Q. P. Code : 24217

(3 Hours)   [Total Marks : 80

N. B. : (1) **Question No.1** is **compulsory**.
     (2) Attempt **any three** questions out of **remaining**.
     (3) Assume suitable **data** if **required**.

1 **Solve any four**   20
   a) Explain the importance of feasibility study in IT projects.
   b) Give the difference between product oriented deliverables and project oriented deliverables.
   c) What is project management. Why it is needed.
   d) Compare various informal organizational structures.
   e) What is relation between MOV, SCOPE and WBS.

2 a) Explain the phases of project life cycle and compare it with SDLC.   10
   b) Explain Project Planning framework, what are the points to be considered when setting the objectives of IT project Communication System. Give any three.   10

3 a) What are the methods for budgeting a project.   10
   b) What is outsourcing? Explain in brief the objectives of procurement management.   10

4 a) Explain how Gantt chart can be used for planning and controlling small projects. What are the limitations of Gantt chart.   10
   b) What is the cost benefit analysis in projects? List the steps for performing costs benefit analysis.   10

5 a) What is project team? Explain multidisciplinary and multicultural teams.   10
   b) Explain in brief resource loading, resource allocation and resource levelling.   10

6 a) What is the role of implementation plan? Explain in brief the contents of implementation plan of a project.   10
   b) Explain project estimation techniques.   10

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Q. P. Code: 26066

Time: 3 hours   Marks: 80

Q1 is compulsory Attempt any 3 Out of 5

Q.1   [20]

a)" Cloud Computing", what do you understand by this term? How this is different from cluster computing, grid computing, utility computing and service oriented computing.

b) Explain the need of Virtualization in the Context of Cloud Computing. Compare type 1 and type 2 Virtualization.

Q.2   [20]

a) Explain the architecture of Eucalyptus Cloud with its mode of operation

b) Explain IaaS , PaaS , SaaS with example.

Q.3   [20]

a) Explain Amazon's NOSQL Database services.

b) Explain adoption of public cloud by SMBs

Q.4   [20]

a) Discuss the questions that Enterprise must ask Cloud vendor.

b) List the implementation level of Virtualization

Q.5   [20]

a) What is the managed Private Cloud? Compare on premises private cloud, managed private cloud , public and hybrid Cloud

b) What are risk associated with Cloud computing

Q.6 write a short note [any 4]   [20]

a) Federated Cloud

b) Cloud Storage Gateways

c) AAA
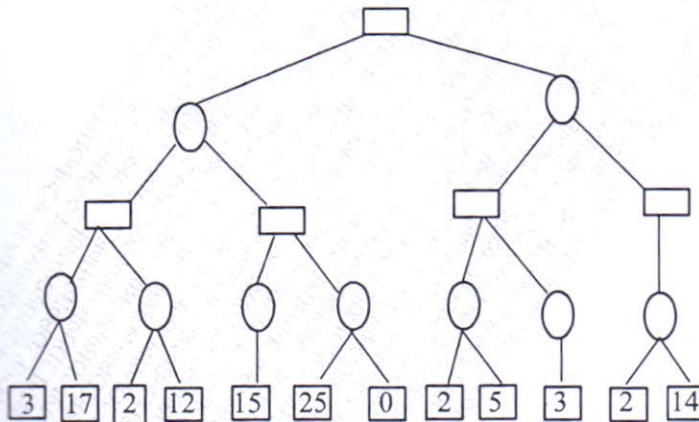
d) Mobile Cloud Computing

e) Cloud Migration Techniques

[Time: Three Hours]   **[Marks:80]**

Please check whether you have got the right question paper.

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

Q.1   A) Give the comparison of DFS, BFS, Iterative deeping and Bidirectional search.   04

       B) Solve the given Cryptarithmetic puzzle   04

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       C) Explain modus ponen with suitable example   04

       D) Draw and Explain general model of Learning Agent.   04

       E) Explain the Limitation of propositional logic with suitable example.   04

Q.2   A) Explain Hill climbing and simulated Annealing with suitable example.   10

       B) Explain Goal based and utility based agent with block diagram   10

Q.3   A) Consider the given game tree. Apply $\alpha - \beta$ pruning where □- max node, 0- min node.   10
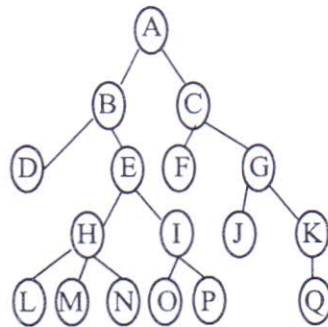

       B) Explain Rote learning and Inductive learning with suitable examples.   10

Q.4   a) Consider the following sentence   10
       i)   Mammals drink milk
       ii)   Man is mortal
       iii)   Man is Mammal
       iv)   Tom is Man

       Prove that Tom is mortal using modus ponen and Resolution

       b) Draw and explain the expert system Architecture.   10

Page **1** of **2**

Q.5   A) Consider the given tree, apply breadth first search algorithm and also write the order in which   10
       nodes are expanded.

       B) Write the Planning algorithm for spare tyre problem.   10

Q.6   Write the short note an **any four.**   20
         A) Wumpus world environment
         B) SMA* algorithm
         C) Forward chaining and Backward chaining
         D) Bayes Theorem and conditional probability
         E) Supervised and Unsupervised learning.

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

Note :1. Question number 1 is **compulsory**.

2. Solve any **three** questions out of the remaining **five** questions

Q 1)

A) If a signal to interference ratio of 15dB is required for satisfactory forward channel performance of a cellular system , What is the frequency reuse factor (Q) and Cluster Size (N) that should be used for maximum capacity if the path loss exponent is as follows:
(i) n=4
(ii) n=3
Assume there are six co-channel cells in the first tier and all of them are at same distance from mobile. Use suitable approximations.   **(10 marks)**

B) Explain Piconet and Scatternet with respect to Bluetooth   **(5 marks)**

C) Explain the advantages and disadvantages of using wireless communication   **(5 marks)**

Q 2)

A) Explain the Wireless Multiple Access Techniques with suitable diagrams   **(10 marks)**

B) Explain the ZigBee (LR-WPAN) Stack Architecture with a neat diagram   **(10 marks)**

Q3)

A) List and explain the Types of channels of GSM and compare GSM with CDMA   (10 Marks)

B) Draw and explain the main components of Wireless Local Loop (WLL) Architecture   (10 Marks)

Q4)

A) Explain the possible attacks on Wireless LAN and explain WEP in detail.   (10 Marks)

B) Explain in detail the WLAN Architecture with neat diagrams.   (10 Marks)

Q5)

A) Explain the evolution of cellular systems highlighting 1G/2G/3G and 4G   (10 Marks)

B) What is Spread Spectrum? Explain FHSS and DSSS.   (10 Marks)

Q6) Answer **any two** of four.   (20 Marks)

A) WiMax

B) Economics of Wireless Networks

C) Electromagnetic Spectrum

D) Frequency Reuse

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Q. P. Code: 26254

(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**.

1. (a) Consider a typical online learning portal that is used for online courses. Identify the considerations that you think such portal should have and then design a User Interface (minimum 3) considering the usability aspects of this online learning website. Design any Five Test Tasks which can be used by the group of testers to evaluate the performance of the above learning portal. 10

   (b) Explain between subjects testing versus within subjects testing 10

2. (a) Explain parallel and participatory design in usability engineering lifecycle. 10

   (b) Explain various stages of a test in usability engineering 10

3. (a) Explain usability Heuristics in detail 10

   (b) List and explain various usability slogans 10

4. (a) Explain attributes of system acceptability 10

   (b) What is need of standards? Explain National, International and Vendor standards in detail. 10

5. Write short notes on 20

   a. Multilocale Interface and Resource Separation.
   b. Focus Groups.
   c. CAUSE Tools.
   d. Intelligent user Interfaces.

6. a. With help of an example explain the importance of graphics design and color while developing an application. 10

   b. Elaborate on different features you will incorporate in a website to sell fire crackers to improve user engagement. 10

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