FACULTY OF ENGINEERING & INFORMATICS

B.E. 4/4 (ECE / CSE / IT) II – Semester (Main) Examination, April / May 2013

Subject: Entrepreneurship (Elective – II & V)

Time: 3 Hours

Max.Marks: 75

Note: Answer all questions from Part – A and any five questions from Part – B.

PART – A (25 Marks)

1.	What do you mean by economic growth for entrepreneur?	(2)
2.	Mention the different types of enterprises.	(2)
3.	What are the characteristics for entrepreneurs?	(2)
4.	What are the sources of ideas in technology development?	(2)
5.	What is slack?	(2)
6.	What is technical analysis in project formulation?	(3)
7.	How do you analyze the market for demand?	(3)
8.	Define three time estimates.	(3)
9.	What are the determinants in the behaviour aspects of entrepreneurs?	(3)
10.	Mention the various approaches of time management.	(3)

PART – B (5x10 = 50 Marks)

- 11.(a) Enumerate the opportunities and challenges in Indian Industrial Environment.(b) Mention the objectives of small scale industry.
- 12.(a) Explain the characteristics of women entrepreneurs.(b) What are the difficulties to be faced by the first generation entrepreneurs?
- 13. The three time estimates of each activity together with predecessors of a building project are given below:

	Three time estimat		stimates
Activity	to	t _m	tp
A-B	2	6	10
A-C	4	8	122
B-C	2	4	6
C-D	0	0	0
B-D	2	3	4
C-E	3	6	9
D-F	6	10	14
E-F	1	3	5

- i) Draw the network and identify the critical path
- ii) Identify the float for each activity and slack for each event.
- iii) Develop the time scale for the network.
- 14.(a) How do you identify the market demand for project formulation?(b) What is the difference between critical path and non critical path?
- 15.(a) Briefly discuss on the behaviour aspects of entrepreneurs.
 - (b) What is time management matrix?
- 16.(a) Discuss the limitations of bar chart.(b) Enumerate the behaviour aspects of entrepreneurs.
- 17. Write short notes on any three of the following:
 - i) Forms of enterprises
 - ii) Float and dummy activity
 - iii) Sources of ideas
 - iv) Collaborative interaction for technology development
 - v) Leadership concept and models.

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II-Semester (Main) Examination, April / May 2013

Subject : Global Positioning System

(Elective - II)

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

1.	Name any four satellite navigation systems other than GPS.	(2)
2.	Compare different types of DOPs.	(3)
3.	Define WES-84 datum and explain all the parameters to define it.	(3)
4.	How, we can overcome signal multipath while calculating a positional value?	(2)
5.	Explain briefly about ephemeris data.	(2)
6.	Give any three real applications of GPS that you come across in your life.	(3)
7.	Explain briefly various types of GPS augmentation systems.	(3)
8.	Discuss about DGPS accuracies.	(2)
9.	Mention the new GPS signals and their frequencies that are planned to	be
	introduced in near future.	(3)
10	. Briefly explain about software improvements in GPS.	(2)

PART – B (5x10=50 Marks)

11.(a) Discuss various steps involved in the satellite position determination.(b) List out the importance of DOP and explain when we will get good GDOP.	(5) (5)
12.(a) Discuss in detail the various errors affecting the GPS accuracy and methods to overcome or minimize the errors.(b) Discuss the terms Geoid, Ellipsoid and Datums.	(7) (3)
13.(a) Explain GPS signal structure with neat block diagram mention the modulation scheme used with GPS.(b) Differentiate between spoofing and antispoofing.	(6) (4)
14. Explain about GAGAN architecture and its implementation. Draw the neat sketch for GAGAN TDS configuration.	(10)
15.(a) Differentiate between GLONASS and Galileo systems.(b) Discuss various types of GPS integration systems.	(4) (6)
16.(a) With the help of mathematical expressions explain about carrier phase observation and pseudo range observation.(b) Bring out the salient features of Galileo with respect to space segment, control segment and signal structure.	(5) (5)
 17. Write short notes on the following: (a) UERE (b) Future GPS satellite and new signals (c) LAAS Vs WAAS 	(10)

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B.E. 4/4 (ECE) II-Semester (Main) Examination, April / May 2013

Subject : Neural Networks and Fuzzy Logic

(Elective - II)

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

1.	Define Neural Network. Draw the non-linear model of neuron and explain.	(3)
2.	What are the different Neural Network topologies and explain?	(3)
3.	On what basis Kohenen's self-organizing nets work?	(2)
4.	What is the basis function used in RBF networks and why the name RBF?	(2)
5.	Explain Mc Collach-Pitts model with a neat diagram.	(3)
6.	Give the applications of Neural Networks in communications.	(2)
7.	Define fuzzyness and explain the importance of fuzzy sets in real world.	(3)
8.	What are excluded middle laws?	(2)
9.	Explain fuzzy sets and its operations.	(3)
10	. What are fuzzy measures?	(2)

PART – B (5x10=50 Marks)

11.	Explain with a neat diagram, algorithm of ADALINE network and explain the applications of ADALINE and MADALINE networks.	(10)
12.	Explain in detail the Back propagation learning algorithm with a neat diagram.	(10)
13.	Explain the Hopfield network with its topology, algorithm and applications.	(10)
14.	Explain the different architectures of Recurrent neural networks and its training algorithms.	g (10)
15.	What is fuzzy relation? Explain the operations on fuzzy relations and its properties.	(10)
16.	Explain the basic structure and operation of fuzzy logic control system.	(10)
17.	Write short notes on the following: (a) Supervised and unsupervised learning (b) Neural Networks in semiconductor technology (c) Fuzzy membership function	(3) (3) (4)

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B.E. 4/4 (ECE) II – Semester (Main) Examination, April / May 2013

Subject : Design of Fault Tolerant Systems (Elective – II)

Time : 3 hours

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. Define a "Stuck open" fault.

- 2. Define the terms maintainability and availability.
- 3. Differentiate between static and dynamic redundancy.
- 4. List out fault detection methods in individual modular of a dynamic system.
- 5. Define the term "Software redundancy".
- 6. Write the functions of bus interface building block (B 1 BB) of FTBBC's self checking compatin module.
- 7. Define the terms "fault secure" and "self testing".
- 8. List out the advantages of Berger codes.
- 9. Discuss how use of control logic enhances controllability.
- 10. List out the principles of built in test for VLSI chips.

PART – B (5 x 10 = 50 Marks)

- 11.a) List out some of the useful properties of Boolean differences.
 - b) Using path sensitization technique derive the test for the fault x3 stack at 1 (s-a-1) in the circuit given.



12.a) Explain how TMR helps in increasing fault tolerance.b) Compare merits and demerits of TMR & SMR techniques.

Max. Marks : 75

- 13. Explain the operation of any 2 practical fault tolerant system.
- 14. Explain in detail the design of totally self checking checkers using m out of n codes.
- 15. Explain tail safe sequential machine design using Berger codes.
- 16. Explain the design of testable combinational logic using three level OR-AND-OR method.
- 17. Write a brief note on any two :
 - a) Transition count and signature analysis
- b) Time redundancy

c) Strongly fault secure circuits
