

# Silver Oak College of Engineering & Technology



## Department of Examinations

Exam Completed - Question Papers

Mid Semester Exam (Winter-2014 Session)

**Branch: Computer Engineering**

**Semester: V**

**Ms Reema Patel**

**I/C H.O.D (CE)**

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**GTU COORDINATOR**

*Keep note that this is just a reference copy of question papers, corrections/queries may not be reflected in the computerized copy. Contact subject coordinator or HOD for any further query*

ROLL NO. \_\_\_\_\_

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

B.E. Sem-5 (CE/IT) MID SEMESTER EXAMINATION

SUBJECT: (151006) Applied Electronics

DATE: 16/10/2014

TIME: 2:00pm to 3:15pm

MAX. MARK: 30

- Instructions:**
1. All the questions are compulsory.
  2. Figures to the right indicate full marks.
  3. Assume suitable data if required.

- Q1** (A) Define all the characteristics of ideal op-amp. **5**  
(B) Draw and Explain the working of SMPS with required block diagram circuits and wave forms. **5**
- Q2** (A) Design a square wave generator at 1KHz using 555 timer IC. **6**  
(B) Do as directed: **4**  
(i) Solve using K map-  $f = \sum m(0,2,6,10,11,12,13) + d(3,4,5,14,15)$   
(ii) Prove  $AB+AB'C+BC'=AC+BC'$
- OR**
- Q2** (A) An op-Amp is used in inverting mode with  $R_1=2K\Omega$ ,  $R_F=30K\Omega$ ,  $V_{cc}=\pm 15V$ . Calculate the output voltage for the given inputs: 1)  $V_{in}=50mV$  2)  $V_{in}= 5V$ . **5**  
(B) Explain working of Linear variable differential transformer in detail. **5**
- Q3** (A) Write a short note on edge triggered toggle flip flop. **5**  
(B) What are the advantages of close loop configuration? Derive expression of close loop gain for Non-inverting configuration of Op-Amp. **5**
- OR**
- Q3** (A) Draw the Architecture of 8051. **6**  
(B) Compare LED and LCD **4**

## SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

### B.E. Semester- V (CE) - MID SEMESTER EXAMINATION (Winter'14 Session)

SUBJECT: ADVANCE PROCESSORS (150701)

DATE: 10/10/2014

TIME: 2:00 to 3:15 PM

Total Marks: 30

**Instructions:** 1. Attempt all questions.

2. Make suitable assumptions wherever necessary.

3. Figures to the right indicate full marks.

- Q.1 (a) Explain the memory bank for 8086. [5]  
 (b) Write a program to generate Fibonacci series. [5]
- Q.2 (a) List the four major processing units in an 80286 microprocessor and briefly describe the function of each. [5]  
 (b) What are privilege levels? What is their use? Give the role of call gates. [5]
- OR**
- Q.2 (a) List three major advances that 80386 microprocessor has over the 80286. Describe how the real mode operation of an 80386 is different from protected mode operation [5]  
 (b) With the help of neat diagram explain the process of task switching. [5]
- Q.3 (a) Explain the addressing mode of 8086 with suitable example. [4]  
 (b) What are steps taken by 8086 when interrupt comes? How does 8086 find address of ISR? [4]  
 (c) Explain following instruction (i) LOOP (ii) LEA [2]
- OR**
- Q.3 (a) Define the term: i) Editor ii) Assembler iii) Linker iv) Debugger [4]  
 (b) Explain Interrupt Vector Table (IVT) [4]  
 (c) Explain the following directives (i) PTR (ii) OFFSET [2]

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**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY****B.E. Semester- V - MID SEMESTER EXAMINATION (Winter'14 Session)****SUBJECT: COMPUTER NETWORKS (150702)****Date: 11-10-2014****TIME: 02:00 P.M. to 03:15 P.M****Total Marks: 30**

Instructions:		
	1. Attempt all questions.	
	2. Make suitable assumptions wherever necessary.	
	3. Figures to the right indicate full marks.	
Q.1	(a) Differentiate between Mesh and Ring Topology. Suppose if you want to connect 5 computers with the help of mesh and ring topology, how many links and ports in each computer will be required?	05
	(b) Explain OSI model in detail.	05
Q.2	(a) Discuss different types of Guided media in detail.	05
	(b) Explain the working principle of CSMA.	05
	<i>OR</i>	
Q.2	(a) Explain Hamming Code. Obtain the Hamming code for the given Data – 10101 with odd parity.	05
	(b) Write a short note on Repeater, Switch and Router.	05
Q.3	(a) Explain Leaky Bucket Algorithm	03
	(b) Explain any one framing method in detail.	02
	(c) Explain Routing. Also explain Shortest Path/Dijkstra Routing algorithm with example.	05
	<i>OR</i>	
Q.3	(a) Explain sliding window protocol using Go – Back – N.	03
	(b) Generate CRC for Frame – 1101011011 having Generator – 10011. What will be the CRC on sender side?	02
	(c) Suppose you have Network Address – 165.100.0.0 No. of needed Usable subnets – 1000 No. of needed Usable hosts – 60 Find out Address class, Default subnet mask, Custom subnet mask, total number of subnet masks.	05

- 1) What is the 14<sup>th</sup> usable subnet range?
- 2) What is the subnet broadcast address for 5<sup>th</sup> usable net?

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Exam Completed Papers for Reference

**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**  
**B.E. Semester- (V/VII) - MID SEMESTER EXAMINATION (Winter'14 Session)**

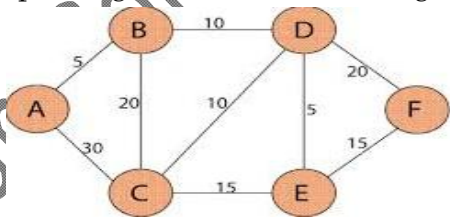
**SUBJECT: Design and Analysis of Algorithms (150703)**

**Date: 14-10-2014**

**TIME: 2:00 P.M. to 3:15 P.M**

**Total Marks: 30**

- Instructions:** 1. Attempt all questions.  
 2. Make suitable assumptions wherever necessary.  
 3. Figures to the right indicate full marks.

Q.1	(a)	Explain asymptotic notations in brief.	10
	(b)	Explain characteristics of greedy method with suitable example.	
Q.2	(a)	Write algorithm for binary search and solve the following array using selection sort {34, 21, -15, 56, 70, 0, 10}.	10
	(b)	Explain backtracking and the solution to 4 queen's problem.	
		<b>OR</b>	
Q.2	(a)	Write algorithm for Merge Sort.	10
	(b)	Explain Rabin Karp algorithm and use to find 93 in 314156438639301.	
Q.3	(a)	Solve the following array using Quick Sort {12, 1, 23, 4, 42, 3}	10
	(b)	Consider the following undirected weighted graph. Find minimum spanning tree for the same using Kruskal's algorithm.	
			
		<b>OR</b>	
Q.3	(a)	Explain how multiplication of large integers can be done efficiently by using divide and conquer technique?	10
	(b)	Using greedy algorithm find an optimal schedule for following jobs with $n=7$ profits: $(P_1, P_2, P_3, P_4, P_5, P_6, P_7) = (3, 5, 6, 20, 7, 1, 38)$ and deadline $(d_1, d_2, d_3, d_4, d_5, d_6, d_7) = (1, 3, 2, 3, 1, 2, 1)$	

**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY****B.E. Semester- (V) - MID SEMESTER EXAMINATION (Winter'14 Session)****SUBJECT: Object Oriented Programming with Java (150704)****Date: 15/10/2014****TIME: 2:00 P.M. to 3:15 P.M****Total Marks: 30**

- Instructions:**
1. Attempt all questions.
  2. Make suitable assumptions wherever necessary.
  3. Figures to the right indicate full marks.

- Q.1 (a) List and explain various features of java. 6  
 (b) Differentiate Method Overloading and Method Overriding with example. 4
- Q.2 (a) Explain Package with example. 6  
 (b) Define: Super and this. (with example) 4
- OR*
- Q.2 (a) Explain Interface with example. 6  
 (b) Dynamic Method Dispatch. 4
- Q.3 (a) What is multithreading? Why it is required? Draw and explain life cycle of thread. 5  
 (b) Write a program to generate a `ArrayIndexOutOfBoundsException`, catches the exception, and displays an error message. 5
- OR*
- Q.3 (a) Write a program that executes two threads using `Runnable` interface. One thread display "A" after every 1 sec. Second thread display "B" after every 3 sec. 5  
 (b) What is Exception? Give some of Built-in exceptions in java. Also give difference between `throw` and `throws`. 5

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**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**

**B.E. Semester- V - MID SEMESTER EXAMINATION (Winter'14 Session)**

**SUBJECT: Management II (150001)**

**Date: 09/10/2014**

**TIME: 2:00 pm to 3:15 pm**

**Total Marks: 30**

**Instructions: 1. Attempt all questions.**

**2. Make suitable assumptions wherever necessary.**

**3. Figures to the right indicate full marks.**

- Q.1 (a) Define Marketing and discuss the role of 4Ps in formulating marketing strategies. 05
- (b) Discuss the importance of Human Resource Management 05
- Q.2 (a) Explain the factors affecting the plant location planning 05
- (b) What is Selection? Explain the selection process. 05
- OR*
- Q.2 (a) Distinguish between Process Layout and Product Layout. 05
- (b) XYZ Co. Ltd, producing a pen, which selling price is Rs 18 per unit has a fixed cost of Rs 75,000 and variable cost is Rs. 8 per unit. Calculate Break Even Point (BEP). 05
- Q.3 (a) Discuss any two demand forecasting methods. 05
- (b) What are the sources of recruitment? Mention their advantages and disadvantages. 05
- OR*
- Q.3 (a) Explain various marketing concepts in detail. 05
- (b) Write a short note on types of tests. 05

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