

3 Hours

[80 marks]

- Note:** 1. Question number 1 is **compulsory**.
2. Solve any **three** questions out of the remaining **five** questions
3. Assume suitable data if necessary
4. Figure indicate marks

- Q1. A. A mobile communication system is allocated RF spectrum of 25 MHz and uses RF channel bandwidth of 25 KHz so that total number of 1000 voice channels can be supported in the system. [10]
a) If the service area is divided into 20 cells with a frequency reuse factor of 4, compute the system capacity.
b) The cell size is reduced to the extent that the service area is now covered with 100 cells. Compute the system while keeping the frequency reuse factor as 4.
c) Consider the cell size is further reduced to that the service area is now covered with 700 cells with the frequency reuse factor of 7. Compute the system capacity.
- B. Explain in detail EDGE Network Architecture with neat diagram. [10]
- Q2. A. Explain in detail GPRS Architecture with neat diagram. [10]
B. Explain in detail CDMA Architecture with neat diagram. [10]
- Q3. A. Give in detail comparison between WiMax and LTE/3GPP. [10]
B. Explain in detail Bluetooth Protocol Stack with neat diagram. [10]
- Q4. A. Neatly explain the WLL Architecture. Explain the two local loop techniques with diagram [10]
B. Explain in detail GSM Privacy and Authentication with neat diagram. [10]
- Q5. A. Explain the main factors of change in economics of wireless technology. [10]
B. Explain the Wired Equivalent Privacy Protocol. Also explain WEP security based on the access control list with neat diagram. [10]
- Q6. Write short notes: [20]
a. Compare CDMA 2000 & W-CDMA
b. Mobile IP.
c. IEEE 802.11 standards.
d. Wireless Sensor Network.

Dr: 25/5/97

B.E - Sem-VII - I.T. (CBGS)

Q.P. Code : 790800

(3 Hours)

Total Marks : 80

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

1. (a) Explain forward chaining. 4
 (b) Explain steps in state space search formulation. 4
 (c) Discuss Heuristic function using suitable example. 4
 (d) Explain goal based agent with diagram. 4
 (e) Explain in brief Expert System Shell. 4

2. (a) You have two neighbours, 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 the other hand likes rather loud music and sometimes 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 tables. 10
 (b) Describe Hill climbing Algorithm. What are its limitations? 10

3. (a) Represent the following sentences in First Order Logic:- 10
 - (i) Every gardener likes the sun.
 - (ii) You can fool some of the people all of the time.
 - (iii) All purple mushrooms are poisonous.
 - (iv) Every student who takes French passes it.
 - (v) No person buys an expensive policy.

- (b) What is prolog? Write Prolog program for generating Fibonacci series. 10

4. (a) Compare and contrast BFS & DFS. And explain the search strategy developed to overcome the drawbacks of both. 10
 (b) Explain Learning Agent with diagram. Also explain inductive learning. 10

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Cloud Computing

Q.P. Code : 800300

(3 Hours)

Total Marks : 80

(2)

Note :1) Question no. 1 is compulsory.

2) Attempt any three from remaining five questions.

3) Assume suitable data, if necessary.

1. a. What are advantages and limitations of Cloud Computing? 5
- b. What are the levels used for virtualization? 5
- c. Differentiate between cloud and traditional application Architecture? 5
- d. What are the factors for successful cloud deployment? 5

2. a. Explain different OPEN STACK cloud services with architecture 10
- b. Explain the architecture and features of EBS 10

3. a. What is virtualization? Explain any one virtualization software architecture. 10
- b. Explain cloud based service delivery and deployment models with example 10

4. a. Explain different risks and mitigation techniques associated with cloud? 10
- b. What are public cloud adoption phases for SMBs? What are cloud vendor roles and responsibilities towards SMBs? 10

5. a. Explain challenges faced in cloud for data storage? 10
- b. Explain AAA model in detail along with its industry implementation? 10

6. Write a note on 20
 1. CSB
 2. CSG
 3. GAE
 4. GFS

- 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.

1. Solve any [Four]:

- a) What is outsourcing? What are its advantages and disadvantages? [5]
b) Explain the need of project management. [5]
c) Give the difference between product oriented deliverables and project oriented deliverables. [5]
d) What is relation between MOV, Scope and WBS? [5]
e) What is project charter? [5]

2. a) Explain the following terms:

- i. Project
ii. Critical Path
iii. Earned Value
iv. Scope Creep
v. Scope Leap

[10]

b) Explain PMBOK Knowledge Areas.

[10]

3. a)

Activity	Predecessor	Duration
A	-	3
B	A(FS2)	2
C	A(SS)	2
D	B(SS1)	4
E	C(SF3)	1
F	C(FF3)	2
G	D(SS1), E	4
H	F(SF2), G	3

[10]

- a) Draw Precedence Diagram.
b) Perform Forward and backward path calculations.
c) Find Critical Path.

b) Explain the phases of project life cycle and compare it with SDLC.

[10]

TURN OVER

- 4 a) Discuss the statement: "Failing to define what not part of the project is just as important as failing to define what is part of the project. [10]
- b) What is project team? Explain multidisciplinary and multicultural teams. [10]
- 5 a) Explain work breakdown structure with example. How does it map to the DDT and DSC. [10]
- b) What is the cost benefit analysis in projects? List the steps for performing costs benefit analysis.
- 6 a) What is the role of implementation plan? Explain the various leadership styles. [10]
- b) Choose a company that sells electronic products /services on the web. Using this website as a guide develop scope statement. (Make suitable assumptions). [10]
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