(Please write your Enrollment Number) Enrollment No. 07201012015

MINOR – I EXAMINATION
(September, 2018)

Subject Code: BCS 401	Subject: Advanced Computer Architecture
Time : 1 ½ Hours	Maximum Marks : 30

Note: Q. 1 is compulsory. Attempt any two questions from the rest.

Q1 **(2.5x4=10)**

(a) "Finer the grain size, the higher the potential for parallelism. But higher the communication and scheduling overhead". True or False. Justify your answer.
(b) Explain Feng's classification.
(c) Discuss the constraints of conventional machines in detail.
(d) How does a multiprocessor machine differ from a multicore and a multicomputer machine? Discuss it with proper block diagram.

Q2 **(5,5)**

(a) How can parallelism in Uni-processor system be achieved? Explain all approaches in detail
(b) With the help of block diagrams explain Flynn's classification of computer architecture in detail.

Q3 **(5,5)**

(a) Explain how degree of parallelism and number of processors affect the performance of a parallel computing system. Give Amdahl's law and find the expression for fixed load speed-up.
(b) What do you mean by parallel computing? Why do we need high speed computing? List the points and explain in brief.

Q4 **(5,5)**

(a) Discuss five performance measurement parameters. Is it true that in an MIMD computer, all processors must execute the same instruction at the same time synchronously?
(b) Differentiate Instruction Level Parallelism (ILP) and Thread Level Parallelism (TLP). Also discuss types of dependencies in ILP

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MINOR – I EXAMINATION
(September, 2018)

Subject Code: BIT 403	Subject: Big Data Analytics
Time : 1 ½ Hours	Maximum Marks : 30

Note: Q. 1 is compulsory. Attempt any two questions from the rest.

Q1 **(2.5×4=10)**

(a) Explain four V's of Big Data and cite cause(s) of each of their emergence.
(b) In what scenario would oversampling be used? Illustrate asymmetric costs of misclassification with an example case.
(c) 10 emails were correctly classified as Spam. 5 emails, which were actual Spam, were not predicted as Spam. 85 emails were correctly classified as Non-Spam. No email was falsely predicted as Spam. Compute: specificity, false positive rate, accuracy and sensitivity of this binary classification model.
(d) Suppose you have a set of numbers: 1, 23, 24, 25, 25, 25, 26, 27, 30, 32, 999. What are the issues with mean, median, and range as statistical inference measures for this data? What visualization technique would you recommend for this data and why?

(5,5)

Q2

(a) What is data? Define nominal, ordinal, ratio, and interval types of data variables with an example each.
(b) 21, 34, 9, 15, 4, 25, 24, 21, 28, 26, 29, 8. Bin this data by frequency and smoothen by bin boundary for noise removal during data exploration.

(5,5)

Q3

(a) Distinguish between analysis and reporting.
(b) What are the kinds of data reduction? Contrast the two ways of dimension reduction.

(4,6)

Q4

(a) Distinguish between OLAP and RTAP for big data processing.
(b) Comment on the correlation between the number of hours spent studying (X) and the grade a student earns (Y). Support your answer with a suitable visualization.

X	Y
8	98
2	74
6	87
4	82
2	72

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MINOR – I EXAMINATION
(September, 2018)

Subject Code: BCS 403	Subject: Mobile Computing
Time : 1 ½ Hours	Maximum Marks : 30

Note: Q. 1 is compulsory. Attempt any two questions from the rest.

Q1 Write short notes on the following **(2.5x4=10)**

(a) Why in cell sites the shape of a cell is hexagonal?
(b) Device security issues in Mobile Computing
(c) Dynamic channel allocation in cellular system
(d) HLR-VLR

Q2 **(5,5)**

(a) What is the concept of Mobile Computing? Discuss its similarity and difference Pervasive Computing
(b) Consider a FDMA cellular system with 120 cites, a frequency reuse factor of N=12, and 900 overall two-way channels. Omni-directional antennas are used, Give the co-channel reuse ratio, number of channels per cell and total number of channels available to the service provider

Q3 **(5,5)**

(a) What do you understand by co-channel interference? What techniques can be used to reduce co-channel interference?
(b) What do you understand by "Umbrella cell Approach"? Explain

Q4 **(5,5)**

(a) Show with a diagram the steps involved in a mobile initiated call in GSM
(b) What is handoff? Explain inter MSC handoff in GSM

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MINOR - I EXAMINATION
(September, 2018)

Subject Code: BAS 419	**Subject: Financial Accounting**
Time : 1 ½ Hours	**Maximum Marks :** 30

Note: Q. 1 is compulsory. Attempt any two questions from the rest.

Q1. **(5x2=10)**

Journalize the following transactions in the books of Accounts of X for the financial year 2017-18:

1/1/18	Y, who owes ₹ 2850, pays ₹ 2775 in full settlement.
3/1/18	Z, who owes ₹ 6000, became insolvent. Only 30% of the amount realized.
15/1/18	Withdrew for domestic use ₹900
31/1/18	Sold old furniture for ₹5000 at a loss 500.
2/2/18	Paid salary for the month of January ₹15000.

Q2. Explain the Basic Accounting Concepts and their importance in Accounting. **(10)**

Q3. What is double entry Framework? Explain the advantages and disadvantages of double entry book keeping system. **(10)**

Q4. Differentiate between Book–Keeping and Accounting. Explain the main branches of Accounting. **(10)**