

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)

MCA I Year I Semester Regular End Semester Examinations Feb/ Mar- 2015

INTRODUCTION TO COMPUTING

Time: 3Hrs

Max Marks: 60

Note: 1. Attempt all the questions.

2. In Q.no 1 to 5 answer either I or II only.

Q.1(I) Explain different units of a computer and write the characteristics of a computer? 12m

OR

Q.1(II) How do you represent characters in computers? Explain hexadecimal representation of numbers with suitable examples? 12m

Q.2(I) What is memory cell? Describe various physical devices used to construct memories. 12m

OR

Q.2(II) Describe the structure of instructions and write about instruction set. 12m

Q.3(I) Explain the following
a. Processor features 6m
b. Virtual memory 6m

OR

Q.3(II) Briefly discuss about various programming languages. 12m

Q.4(I) Define operating system? Write about various functions of operating system. 12m

OR

Q.4(II) Describe various generations of computers. 12m

Q.5(I) What is LAN? Explain how it works and write about LAN technologies. 12m

OR

Q.5(II) Explain the following
a. World Wide Web 6m
b. Cyber Crime 6m

*** End***

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ENGLISH FOR COMMUNICATION

Time: 3Hrs

Max Marks: 60

Note: 1. Attempt all the questions.

2. In Q.no 1 to 5 answer either I or II only.

- Q.1(I) a. Fill in the blanks with appropriate preposition/ article /verb form. 6m
- i. English _____ (speak) all over the world.
 - ii. This is _____ best of all options.
 - iii. Raju _____ (complete) the project report just now.
 - iv. _____ Gold is precious metal.
 - v. John _____ (do) the work since 2009.
 - vi. Brainstorming is a good tool _____ find suitable answer. 6m

b. Correct the following sentences and rewrite.

- vii. I did not find no one in the office on Sunday.
- viii. Our principal asked all the staff members to attend to the meeting.
- ix. The number of students present today are very less.
- x. The students sat under the shade of a tree.
- xi. Beside his salary, he gets tutorial amount also.
- xii. I look forward to meet him.

OR

- Q.1(II) a. Fill in the blanks with appropriate word by choosing either of the two words given in the brackets. 6m
- i. There will be new _____ (curb/kerb) on drink-driving from next week.
 - ii. She is very good at keeping _____ (peace/ piece) in the family.
 - iii. You should pull both _____ (reigns/ reins) to stop or slow a horse.
 - iv. The _____ (fir /fur) trees on the mountain were covered in snow.
 - v. The girl carefully pulled up the weed by its _____ (roots/routes).
 - vi. Ravi painted on the _____ (canvas/ canvass) given to him.

b. Write a sentence for each of the following idioms/ phrases. 6m

- vii. Keep one's fingers crossed.
- viii. Kick the bucket.
- ix. Cut both ways.
- x. A stumbling block.
- xi. Bear the brunt.
- xii. Apple of one's eye.

Q.2(I) What is the purpose of professional communication? Explain with suitable examples. 12m

OR

Q.2(II) What are the seven C's of effective communication? 12m

Q.3(I) **Write short notes on:**

a. Non-verbal communication. 6m

b. Barriers to communication. 6m

OR

Q.3(II) The five factors that influence fluency and self-expression are articulation, pronunciation, voice quality, accent and intonation. Explain. 12m

Q.4(I) Why is systematic planning important for making an effective presentation? 12m
What are the essential elements in the Introduction, Body and Conclusion of oral presentation?

OR

Q.4(II) What is the difference between formal and informal interviews? What are the characteristics being tested by the interviewer? 12m

Q.5(I) Write a letter of application for the post of Software Engineer in Cognizant Technologies, Hyderabad. Enclose your Resume. 12m

OR

Q.5(II) Write a report on the Technical Event conducted in your department. 12m

***** End*****

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PROGRAMMING TO PYTHON

Time: 3Hrs

Max Marks: 60

Note: 1. Attempt all the questions.

2. In Q.no 1 to 5 answer either I or II only.

- Q.1(I) a) Find the value of X in the following: i) $123203_4 = X_{16}$ ii) $1022102_3 = X_9$ 6m
 b) Draw the block diagram of a computer and explain the function of each block. 6m

OR

- Q.1(II) a) Draw the flowchart for reading 2 numbers and printing the GCD of the 2 numbers. 6m
 b) Draw the flowchart for printing the biggest of 3 numbers read. 6m

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- Q.2(I) a) Write a Python recursive function firstDigit(n) that returns the first digit of the argument. 6m
 b) Write in detail on String operations and functions in Python. 6m

OR

- Q.2(II) a) Write in detail on functions and modules in Python. 6m
 b) Write a Python recursive function that sorts all letters in a string and return it. 6m

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- Q.3(I) a) Write a program that adds all numbers from 2 to 10,000 to a list. Then remove the multiples of 2 (but not 2), multiples of 3 (but not 3), and so on, up to the multiples of 100. Print the remaining values. 6m
 b) Write a program that asks the user for a file name and prints the number of characters, words, and lines in that file. 6m

OR

- Q.3(II) a) Write a function that reverses the sequence of elements in a list. For example, if you call the function with the list 1 4 9 16 9 7 4 9 11; then the list is changed to 11 9 4 7 9 16 9 4 1 6m
 b) Write a program that reads each line in a file, reverses its lines, and writes them to another file. 6m

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- Q.4(I) Write in detail on event handling and Exception handling in Python language. 12m

OR

- Q.4(II) Write a Python program to build a date class to implement a date functionality. 12m

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- Q.5(I) Write a Python program to implement stack using Python lists. 12m

OR

- Q.5(II) Write a Python program to evaluate a postfix expression. 12m

*** End***

COMPUTER ORGANIZATION

Time: 3Hrs

Max Marks: 60

- Note:** 1. Attempt all the questions.
2. In Q.no 1 to 5 answer either I or II only.

- Q.1(I) a. Discuss basic functional units of a computer. 6m
b. What are the arithmetic operations performed on floating point numbers? 6m
Explain with example.

OR

- Q.1(II) a. With a neat diagram, explain the structure of a bus. 6m
b. Explain Karnaugh map simplification with example. 6m

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- Q.2(I) Explain basic five addressing modes with suitable examples. 12m

OR

- Q.2(II) a. Describe the fields in instruction formats. 6m
b. Differentiate between Hardwired control and Micro programmed control. 6m

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- Q.3(I) What is a data hazard? Illustrate with an example. How can you mitigate data hazards explain with example? 12m

OR

- Q.3(II) How can you mitigate the instruction hazards? Explain. 12m

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- Q.4(I) a. Discuss RAID levels in detail. 6m
b. Give a note on memory interleaving. 6m

OR

- Q.4(II) List and explain various Read-only memories. 12m

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- Q.5(I) Explain the two types of buses. 12m

OR

- Q.5(II) Give a note on PCI bus and USB. 12m

*** End***