UNIVERSITY PAPER
TYBSCIT
SEM-VI
MAY-2018

University Regular Exam - May-2018

TY·BSc (I·T) .Sem-VI

Sub - Internet Technologies

Q.P. Code: 36134

Date - 4/5/18 (2½ hours)

Time - 11·00 To 1·30pm.

Total Marks: 75

N. B.: (1) **All** questions are **compulsory**.

(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.

(3) Answers to the **same question** must be **written together**.

(4) Numbers to the **right** indicate **marks**.

(5) Draw **neat labeled diagrams** wherever **necessary**.

(6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt *any two* of the following:** 10

a. What are the responsibilities of Transport layer in OSI Model?

b. Explain Subnetting giving example.

c. Explain fields related to Fragmentation in detail.

d. Write a note on Global Unicast Address that covers following: Definition, Three levels of hierarchy.

2. **Attempt *any two* of the following:** 10

a. Draw and explain ATMARP Packet.

b. Explain Timestamp Request and Reply of ICMP.

c. Explain Data Transfer Phase of Mobile communication.

d. Explain two node instability problem in Distance vector routing and its solution.

3. **Attempt *any two* of the following:** 10

a. Explain Features of UDP in detail.

b. Write and Explain algorithm of input module of UDP.

c. Draw and explain TCP Segment Format.

d. Explain Timers in TCP.

4. **Attempt *any two* of the following:** 10

a. Explain Association establishment in SCTP.

b. Explain Data Chunk of SCTP with its packet format.

c. Draw and explain DHCP client state transition diagram.

d. Explain Recursive and Iterative Resolution in DNS.

5. **Attempt *any two* of the following:** 10

a. Explain NVT character set for option negotiation.

b. Explain Components of SSH.

c. Explain two FTP connections, control and data with diagram.

d. Explain DATA and ACK message of TFTP.

6. **Attempt *any two* of the following:** 10

a. What is the role of Message Access Agent in email communication? Explain POP and IMAP.

b. Explain Web Based E-Mail.

c. Draw and explain RTP packet format.

d. How do you download a compressed audio/video using a web server and using a media server?

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7. **Attempt _any three_ of the following:**   15
a. Write points of comparison between IPv4 and IPv6.
b. Explain types of links available in OSPF.
c. Explain Congestion policy of TCP.
d. Explain Generic Domain, Country Domain, and Inverse Domain.
e. Explain Persistence and non-persistence connection of HTTP.
f. How does Video compression (MPEG) happen?

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University Regular Exam - May-2018.
TY B·Sc (I·T) Sem - VI
sub - Project Management
Date - 31.5.2018 (2½ hours)
Time - 11:00 To 1·30 pm.

Q. P. Code: 36130

[Total Marks: 75]

N. B.: (1) **All** questions are **compulsory**.
    (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
    (3) Answers to the **same question** must be **written together**.
    (4) Numbers to the **right** indicate **marks**.
    (5) Draw **neat labeled diagrams** wherever **necessary**.
    (6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt _any two_ of the following:**   10
  a. Explain Boehm's principle for examining how to staff for software project.
  b. Explain the three levels of processes and its attributes.
  c. What are the five basic parameters that are involved in estimating the cost of a software project?
  d. Explain the five symptoms of a project that is headed for trouble.

2. **Attempt _any two_ of the following:**   10
  a. List out the life-cycle phases of modern software development process. State the objectives of each phase.
  b. Briefly explain the different artifacts in the management set.
  c. Explain the technical perspective of software architecture.
  d. Map the process exponent parameters of the COCOMO II model to the principles of a modern process

3. **Attempt _any two_ of the following:**   10
  a. What is a workflow? Describe the major workflows involved in software development.
  b. Write short note on life-cycle architecture milestone. List the engineering artifacts available at the life-cycle architecture milestone.
  c. What is work breakdown structure? What are the issues associated with conventional work breakdown structure?
  d. Write short note on minor milestones in a project life-cycle.

4. **Attempt _any two_ of the following:**   10
  a. With the help of diagram explain the default roles and responsibilities in a software line-of-business organization.
  b. Briefly explain the four important disciplines that are critical to the management context and the success of a modern iterative development process.
  c. What is configuration baseline? What are the different types of software change?
  d. Explain the activities of software management team over the project life cycle.

5. **Attempt _any two_ of the following:**   10
  a. Explain the quality indicators that provide an indication of the quality of software system.
       ne metrices. List out the basic characteristics of a good metric.

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c. Summarize process discrimination that result from difference in stakeholder cohesion.
d. With the help of diagram explain the two primary dimensions of process variability.

6. Attempt _any two_ of the following: 10
a. With the help of diagram explain the difference between the progress profile of a modern project and conventional project.
b. Explain how a software cost model should be structured to best support the estimation of a modern software process.
c. Briefly explain the culture shifts in order to avoid friction in transitioning to modern software process.
d. How does balancing the top 10 software management principles achieve balance in software economics equation?

7. Attempt _any three_ of the following: 15
a. State Boehm's top 10 principles about conventional software management performance.
b. Write short note on requirement and design set.
c. Explain top-down and bottom-up approach of cost and schedule estimating process.
d. Explain the automation aids and tool components that support the process workflows.
e. Define the following terms
    i)Earned value   ii)Actual Cost   iii) Cost variance   iv)Expenditure plan   v)Schedule variance
f. List the characteristics of modern iterative development framework. Explain the steps to follow to transition to a mature iterative development process.

Q.P. Code: 36140

(2½ hours)

[Total Marks: 75]

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(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary**.
(6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt _any two_ of the following:** 10
   a. Explain the basic principles of design rights.
   b. What is a trademark? What are its functions?
   c. What is a copyright? What are its characteristics?
   d. List out the basic principles of trademark.

2. **Attempt _any two_ of the following:** 10
   a. Explain how to enforce data protection.
   b. Explain the concept of Semi Conductors? State & explain Semiconductor IC layout design act.
   c. Write a short note on WIPO Treaty.
   d. Explain the procedure for registration of domain names.

3. **Attempt _any two_ of the following:** 10
   a. What are the rights and duties of a patentee are enforced? Explain.
   b. Explain copy right in connection with establishing good will.
   c. Discuss transfer of patent rights in the form of assignment.
   d. What are the defenses available in case of infringement of patents? Explain.

4. **Attempt _any two_ of the following:** 10
   a. What are the advantages of IP licensing? Explain.
   b. Explain in brief the civil remedies in enforcing intellectual property rights.
   c. Explain practical aspects of licensing.
   d. Explain the general Obligations for enforcement of Intellectual Property Rights.

5. **Attempt _any two_ of the following:** 10
   a. Explain Uniform Domain-Name Dispute Resolution Policy in detail.
   b. Explain cyber jurisprudence in detail.
   c. Explain the functions performed by the certifying authorities.
   d. Explain briefly the issues of Enforcement of rights relevant to patent protection in digital media.

6. **Attempt _any two_ of the following:** 10
   a. Explain the powers of Cyber Appellate Tribunal.
   b. What does chapter 5 of IT Act, 2000, "Secure Electronic records and secure digital signatures" specify? Explain briefly.
   c. Explain the roles and responsibilities Computer Emergency Response Team.
   d. What does Chapter 13 of IT Act, 2000, "Miscellaneous" talk about?

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7. **Attempt *any three* of the following:**   15
a. List out the basic principles of design rights.
b. Write short notes on TRIPS.
c. What are the rights granted for registration of design? Explain.
d. Categorize and explain the licensing format.
e. Explain the term "Privacy". What are the privacy issues for data and software?
f. What kinds of documents are not covered under IT Act, 2000? Explain.

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TYIT - VI sem
7/5/2018   Datawarhousing

Q. P. Code: 36137

(2½ hours)

[Total Marks: 75]

N. B.: (1) **All** questions are **compulsory**.
    (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
    (3) Answers to the **same question** must be **written together**.
    (4) Numbers to the **right** indicate **marks**.
    (5) Draw **neat labeled diagrams** wherever **necessary**.
    (6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt *any two* of the following:**   10
    a. Differentiate between OLTP Database and Data Warehouse Database.
    b. Write a short note on Dimensional Model.
    c. Explain the different types of developing strategies to be considered before developing a Data Warehouse.
    d. Define Data Warehouse. Explain its characteristics.

2. **Attempt *any two* of the following:**   10
    a. What is a Design Center? Explain the three main windows of it.
    b. Explain with the help of diagram OWB components and architecture.
    c. List and explain the steps to configure the Repository and Workspace.
    d. What is a Module? Write the steps to create Oracle Database Module.

3. **Attempt *any two* of the following:**   10
    a. Explain the different tabs of the Cube Editor in the Data Object Editor.
    b. Write a note on OWB design objects.
    c. Explain the four characteristics that have to be defined for every dimension.
    d. Write the steps to create a Time dimension using Time dimension wizard.

4. **Attempt *any two* of the following:**   10
    a. What is Staging? Explain the factors on which staging depends.
    b. Define Constraint. Explain types of Constraints.
    c. Explain any five Source and Target operators.
    d. What is ETL? Explain the manual ETL process.

5. **Attempt *any two* of the following:**   10
    a. What is Validation? Explain the process of validation in Design Center.
    b. Explain any three transformation operators.
    c. Explain the three main default operating modes of a mapping.
    d. Explain the features and benefits of Oracle Warehouse Builder.

6. **Attempt *any two* of the following:**   10
    a. Explain the term Data Sparsity and Data Explosion with example.
    b. What is a Snapshot? Explain its type.
    c. Explain the following features of Integrated ROLAP.
        i) Parallelization.   ii) Data Partitioning
    d. Explain the role of Recycle Bin in OWB.

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7. **Attempt _any three_ of the following:**   15
a.   Explain the three levels of Data Redundancy to be considered while creating a Data Warehouse.
b.   What is a Listener? Write down the steps to configure a Listener.
c.   Explain the following.
     i) Surrogate identifier and Business identifier.
     ii) Birds eye view window.
d.   Explain any three Data Flow Operators of OWB.
e.   Explain the Object Details Window of Control Center Manager.
f.   Explain the different Matching and Synchronizing Strategies to be used while Synchronizing objects.

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