]                                   |  |  |  |  |
| e) Describe the term aggregation, composition, m                                 | ultiplicity, qualification,role names, |  |  |  |  |
| Association with respect to class diagram.                                       | [03]                                   |  |  |  |  |
| f) Differentiate between include and extends rela                                | tionship wrt use-case diagram. [02]    |  |  |  |  |
| Q2.  |  |  |  |  |  |
| a) Explain the checklist to be considered for valid                              | lating the requirements. [05]          |  |  |  |  |
| b) Draw and explain in short Zachman's framewo                                   | ork. [05]                              |  |  |  |  |
|  |  |  |  |  |  |
| Q3.  |  |  |  |  |  |
| Your collage wishes to prepare and maintain the da                               | tabase system to track progress of the |  |  |  |  |
| students who were recruited through collage training                             | ng and placement cell.                 |  |  |  |  |
| a) Draw the usecase diagram for above scenario.                                  | [05]                                   |  |  |  |  |
| b) Draw the interaction diagrams for above scenar                                | rio. [05]                              |  |  |  |  |

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| Subject: OS   | Date: 1/9/2016                                    |
|---|---|
| Marks: 20<br>Class: TE  | Duration: 1 Hr Branch:Computer                    |
| Instructions: All Questions are compulsary.   |   |
| Q.1 Answer any 5 questions out of 6 ( Eac   | ch carry 2 marks) (10M)                           |
| a) What is OS?List out the services provided by   | y OS.   |
| b) What problem is solved by banker's algorith  | nm? justify your answer.                          |
| i) mutual exclusion   | ii) deadlock recovery                             |
| iii) deadlock avoidance   | iv) cache coherence                               |
| <ul> <li>In a typical process state transition diagramethe following state transitions occurs.</li> </ul> | m. Clearly state under what condition             |
| (i) Running to ready  |   |
| (ii) Running to waiting/halt  |   |
| (iii) create to ready   |   |
| d) Fill in the blank.   |   |
| In round robin, throughput is   | , The SJF algorithm execute                       |
| i)less, that last entered the queue   | (ii)more, that first entered the queue            |
| iii)less,with the least processor need.   | iv)medium, that has been in the queue the longest |
| e) What is Starvation and what is its solution?   |   |
| f) What is Context switching?   |   |
| Q.2 Answer any one question.  | (5m)  |
| a) Explain dinning philosopher problem and its  | solution.   |
| b) What is mutual exclusion and how it is impe  | Imented.  |

(PTO)

# Q.3 Solve any one Numerical.

a)Consider the following snapshot of the processes to be executed.

| Process | Arrival time | Burst time |
|---------|--------------|------------|
| P1      | 0            | 4          |
| P2      | . 2          | 5          |
| Р3      | 4            | 6          |
| P4      | 5            | 2          |
| P5      | : 6          | 1          |

Draw the Gantt chart and determine the average waiting time and average turn around time for FCFS and SRTF.

b) Consider the following snapshot of the system.

| Process |   | Allocation |   |   | Max |   | Available |   |    |   |
|---------|---|------------|---|---|-----|---|-----------|---|----|---|
| 91      | A | В          | С | A | В   | C | A         | В | .: | C |
| P1      | 1 | 4          | 2 | 2 | 4   | 3 | 3         | 2 |    | 3 |
| P2      | 0 | 1          | 0 | 3 | 2   | 3 | *         |   |    |   |
| P3      | 2 | 0          | 3 | 3 | 4   | 4 |           |   |    |   |
| P4      | 1 | 2          | 2 | 3 | 3   | 2 |           |   | 9  |   |

i)What is the content of Need Matrix.

ii)Determine the total amount of resource of each type.



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| Unit Test - 1   |                  |                     |  |  |  |
|---|------------------|---------------------|--|--|--|
| Subject : Microprocessor                                      | Date:            | /09/2016            |  |  |  |
| Marks: 20   | Duration: 1 Hr/s |                     |  |  |  |
| Class : TECO  | Branch :         | ranch : Comp. Engg. |  |  |  |
| NOTE:- Attempt all Questions.                                 |                  |                     |  |  |  |
| Q-1 ) Attempt any five.                                       |                  |                     |  |  |  |
| a) Draw programming model of microprocessor 8086.             |                  | 2                   |  |  |  |
| b) What is memory segmentation? Draw suitable diagram.        |                  | 2                   |  |  |  |
| c) Explain 8288 Bus controller.                               |                  | 2                   |  |  |  |
| d) Explain – STOSB , STI.                                     |                  | 2                   |  |  |  |
| e) Explain - LAHF , PUSHF.                                    |                  | 2                   |  |  |  |
| f) Draw timming diagram for read cycle in minimum mode of     | µр 8086.         | 2                   |  |  |  |
| Q-2) Attempt any one.   |                  |                     |  |  |  |
| a) Explain with diagram minimum mode of operation of μp 808   | 36.              | 5                   |  |  |  |
| b) Write a assembly language program for μp 8086 to arrange   | of 5 elements o  | of an array         |  |  |  |
| in disscending order (each element of array is of $8-$ bits). |                  | 5                   |  |  |  |
|   |                  | -                   |  |  |  |
| Q-3) Attempt any one.   |                  |                     |  |  |  |
| a) Write a assembly language program for μp 8086 to demostra  | te DOS interru   | pts. 5              |  |  |  |
| b) Explain in detail 8284 clock generator .                   |                  | . 5                 |  |  |  |
| ***   | _**              |                     |  |  |  |