VII - IT

SPM

13/5/16

QP Code : 31274

(3 Hours) **[80 Marks]**

N.B. (1). Question No.1 is compulsory.

(2). Out of remaining attempt any three.

(3). Assume suitable data wherever required.

(4). Figures to right indicates full marks.

Ques.1. Solve any [Four]:

a). Describe PMBOK [5]

b). Explain Triple constraints of a project. [5]

c). Explain Business Case. [5]

d). Explain formal and informal organisation. [5]

e). What is project? What are the attributes of a project? [5]

Ques.2 a). Explain work breakdown structure with example. [10]

b). Explain various project scheduling techniques. Explain the difference between CPM and PERT. [10]

Ques.3 a). Explain project leadership and ethics. [10]

b). List and explain the steps involved in terminating a project. [10]

Ques.4 a). What is project risk management? What are the RM processes? [10]

b). Distinguish resource loading from resource levelling. Why is levelling of resources preferred to large fluctuations? [10]

Ques.5 a). Explain project life cycle and its relation with SDLC. [10]

b). How can a system be a technical success but an organizational failure? [10]

Ques.6 a). What is the role of implementation plan? Explain in brief the contents of implementation plan of a project. [10]

b). What is meant by Communication Management? What are the strategies for an effective communication system? [10]

X———————X

BE Sem VII CCBGS FT 19/05/2016

Cloud Computing

QP Code : 31314

(3 Hours) [Total Marks :80

N.B. : (1) Q. 1. is compulsory
(2) Attempt any three out of five.

1. (a) What are cloud deployment models? 5
(b) Explain benefits of virtualization? 5
(c) What saas maturity model? 5
(d) Explain different types of hypervisor with example. 5

2. (a) Explain Openstack Architecture in detail. 10
(b) Explain Xen architecture in detail. 10

3. (a) What are the features of Google file system? 10
(b) Explain cloud Data Security? 10

4. (a) What are techqnines for the risk assessment and management for cloud? 10
(b) Explain AAA model for cloud? 10

5. (a) What is the impact of shared resources and Multi-Tenancy on cloud Applications? 10
(b) What are the fundamental requirements for cloud application architecture? 10

6. Write a note on:- 10
(a) Cloud Service Brokerage
(b) Mobile cloud Computing
(c) Amzon simple DB
(d) Modes of Eucalptus

B.E. Sem. VII (CBSGS) IT 20-5-16
Intelligent Systems

Q.P. Code : **31352**

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

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **three** questions out of the remaining **five** questions.

1. Attempt any **five** **20**
   (a) Describe Bayes theorem.
   (b) What are modus ponen ?
   (c) Define Alpha & Beta value in game tree?
   (d) Differentiate between prepostional and predicate longue.
   (e) Give Agent Task Environment of Image analysis.
   (f) Explain in short what is Expert System Shell.

2. (a) Consider a knowledge base KB that contain following propositional logic sentenced. **10**
   $Q \Rightarrow P$
   $P \Rightarrow \neg a$
   $Q \vee \neg R$
   (i) Construct a truth table that shows the truth value of each sentence in KB and indicate the model in which KB is true.
   (ii) Does KB entail R ? use definition of entailment to justify your answer.
   (iii) Does KB $R \Rightarrow \neg P$ entail ? Extend the truth table and use the difinition of entailment to justify your answer.
   (iv) Does KB $Q \Rightarrow \neg R$ entail ? Extend the truth table and use the difinition of entailment to justify your answer.
   (b) Explain simulated annealing with diagram. Where it is used ? **10**

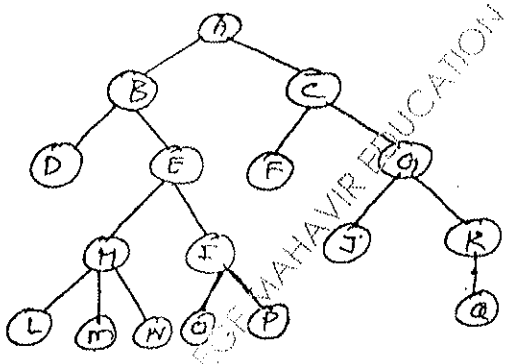
3. (a) Measure 1 liter water if available Jug sizes are 7 liters and 5 liters. **5**
   (b) What is PEAS descriptor ? Explain PEAS descriptor for Taxi diver Agent. **5**
   (c) You have two nighbour, John and Mary, who have promised to call you at work when they hear the alarm. John always calls when he hears the alarm, but sometimes confuses the telephone ringing with the alarm and calls then, too. Mary on other hand, likes rather loud music and some times misses the alarm altogether. Given the evidence of who has or has not called. We would like to estimate the probability of a burglary. Draw a Bayesian network for this domain with suitable probability table. **5**

[TURN OVER

4. (a) Assume the following facts :- 10
   (i) It is a crime for an American to sell weapons to hostile nations.
   (ii) The country Nano an enemy of America.
   (iii) Nano has some missiles; all of its missiles were sold to try it by Colonel West.
   (iv) Colonel West is an American
   Use resolution to answer the question "Colonel West is a Criminal." 10

   (b) Differentiate between Informed and uniformed search techniques. Also give comparative analysis of various uninformed search techniques. 8

5. (a) Apply DFS algorithm on given tree write the sequence of nodes in which it is explored.



   (b) List down all types Agent Architechture. Explain utility based and learning agent. 5

   (c) What is Expert System explain its working with block Diagram. 7

6. Write Short notes on any Four. 20
   (a) Ontology
   (b) Crypto Arithmatic Problem
   (c) WUMPUS world Environment
   (d) Partial order planner with STRIP representation
   (e) Prolog.

Course: B.E. (Sem VII) (REV. -2012) (CBSGS) (IT) (Prog-T5127)

QP Code 31352

Correction

Q. 3 (c) & Q. 4 (a), 4 (b) are of 10 Marks each.

Q. 5 (a) is of 8 Marks

Q.5 (b) is of 5 Marks

Q.5 (c) is of 7 Marks

Date and Time 25/05/2016 11:15 AM

VIII - IT 31/5/16

WT

Q.P. Code : 31422

(2½ Hours) **[Total Marks : 80**

N.B. : (1) All questions are compulsory.
(2) Solve any three questions out of the remaining five questions

1. A) Consider a cellular network with 64 cells. Each hexagonal cell has an appropriate area of 10 km². The total number of radio channels allotted for the network is 336. Find the total number of channels of the network, if **10**
   a) N = 4
   b) N = 7
   c) N = 12. Where N denotes cell reuse.

   B) Illustrate FHSS and DSSS with suitable examples. **10**

2. A) Explain in detail functional architecture of a GSM system. **10**
   B) Explain in detail MMDS and LMDS working in WLL based technology. **10**

3. A) Explain in detail IEEE 802.11 WLAN Architecture. **10**
   B) Explain in detail Hidden Terminal and Exposed terminal problem with respect to WLAN. **10**

4. A) Explain in wireless security offered by IEEE 802.11 in detail with neat diagram. **10**
   B) Explain in detail Bluetooth Protocol architecture with neat diagram. **10**

5. A) Explain Bluetooth security aspect. **10**
   B) Explain WEP protocol in detail. **10**

6. Write short note : **20**
   a. OFDM
   b. WLL Architecture
   c. Satellite Systems
   d. MACA

FW-Con.11668-16.

BE Sem VI CCBGS Elec? IP 06/06/16

QP Code : 31598

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

N.B.: **Q1 is compulsory.**

Write any three questions out of remaining.

Assume suitable data wherever necessary.

Q1 (a) Show that High pass = original – low pass 05

(b) How contrast stretching is different than thresholding 05

(c) Explain Digital water marking and its application 05

(d) Explain Discrete time system 05

Q2 (a) Find DFT of the image 10

0	1	2	1
1	2	3	2
2	3	4	3
1	2	3	2

(b) Explain HIT and Miss Transform 10

Q3 (a) Calculate the direction of the edge at the centre point of the image 10

$$I = \begin{bmatrix} 50 & 60 & 70 \\ 5 & 50 & 80 \\ 7 & 9 & 50 \end{bmatrix}$$

(b) Explain various frequency domain low pass filters in detail 10

Q4 (a) Perform histogram stretching so that new image has a dynamic range of [0, 7]

Grey level	0	1	2	3	4	5	6	7
No. of Pixels	100	90	85	70	0	0	0	0

(b) Differentiate between point operation and neighbourhood operations 10

Q5 (a) Compare lossless and lossy compression techniques 10

(b) Explain application of image processing in digital watermarking 10

Q6 (a) For the given 3 bit , 4x4 size image perform the following operations 10

(i) thresholding

(ii) bit plane slicing for LSB and MSB planes

(b) Explain walsh and wavelet transform 10

FW-Con.12192-16.