University Institute of Engineering & Technology
(Recognised Under Section 2(f) and 12B of UGC)
Kurukshetra University, Kurukshetra

TIME – 3 Hrs 15 Min

THEORY EXAMINATION –FEB 2021

B.TECH - ECE	SEMESTER – III

M.M. - 56

PAPER - ES-201

SUBJECT - Essentials of Information Technology

INSTRUCTIONS TO BE FOLLOWED

- **Allotted time for examination is 3 hours 15 min that includes time for downloading the question paper, writing answers, scanning of answer sheets and E-mailing the PDF files to the designated Email ID.**
- **All the ECE-A students should send their answer sheets on this Email ID-btech3rdecea@kuk.ac.in**
- **All the ECE-B regular and reappear students should send their answer sheets on this Email ID- btech3rdeceb@kuk.ac.in**
- **The candidates will be required to attempt 75% of the question paper (maximum) by choosing to their any best questions accumulating 56 marks.**
- **The PDF files should be saved as Roll No. and Subject Code. Proper attention should be given while sending the email and in the subject line, the Roll Number and Subject Code should be mentioned.**
- **Maximum Page Limit should be 20 (Twenty) for attempting the question paper on A4 sheets which could be downloaded and printed from the sample sheets given in the Kurukshetra University Examination guidelines.**
- **Over-attemptation should be avoided.**
- **Handwriting should be neat and clean and diagrams should be clear and contrasted.**
- **The candidate should not write their Mobile No. otherwise Unfair Means Case will be made.**
- **While attempting the paper, the candidate will use blue/black pen only.**
- **Before attempting the paper, the candidate will ensure that he/she has downloaded the correct question paper. No complaint for attempting wrong question paper by the candidate will be entertained.**
- **Candidate must ensure that he/she has put his/her signature on each page of the answer sheet used by him/her. Answer sheet without the signature of the candidate will not be evaluated.**

PART-A

Q. No. – 1 Answer the following questions.   **15x1=15**

(i)	What is pdb in python?
(ii)	What is parallel computing?
(iii)	What is cache memory?
(iv)	What is the difference between list and tuples in Python?
(v)	What is the output of selection sort after 1st iteration of given Sequence 23 19 44 38 25 16 35 40.
(vi)	What is pep?
(vii)	Source code extension in python is?
(viii)	What is self in Python?
(ix)	Enlist types of plot.
(x)	What happens is that pdb attempts to execute the pdb **n** command?
(xi)	Differentiate range & xrange.
(xii)	What is utility software?
(xiii)	To fill a table in MySQL, use the ……………………. statement.
(xiv)	Change the address from "Valley 345" to "Canyon 123": use the ………………statement.
(xv)	What is mongo DB?

PART-B

2	What is decision tree in python? Explain with example.	5
3	Write down algorithm for histogram plot using python.	5
4	Explain different services of cloud and its architecture.	5
5	Explain Select , Project and Join operations in relational data model with example	5

PART-C

6	Explain the Conditional statements and control flow statements with example.	10
7	a) Write a python program to check whether number is prime or not. b) Write a python program to find sum of array	10
8	a) Describe debugging in python in detail. b) Discuss different operations of string in python with example.	10
9	a) Write down insertion sort and insertion sort algorithm for given problem. 45 2 78 51 98 23 9 b) Write pseudocode to Plot line chart, bar chart in python	10
10	Differentiate between: (i) An interpreter and a compiler. (ii) Priority Scheduling and Round Robin Scheduling (iii) Buffering and SPOOLING (iv) Time Sharing and Real Time Operating System	10

11	What is cloud computing? Discuss benefits and risks related to cloud computing.	10
12	a) Write an SQL query to fetch the count of employees working in project 'P1'. b) Write an SQL query to find the employee id whose salary lies in the range of 9000 and 15000. c) Write an SQL query to fetch those employees who live in Toronto and work under manager with ManagerId – 141. d) Write an SQL query to fetch common records between two tables. e) Write an SQL query to fetch records that are present in one table but not in another table.	10
13	What is No SQL? Explain the commands of Mongo DB.	10