 Nov - 2018

Q.P.Code: 40822

1st / Information Technology / Sem - I C Choice based)

(Time: 3 Hrs) **Marks: 80**

N.B. : 1. Question no. 1 is **compulsory**.
2. Solve any **Three** questions out of remaining **Five** questions.

Q1	a	What are the main challenges of text analysis?	5
	b	Explain the differences between BI and Data Science.	5
	c	Write types of variable assigned with R-Objects with example.	5
	d	How many sections does a box-and–whisker divide the data into? Explain with example	5
Q2	a	Explain data science process in detail	10
	b	Explain model based clustering.	10
Q3	a	Explain k-NN with suitable example.	10
	b	How to achieve and sustain competitive advantage with Data Science?	10
Q4	a	Describe how logistic regression can be used as a classifier	10
	b	Write short note on Descriptive statistics in R language	10
Q5	a	Justify the term 'Thinking Data-Analytically, Redux'	10
	b	Explain Data Journalism in detail	10
Q6	a	Explain plot() and pairs() function in R. Suppose you are using the plot() function to produce scatterplots of the quantitative variables. When it will produce an error message, 'Error in plot(abc , xyz) : object 'abc' not found?'	10
	b	Explain ARIMA model in detail.	10

EM-I (Choice Base) / Paper / Subject Code: 60102 / IT Infrastructure Design. / NOV. 2018 INFT /

(3 Hours) [Total Marks : 80]

N.B.:
(1) Questions No. 1 is compulsory.
(2) Solve any three questions from remaining five questions.
(3) Assume suitable data if necessary.

Q1 In the Cold Storage House, there is a main Building and three (03) consumable items storage blocks in the campus. The main building is the inventory management block where registration of new items takes place. The main building has 4 floors. (20)

The Cold storage has identified ERP software, which should be accessible by the employees. The software is installed on a server at the inventory management block. At the ground floor, there are 12 computers at the scanning section. At other remaining floors, there is one computer user each. The farthest distance between the computer on the top most floor and the ground floor is less than 50 meters.

The consumable items storage blocks have 3 floors each, with 06 computers in the ground floor of each block. The max distance between the storage blocks and the inventory management blocks is less than 150 Meters. The computers in the storage block may be increased based on future expansion plans.

1. Hardware requirement analysis in main building with quantity.
2. Hardware requirements analysis in storage blocks.
3. The employees should receive dynamic IP addressing from a central server.
4. Network should be loop free at Layer 2
5. Every computer should be able to access the ERP software from each of the location using a fixed IP address.
6. IP Network design table.
7. Identify configurations on the hardware wherever appropriate.
8. Network topology diagram with necessary equipment's.

Q2. (a) What is a DMZ? Explain its importance in Network Security? Discuss its limitations. (10)

(b) What is Ethernet technology? Discuss advantages of Ethernet over Token Ring, FDDI and ATM LAN Emulation (LANE). (10)

Q3. (a) What is WAN? What key features should be considered for selecting a WAN provider? (10)

(b) What is TIA-942-A Data Center Standard? What guideline does it includes? (10)

Q4. (a) What is a Data center? List three data center topologies? Explain any one in detail. (10)

(b) Discuss the wireless network component architecture with diagram. (10)

0281C74C6A947396FE1A36B322C9F6A9

Q5. (a) What is a SAN? Discuss its role in data centers. (10)

(b) What is network Virtualization? How it is incorporated in Software Defined Networks? (10)

Q6. (a) Explain how SDN changed traditional Enterprise Network Design? Highlight with example. (10)

(b) Describe the relevance of Narrow Band and Spread Spectrum WLAN technologies (10)

****

ME/ Paper / Subject Code: 60103 / Advances in Software Engineering. IN ON-2018

INFT /sem-I /choicebased Q. P. Code: 40935

(3 Hours) [Total Marks: 80]

N.B. (1) Question No.**1** is **compulsory**, solve any **three** questions from **remaining** questions.
(2) **All** questions carry **equal** marks.
(3) Specify your answers with neat **diagrams** and **examples** wherever **necessary**.

Q1	**(a)**	How software is different from hardware	**05**
	(b)	Explain management myth	**05**
	(c)	What is QFD	**05**
	(d)	How software can be measured. What are limitations of LOC?	**05**
Q2	**(a)**	What is Cleanroom Software Engineering	**10**
	(b)	What is the need of process model? What will happen if proper process model is not selected for software project?	**10**
Q3		For a banking application the user can operate his account to perform following operation deposit amount, withdraw amount, and enquire account. The user can open savings account, current account and fixed deposit account. The user can access his account using ATM machine. To access account user need to verify his account. When a user deposits amount greater than 10000 in one transaction a bonus of 1% on deposit amount is given to the user. Manager of a bank needs to generate required reports. (Show includes and extends relationship) Draw Use Case, Activity Diagram, Class and Deployment Diagram for the given scenario	**20**
Q4	**(a)**	Explain SAAM and ATM	**10**
	(b)	Explain design concepts	**10**
Q5	**(a)**	Explain different types of test conducted on the software	**10**

	(b)	Draw CFG for the PDL and find cyclomatic complexity
		if(c1 or c2 and c3) st1;
		else if(c4 or c5) st2;
		st3;
			10

Q6	**(a)**	Explain SCRUM	**10**
	(b)	Explain different type of integration testing. What is the need of stub and driver?	**10**

****

SEM I Paper / Subject Code: 60104 / Elective I : User Experience Engineering. / NOV.18

(Choice Base) / IT

(3 Hours) [Total Marks: 80]

N.B. (1) Question 1 is compulsory.
(2) Attempt any three from remaining Questions.
(3) Assume suitable data wherever necessary.

Q.1. a) Explain Model driven inquiry (5)

b) Explain Ubiquitous interaction? (5)

c) Explain different Usability Principles? (5)

d) List and explain UX team roles in the context of the Wheel lifecycle template (5)

Q.2 a) Explain elements of User Experience (10)

b) Explain in detail Mental Models (10)

Q.3 a) Identify and describe objectives of UXE with example (10)

b) Explain Task Structure Models with example (10)

Q.4 a) Explain wireframe with suitable example (10)

b) Explain role of affordance with in UAF along with its practical value (10)

Q.5 a) Explain UX design guidelines (10)

b) What are Flow Models? Draw Flow model for Ticket Kiosk System. (10)

Q.6 a) Explain UX evaluation technique along with example. (10)

b) Define concept of Ideation in detail? State Difference between Idea creation and Critiquing. (10)

Paper / Subject Code: 60210 / Elective II: Management Information System. / NOV-18

Inst SEM-I / Choice Based **Q.P. Code: 24387**

(3 Hours) **[Total Marks : 80**

(1) Question **No.1** is **Compulsory.**

(2) Attempt any 3 questions out of rest.

(3) Figure to the right indicate full marks.

(4) All questions carry equal marks.

A Canteen wants to design database with respect to the four dimensions, customer, Food items, category and bill.

a) Design tables with assuming suitable attributes and normalize the database. **5**

b) Define primary key, foreign key with its importance in database design. List Primary and foreign key in each table of above tables. **5**

c) Draw Star schema and Snowflake schema for above design. **5**

d) Explain difference between star schema and snowflake schema **5**

a) Define Big Data. Explain various characteristics and issues in Big Data. **10**

b) Define Functional area Information System. Explain Information system For Human Resource Management. **10**

a) Define relational database. Explain its advantages and disadvantages in detail. **10**

b) Explain Computer based Information System with its types. **10**

a) Explain various threats to information system. **10**

b) Explain Data Warehouses and Data Marts with its characteristics. **10**

a) Explain Pervasive Computing and the technologies that provide infrastructure For Pervasive Computing. **10**

b) Define Business Intelligence. Explain Business Intelligence applications for Data Analysis. **10**

Write short notes on any two **20**

a) Transaction Processing System

b) Enterprise Resource planning

c) E-Commerce

.....