(Time: 3 hrs) **(Total Marks: 80)**

N.B. 1. Question no 1 is compulsory, solve any 3 questions from remaining 5 questions.
2. Assume Suitable data whenever necessary.
3. Figures in the right indicate full marks.

Q 1) a) Compare various cloud service models. (05)
b) Write a note on Amazon Web Service (AWS) (05)
b) List the benefits associated with Virtualization? (05)
d) How cloud firewall is different from a traditional firewall? (05)

Q 2) a) Explain the architecture of Xen hypervisor in detail (10)

b) What is cloud computing? Differentiate between various cloud deployments models. (10)

Q 3) a) What are the benefits of public cloud for small and medium business (SMB) Organizations? (10)

b) What do you understand by Service Oriented Architecture (SOA)? Explain how it supports cloud computing? (10)

Q 4) a) What are the challenges with cloud data security? (10)

b) Explain AAA model for cloud computing in detail. (10)

Q 5) a) Explain GFS file system of cloud in detail, also specify how Bigtable reside on GFS. (10)

b) Draw and explain the architecture of mobile cloud computing.

Also list its challenges and benefits. (10)

Q 6) Write a note on **(any two)** (20)
(a) Google's no SQL system
(b) Eucalyptus Architecture
(c) Open Stack Architecture

150
14/12/18

BE sem VII (IT) Dec-18

LC

(3 hours) [Total: 80 Marks]

Note: 1) Question no. 1 is compulsory.
2) Solve any THREE question out of remaining FIVE.
3) Assume suitable data wherever applicable.

1. Develop a business plan for online grocery store for selling organic items based on the following guidelines: 20
   (1) Identify the business model.
   (2) Develop the strategic plan based on Strategic Objectives, Strategic definition, Marketing plan, SCM and CRM plan.
   (3) Implementation should include few screenshots of websites demonstrating: Business model, revenue model(s) used, CRM and SCM activities, Marketing activities, Strategic objectives like mission, vision and objectives, Security concern, Payment mode.
   (4) One example of use-case scenario.

2. (a) Discuss the various electronic payment methods. 10
   (b) Distinguish between E-Commerce and E-Business. What are different mechanisms for online auctions? 10

3. (a) Explain different types of Portals with an example. Illustrate with an example Buy Side E-Commerce and Sell –Side E-Commerce. 10
   (b) Differentiate between strategy and tactics. Explain five force model and importance of value chain. 10

4. (a) Explain in detail the SOSTAC framework to promote the product. 10
   (b) Publisher wants to set up online business for his firm. Which type of revenue models will be used by him for revenue generation? 10

5. (a) Identify and examine the issues involved in the development of E-Commerce Website. 10
   (b) How Porter's Five Forces can be applied to variousonline business industries? 10
   Explain by giving examples.

6. (a) What is blind signature? Explain with example how it is used in online payment method? 10
   (b) Discuss which E-CRM tool is used by HDFC to acquire, maintain, and expand customer relations worldwide by using the internet. 10

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

(1) Ques 1. is compulsory.

(2) Attempt any 3 of the remaining 5 questions.

Q1 (a) What is AI? List down all components of AI. **(04)**

(b) Explain the limitations of Propositional logic with suitable example. **(04)**

(c) Describe the Bayes theorem. **(04)**

(d) Explain any AI problem with suitable example. **(04)**

(e) Solve the given crypt arithmetic puzzle: **(04)**

BASE

+ BALL

GAMES

Q2. a) Explain Hill Climbing and Simulated Annealing with suitable example. **(10)**

b) Explain Goal Based and Utility based agent with block diagram. **(10)**

Q3. a) What is Prolog? What do you mean by Structure in Prolog? Write a Prolog Program for family information systems. **(10)**

b) What is heuristic function? Explain 8 puzzle problem. Explain the PEAS descriptor of Wumpus world problem. **(10)**

Q4. a) Consider the following sentence **(10)**

(i) Mammals drink water.

(ii)Man is Mortal.

(iii) Man is Mammal.

(iv) Bob is Man.

Prove *Bob is Mortal* using modus ponen & Resolution.

b) Differentiate between Informed and Uninformed search techniques. Also explain A* algorithm with suitable example. **(10)**

Q5. a) Explain Planning in AI. Compare and contrast between Partial Order Planning and Conditional Planning. Also explain the real time application of hierarchical planning. (10)

b) What is uncertainty ? Explain Bayesian Network with example. (10)

Q6.Attempt any 4 :

a) Backward chaining with an example. (05)

b) Expert Shell system architecture. (05)

c) Conditional Probability. (05)

d) Knowledge base agent. (05)

e) Depth limited search. (05)

1T01217 - B.E.(INFORMATION TECHNOLOGY)(Sem VII) (CBSGS)Software Project Management

Time : 3 Hrs **Marks : 80**

N.B : (1) Question 1 is compulsory.
(2) Out of remaining **ANY 3**
(3) Assume suitable data wherever required.

1. Solve **ANY FOUR** (**20**)

(a) How does a project's scope support the MOV concept?

(b) Describe how a project's MOV can support an organization's goals and strategies.

(c) What are the attributes of a project?

(d) What is a process metric & a product? Give an example.

(e) What are some hidden costs of outsourcing? Why is it important to consider these costs?

2. (a) What are seven IT project risk management processes? Explain each? (**10**)

(b) Describe the three approaches to implementing an information system. (**10**)

3. (a) Describe the PMBOK area of project time management & What is a work package? (**10**)

(b) Describe the roles of a project manager. What qualities are required for a good project manager? What is the difference between a work group and a real team? (**10**)

4. (a) Briefly describe the five scope management processes & describe the scope planning process (**10**)

(b) Explain the phases of project life-cycle and compare it with SDLC. (**10**)

5. (a) Describe the relationship among scope, schedule, and budget (**10**)

(b) Describe the criteria that should be used to make a project selection decision. (**10**)

6. (a) Describe the five phases of the IT project methodology (**10**)

(b) Describe the functional organizational structure & project organizational structure (**10**)

Paper / Subject Code: 42610 / 6) Ubiquitous Computing

BE (IT) Sem-VII Dec-18 **Q. P. Code: 50905**

(Time: 3 hours) **Total marks: 80**

Note:1. Q.1 is compulsory
2. Attempt any 3 from remaining
3. Assume suitable data if necessary.

Q1 A) Explain basic properties and applications of Ubiquitous system. 10
B) Explain in detail different challenges of Ubiquitous Computing. 10

Q2. A) Explain in detail Context-aware computing and context-aware systems. 10
B) Discuss smart DEI model. 10

Q3. A) Explain in detail network design in Ubiquitous system 10
B) Explain in detail Hidden UI Via Basic Smart Devices. 10

Q4. A) Discuss in detail design problems in Ubiquitous Computing with an example. 10
B) Explain in detail Service Provision Life-Cycle. 10

Q5. A) Explain in detail Service Architecture Models. 10
b) Explain in detail Human Intelligence Versus Machine Intelligence. 10

Q6. Write short notes on following 20
a) MEMS
b) HCD

(3 Hours) **Marks : 80**

Note: 1. Question Number 1 is compulsory.
2. Solve any **three** from remaining questions.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary

(1) a.Define frequency resuse with a neat diagram. Consider a transmitter supporting 80 voice channels over an area of 250 kms. If this area is equally divided into 8 cells, each supported by lower power transmitters so that each cell supports 50% of the channels. Determine: (i) The coverage area of each cell (ii) Total area of voice channels available in cellular systems. **(10 marks)**

b. Define the threats and challenges in wireless systems. Explain the different types of device security issues . . **(10 marks)**

(2) a. Why is tunneling required in VPN. What are the protocols which support VPN. **(10 marks)**

b. Why is the concept of Spread Spectrum important? Briefly explain FHSS and DSSS concept. **(10 marks)**

(3) a. Detail the Bluetooth protocol stack with neat diagram. **(10 marks)**
b. Elaborate the main factors of change in economics of wireless technology **(10 marks)**

(4) a. Classify 802.11 MAC management functions. Explain Power management function in detail **(10 marks)**

b. Explain Hidden and Exposed terminal problem with solution. **(10 marks)**

(5) a. Neatly explain the WLL Architecture. Explain the two local loop techniques with diagrams **(10 marks)**
b. Discuss the GSM System Architecture in detail **(10 marks)**

(6) Write short notes on (any 2): **(20 marks)**

a. Mobile IP
b. Wireless Sensor Networks
c. Handoff Strategies
d.. Wimax Technologies
