

B.SC (I.T.) (SEM-VI) (REV)

INTERNET TECHNOLOGIES

(MAY - 2018)

Q.P. Code:22820

(3 Hours)

Total Marks : 100

- Note : :
- 1) All questions are compulsory.
 - 2) Make suitable assumptions wherever necessary and state the assumptions made.
 - 3) Numbers to the right indicate marks.

- Q. 1 Attempt **any two** of the following **10**
- a Explain input module of TCP.
 - b Write a note on various links available in OSPF.
 - c Explain IPv6 base header format.
 - d Draw and explain DHCP packet format.
- Q. 2 Attempt **any three** of the following **15**
- a Write a note on NAT (network address translation)
 - b Explain role of transport layer.
 - c Explain subnetting with example.
 - d State and explain Fragmentation module of IP Package.
 - e Explain strategies for transmission from IPv4 to IPv6.
 - f Write a note on Classless addressing.
- Q. 3 Attempt **any three** of the following **15**
- a Draw and explain packet format of ARP.
 - b Draw and explain general format of ICMP messages.
 - c Write a note on Inefficiency in Mobile IP.
 - d Explain BGP messages.
 - e Explain two-node instability in RIP.
 - f Explain various types of LSA in OSPF.
- Q. 4 Attempt **any three** of the following **15**
- a State and explain services of UDP.
 - b Write and Explain pseudo code of input module of UDP.
 - c Explain byte number, sequence number, acknowledgment number used in TCP.
 - d Explain Half close in TCP.
 - e Explain Association establishment of SCTP.
 - f Explain SACK chunk of SCTP.
- Q. 5 Attempt **any three** of the following **15**
- a Draw and explain DHCP client transition diagram.
 - b Explain recursive and iterative resolution in DNS.
 - c Explain the concept of NVT and NVT character set.
 - d Explain in brief components of SSH.
 - e Explain in brief communication over control connection & data connection in FTP.
 - f Explain RRQ and WRQ messages of TFTP.
- Q. 6 Attempt **any three** of the following **15**
- a Explain in detail static, dynamic and active web documents.
 - b Explain persistence and nonpersistent connection of HTTP.
 - c Write a note on user agent of email system.
 - d Explain in detail the role of POP3 and IMAP4 in email system.
 - e Explain three approaches of stream stored audio/video.
 - f Draw and explain RTP Packet format.

Q. 7 Attempt **any three** of the following

- a Explain in detail constructors used to create DatagramPacket.
- b Write TCP socket program that will give factorial of a number.
- c Explain ServerSocket class with its methods and properties.
- d Explain how UDP socket programming works?
- e Write UDP socket program that will display whether a string is palindrome or not.
- f Write a Client/server application where a client contacts the server to obtain random number. Use Socket and Server Socket.

B.SC (I.T.) (SEM-VI) (REV)
DIGITAL SIGNALS AND SYSTEM
(MAY - 2018)

Q.P. Code : 22816

(3 Hours)

Total Marks : 100

- Note : : 1) All questions are compulsory.
2) Make suitable assumptions wherever necessary and state the assumptions made.
3) Numbers to the right indicate marks.

- Q. 1 Attempt **any two** of the following 10
a Show whether the following systems are linear and time varying.
1) $y(n)=nx(n)$ 2) $y(n)=nx^2(n)$
b Define the following
1) Energy signals and Power Signals 2) Aperiodic and Periodic Signals.
c Write the advantages of digital signal processing over analog signal processing?
d Deduce Fourier series for waveform of positive going rectangular pulse train.
- Q. 2 Attempt **any three** of the following 15
a What is sampling theorem? State the sampling theorem?
b Determine the Z-transform of the given sequence $x(n)=\text{nanu}(n)$
c Determine the pole-zero plot for the system described by difference equation $y(n)-3/4y(n-1)+1/8y(n-2)=x(n)-x(n-1)$.
d Write a short note on Poles and zeros of a system function?
e Explain how analog signals get converted into digital signals.
f Define digital signal processing and write the advantages of digital signal processing?
- Q. 3 Attempt **any three** of the following 15
a State and prove Parseval's theorem or Rayleigh's energy theorem.
b Obtain the Laplace transform of the unit step and impulse response of R-C circuit
c Discuss final value theorem in Laplace transfers domain.
d Derive from the principals, the Laplace transforms of a unit step function.
e Find the Laplace Transform of the $t \sin at$.
f Define Region of Convergence of Laplace transforms? Write its significance?
- Q. 4 Attempt **any three** of the following 15
a Define z transform and inverse Z-transform briefly?
b Determine the convolution of the two sequences $x(n)=\{2,1,0,0,5\}$ and $h(n)=\{2,2,1,1\}$
c Derive the relationship between the Fourier transform and Z-transform.
d State and discuss the five properties of region of convergence.
e State the Partial fraction Expansion Method to calculate inverse Z-transform .Find the inverse Z-transform of $X(z)=z/(z-3)(z-4)$
f Evaluate frequency response of system described the system function $H(z)=1/1-0.5z^{-1}$
- Q. 5 Attempt **any three** of the following 15
a Show that the system function described by the differential equation $dy(t)/dt +10y(t)+5=x(t)$ is non linear
b Determine DFT of sequence whose values for one period is given by $x(n)=\{1,1,-2,-2\}$
c What are the properties of Frequency response in case of z-transform?
d Define the property of superposition in case of linear systems.
e Obtain circular convolution of following sequences $x(n) =\{1,2,1\}$ and $h(n)=\{1,-2,2\}$.
f How will you obtain linear convolution from circular convolution?

- Q. 6 Attempt **any three** of the following 15
- a State and explain any four properties of DFT.
 - b Determine DFT of sequence whose values for one period is given by $x(n)=\{1,1,-2,-2\}$
 - c Distinguish between linear convolution and circular convolution of two sequences?
 - d State the relationship between DFT and z-Transform
 - e Obtain circular convolution of following sequences $x(n)=\{1,2,1\}$ and $h(n)=\{1,-2,2\}$.
 - f Define Discrete Fourier Transform (DFT) for a sequence $x(n)$

- Q. 7 Attempt **any three** of the following 15
- a Write a short note on Elliptic filters
 - b Obtain the system function for normalized butterworth filter for order $N=1$ and $N=2$
 - c Determine the unit sample response of the ideal low pass filter .Why is it not realizable?
 - d State the advantages of Digital filters.
 - e Write a short note on Chebyshev Filters
 - f Discuss and derive the frequency response of the linear phase FIR filters.
- ~ * ~ * ~ * ~ * ~ * ~ * ~

- Note : : 1) All questions are compulsory.
 2) Make suitable assumptions wherever necessary and state the assumptions made.
 3) Numbers to the right indicate marks.
- Q. 1 Attempt **any two** of the following 10
a Write a short note on database management system.
b How transaction processing can be parallelized?
c Write a short note on ETL mapping.
d Write a short note on building the metadata infrastructure.
- Q. 2 Attempt **any three** of the following 15
a Write a short note on star schema.
b Write a short note on interactive sector.
c Explain data warehouse with respect to referential integrity.
d Write a short note on meta data.
e Differentiate between structured and unstructured data.
f Write a short note on lifecycle of Data Warehouse.
- Q. 3 Attempt **any three** of the following 15
a Differentiate between active and passive repositories.
b Briefly explain internal and external taxonomy.
c Explain spiral model methodology in brief.
d What is statistical processing with respect to data warehousing?
e Define data marts and exploration facility.
f What is project based data?
- Q. 4 Attempt **any three** of the following 15
a Explain in brief ETL data quality monitor.
b What is a granular data?
c Explain the importance of encryption process.
d How data access can be protected in DW?
e Explain in brief how to monitor DW environment.
f Write a short note on attack sensing.
- Q. 5 Attempt **any three** of the following 15
a Briefly explain discrete data.
b Explain audit trail with respect to ETL.
c Write a short note on time variant data.
d Define role of ETL in brief.
e Explain exception flow of data.
f Explain ETL in batch mode.

- Q. 6 Attempt **any three** of the following 15
- a Write a short note on homegrown versus third party granularity manager.
 - b Define analytical response time.
 - c How transactions can be separated into classes?
 - d Write a short note on creating enterprise metadata.
 - e What are service level agreements? Explain in brief.
 - f Write a short note on data partitioning.

- Q. 7 Attempt **any three** of the following 15
- a Explain in brief physical design process.
 - b Explain process of DW implementation.
 - c Explain data warehouse deployment.
 - d Define DW maintenance.
 - e Write a short note on data warehouse.
 - f Write a short note on growth of DW.

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1. Question **no. 1** is **compulsory**.
2. Attempt **any four** from Question **#2 to 7**.

1. A. Describe Software Economics and its generations in detail. [5]
1. B. What is Waterfall model? Explain in detail. [5]
1. C. What is Reducing Software Product Size? Explain Reuse and Commercial Components. [5]
1. D. Describe about Improving Team Effectiveness. [5]

2. A. Explain Quality with respect to Improving Software Economics. [6]
2. B. What are the principles of Modern Software Management? Explain in detail. [8]
2. C. Explain Engineering and Production Stages in detail. [6]

3. A. Describe Iteration Workflows in detail. [8]
3. B. What is WBS and Evolutionary WBS? Explain in detail. [6]
3. C. Describe Major and Minor milestones in detail. [6]

4. A. Explain Project Organizations in detail. [8]
4. B. Explain any five tools in Automation Building Blocks. [6]
4. C. Explain Software Change Order. [6]

5. A. Explain Management Indicators in detail. [6]
5. B. Explain Metrics Automation in detail. [8]
5. C. Explain Scaling in Process Discriminants. [6]

6. A. Describe top 10 Software Management Principles. [8]
6. B. Describe about Software Management Best Practices. [6]
6. C. Please mention about Culture shifts. [6]

7. A. Write a note on Modern Software Economics. [8]
7. B. Describe some of the performances about Modern Software Management Framework. [6]
7. C. Describe about Teamwork among Stakeholders. [6]

- 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**
- Write a short note on Thematic map.
 - Explain the following terms of object based data model and give suitable example.
 - Association
 - Aggregation
 - Explain Network database with suitable example.
 - Explain the neighborhood operations with suitable example.
- 2. Attempt any three of the following:**
- List and explain data analysis kind of GIS operations.
 - Define
 - Datum
 - False Easting
 - Map Projection
 - Meridian
 - Scale Factor
 - What is map projection? List and explain commonly used map projection.
 - What is rasterization? Write the steps for it.
 - Convert the following into degrees
 - 45° 15' 45"
 - 1745 rad
 - Write a short note on spatial reference information of raster data.
- 3. Attempt any three of the following: 15**
- List the common resampling methods and explain them.
 - Explain the map-to-map and image-to-map transformation.
 - What is RMS? Explain the role of RMS error in Affine transformation.
 - What are the two types of field data? Explain.
 - Write a short note on metadata.
 - Explain digitizing with suitable example.
- 4. Attempt any three of the following: 15**
- What is normalization? Explain with example.
 - Explain
 - Isarithmic map
 - Flow map
 - Explain how text is placed in map body.
 - Explain the following with respect to color
 - Hue
 - value
 - Chroma
 - What is attribute data in GIS? List and explain different types of attribute table.
 - List the types of attribute data based on measurement scale. Explain.

5. Attempt any three of the following:

15

- Write a short note on data visualization.
- Explain the concept of data exploration?
- What is descriptive statistics? Explain.
- Explain spatial aggregation.
- What is the output of the following for a statement (slope = 1) OR ((Aspect =3))

Aspect

Slope

3	2	1	1	1	2	2	2
2	3	3	3	3	3	1	1
1	2	3	3	2	1	1	3
2	2	3	1	1	1	2	2
2	2	2	1	1	1	1	1
3	2	2	1	2	1	2	3
3	2	3	3	3	2	2	3
2	2	2	1	3	1	3	3

1	2	2	2	1	1	1	2
2	3	1	1	2	2	1	1
1	2	3	3	2	1	1	3
2	2	3	1	1	1	2	2
2	2	2	1	1	3	3	1
3	1	2	1	1	1	2	3
3	1	3	3	1	2	2	3
1	1	1	2	3	2	3	3

- Explain feature selection by graphic data query with suitable example.

6. Attempt any three of the following:

15

- List and explain various overlay operations based on feature type.
- List and explain various overlay methods based on Boolean connector.
- What do you mean by pattern analysis? Explain Nearest Neighbor analysis.
- What is buffering? Explain with example.
- What is local operation? Explain local operation with a single raster.
- Explain the raster data generalization operation with suitable example.

7. Attempt any three of the following:

15

- Describe how semivariance can be used to qualify the spatial dependence in a data asset.
- List global methods and explain any one.
- List and explain the elements of spatial interpolation.
- What is Kriging? Explain.
- Explain trend surface model with suitable example.
- Explain the Inverse Distance Weighted Interpolation local method.

- N. B.: (1) **Question** No. 1 is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions made**.
(4) Answers to the **same question** must be **written together**.
(5) **Numbers** to the right indicate marks.
(6) Draw **neat labeled diagrams** wherever **necessary**.

- 1 a What is arithmetic expression? Explain evaluation of expressions. **5**
b Write short note on Common Language Runtime. **5**
c Briefly explain reference types and value types. Give examples for both. **5**
d What is a constructor? Explain about static constructor. **5**
- 2 a Write a program to print the following pattern using nested for loop. **8**
1
2 3
3 4 5
4 5 6 7
5 6 7 8 9
b Give a brief account on: **6**
i. if...else statement
ii. the ?: operator
c What do you mean by type casting? Explain Pow and Sqrt methods of Math class with proper syntax and example. **6**
- 3 a What are method parameters? Explain out and ref parameters with example. **8**
b Write a program to print the difference between the largest and the first elements of a one dimensional integer array. **6**
c What is read-only and write-only Property? Explain read-write property definition with an example. **6**
- 4 a Design a class named Point2D with data members for storing x coordinate and y coordinate of a point. Include relevant constructors and operator methods so that the following operations can be performed from Main method.
Point2D p1=new Point2D(20,40);
Point2D p2=new Point2D(50,100);
p1++;
Point2D p3=p1+p2; **8**
b Write short note on: **6**
i. boxing and unboxing
ii. for loop
c What is inheritance? Explain about classical inheritance. **6**

- 5** a Write a program to create a sealed class called StudentExam with data members for storing roll number and marks obtained in 3 subjects of a student. It also has the following constructor and methods: **8**
1. Constructor that initializes all data members.
 2. Method isPassed(), to check whether the student has passed in every subject.
 3. Method displayTotal(), for displaying the total marks obtained in all subjects provided the student has scored minimum 40 marks in every subject or else, display the message "Student is failed".
 4. Main method to test the program by creating object of StudentExam class.
- b What are interfaces? Explain implementing an interface in a class with an example. **6**
- c How is a structure declared? Differentiate between structures and classes. **6**
- 6** a Explain each of the following with proper syntax and example. **8**
- i. Delegate declaration
 - ii. Delegate methods
 - iii. Delegate instantiation
 - iv. Delegate invocation
- b What are private, protected and public members of a class? Explain method overloading with example. **6**
- c What is formatted output? Explain fixed-point formatting and exponential formatting with examples. **6**
- 7** a Write a program to create a class Voter with attributes voter_id, name and age. Include relevant constructors to initialize its data members. If age is less than 18 years, then raise a user defined exception with error message "You are not eligible to vote". **8**
- b Write short notes on each of the following: **6**
- i. general catch handler
 - ii. finally block
 - iii. checked exceptions
- c What is verbatim string? Explain the use of Equals() method and == operator for checking equality of two strings. **6**

- N. B.: (1) Question **No. 1** is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(4) Answers to the **same question** must be **written together**.
(5) Numbers to the **right** indicate **marks**.
(6) Draw **neat labeled diagrams** wherever **necessary**.
(7) Use of **Non-programmable** calculators is **allowed**.

- 1 A Write a short note on ARP. **5**
B Write a short note on Marshalling and Unmarshalling. **5**
C Explain data transfer in WLAN using Infrared technology. **5**
D Explain the three way hand shake method for TCP connection Establishment. **5**
- 2 A In case of OSPF protocol, explain the following terminology. **8**
i. area
ii. metric
iii. link
What different types of link exists? What is the purpose of each link type?
B Explain the different timers used by Routing Information protocol. **6**
C What is fragmentation? Why is it required to fragment an IP datagram? Explain the functions of the following fields related to fragmentation in an IP datagram: **6**
i) Identification
ii) Flags
iii) Fragmentation Offset.
Explain fragmentation offset with an example.
- 3 A What are the different states for transmission control protocol? What are the states which the TCP client can attain? A TCP connection is in the FIN-WAIT-1 state. The following events occur one after another: **8**
i. An ACK segment is received.
ii. A FIN segment is received.
iii. Time-out occurs.
What is the state of the connection after each event? What is the action after each event?
B Write a short note on path vector routing. **6**
C Explain the Routing Information Protocol Message format. A router has the following RIP routing table: **6**

Destination	Hop Count	Next Hop
Net 1	4	B
Net 2	2	G
Net 3	1	F
Net 4	5	G

Show the response message sent by this router

- 4 A** Write the programs for the following using RMI: **8**
i. to invoke a remote method to find the factorial of a number.
ii. to invoke a remote method to reverse a string.
- B** A router with IP address 125.45.23.12 and Ethernet physical address 2345AB4F67CD has **6**
received a packet for a host destination with IP address 125.11.78.10 and Ethernet Physical
address AABBA24F67CD. Show the entries in the ARP request packet sent by the router.
Assume no subnetting.
- C** Enumerate the benefits of Wireless LAN. **6**
- 5 A** What are the different types of messages used by Border Gateway Protocol? Explain the **8**
Border Gateway Protocol Header. Explain the fields of Open message packet.
- B** With the help of a neat diagram describe the RMI architecture. **6**
- C** A TCP connection is in the ESTABLISHED state. The following events occur **6**
one after another:
i. The application sends a “close” message.
ii. An ACK segment is received.
What is the state of the connection after each event? What is the action after each event?
- 6 A** With reference to CORBA explain the following in detail. **8**
i. Stubs and Skeleton.
ii. Interface Definition Language (IDL).
- B** Distinguish between object request broker and remote procedure call. **6**
- C** How is wireless LAN setup? Explain any one architecture to setup wireless LAN. **6**
- 7 A** What is transmission control block (TCB)? Explain any eight common fields which can **8**
be included in TCB.
- B** Explain the difference between frequency hopping spread spectrum and direct sequence **6**
spread spectrum.
- C** Explain data transfer in WLAN using Infrared technology. **6**

- N. B.: (1) Question **No. 1** is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(4) Answers to the **same question** must be **written together**.
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(6) Draw **neat labeled diagrams** wherever **necessary**.
(7) Use of **Non-programmable** calculators is **allowed**.

Q1.

- a) "Good Customer intelligence can create best customer". Justify the statement. (5)
b) Write a short note on ACD. (5)
c) What are the components of E-CRM? (5)
d) What are different technology components of CRM? Explain all the components with suitable example. (5)

Q2.

- a) Describe the steps to be followed before implementing CRM? (5)
b) Explain the six E's associated with e-CRM in any business organization. (5)
c) Define IVR. (5)
d) Write short note on ASP. (5)

Q3.

- a) Define data synchronization process for SFA. Also explain why a flexible technology is required. (8)
b) Give a detailed description of campaign and management. (6)
c) Write short notes on:- (6)
 i) Account Management
 ii) Pipeline Management

Q4.

- a) What are the advantage of ASP implementation? (8)
b) Explain the technological components of CRM. (6)
c) Describe the advantage of integrating closed-loop feedback with e-marketing. (6)

Q5.

- a) Explain the four phases of any CRM project. (8)
b) What is embedded permission marketing? Discuss along with proper example. (6)
c) What are the different features of e-CRM? (6)

Q6.

- a) Why do we need kick-off meeting with implementation of CRM and explain who all are involved in the meeting? (8)
b) Explain the term "Opt-in:Opt-out". (6)
c) What are the advantages and disadvantages of ASP. (6)

Q7.

- a) Differentiate CRM and e-CRM. (8)
b) Explain the importance of CLC in CRM. (6)
c) What are the various logging and monitoring technologies? Explain. (6)

- N. B.: (1) Question **No. 1** is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(4) Answers to the **same question** must be **written together**.
(5) Numbers to the **right** indicate **marks**.
(6) Draw **neat labeled diagrams** wherever **necessary**.
(7) Use of **Non-programmable** calculators is **allowed**.

- 1 A Give your views and examples to support the following quotes made by the eminent personalities. **20**
i. Things are always different – the art is figuring out which differences matter. – Laszlo Birinyi.
ii. Successful business strategy is about actively shaping the game you play, not just playing the game you find. – Adam Brandenburger and Barry Nalebuff.
iii. Without a strategy the organization is like a ship without a rudder – Joel Ross and Michael Kami.
iv. If a company is not “best in world” at a critical activity, it is sacrificing competitive advantage by performing that activity with its existing technique. – James Brian Quinn.
- 2 A What do you understand by the word “Strategy” and “Strategic Management”? Why is a strategy considered to be both proactive and reactive? What are the patterns of actions and business approaches that define a company’s strategy? **8**
B What is “Diversification”? Explain the factors that signal when it is time to diversify. **6**
C Explain the impact of the Internet Technology on “Supply Chain Efficiency” and “Internal Operating Efficiency”. **6**
- 3 A Mention the different forms used in the process of crafting a strategy. Explain the Chief Architect Approach and the Delegation Approach in detail. **8**
B Explain in brief any three topics covered in Value Statements and any three topics covered in Codes of Ethics. **6**
C Explain Export strategies and Franchising strategies in brief. **6**
- 4 A Explain what do you understand by “Driving forces” and “Key Success Factor”? Explain any five categories into which these driving forces fall in. Also mention any five key success factors of an industry and explain them in brief. **8**
B Explain any five actions that can be undertaken by an organization to cure the turnover for businesses in crisis. **6**
C Explain Licensing and Export strategies in brief. **6**
- 5 A What are “Strategic Alliances”? What are their advantages? Give any two examples of recent strategic alliances. **8**
B Explain any two strategic mistakes made by early Internet Entrepreneurs what was their impact on the organization in detail. **6**
C Discuss the different methods for creating a strong fit between Strategy and Culture. **6**
- 6 A What is a Company Value Chain? Why do the Value Chains of Rival Companies often differ? Draw a Representative Company Value Chain and explain it in brief. **8**
B Differentiate between Multicountry Strategy and Global Strategy. **6**
C Explain the impact of the Internet Technology on the following **6**
(a) Supply Chain Efficiency (b) Distribution Channel Efficiency
- 7 A Why do organizations have strategic alliances and joint ventures with foreign partners? What are the risks of having Strategic Alliances with them? **8**
B Explain the pros and cons of Unrelated Diversification. **6**
C Explain any four strategic moves in Maturing Industries. What are the strategic pitfalls in such industries? **6**

B.SC (I.T.) (SEM-VI) (OLD)**(ELECTIVE - III)****TOTAL SUPPLY CHAIN MANAGEMENT****(MAY - 2018)**

Q.P. Code :35236

[Total Marks: 100]

- N. B.: (1) **Question** No. 1 is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions made**.
(4) Answers to the **same question** must be **written together**.
(5) **Numbers** to the right indicate marks.
(6) Draw **neat and labeled diagrams** wherever **necessary**.

- | | | | |
|---|---|--|----|
| 1 | a | Bharat Logistics Ltd. wants to develop and establish a distribution network of their Cosmetic products in Indian territory. Which type of distribution will you suggest for this company? Which factors will you consider while designing the channel? | 10 |
| | b | List and explain the factors considered while selecting plant location. | 10 |
| 2 | a | Discuss various types of transportation and their contribution in development of a nation. | 8 |
| | b | Explain the principles of Material Handling | 6 |
| | c | Describe the role of IT in materials management. | 6 |
| 3 | a | Discuss the issues for selecting the distribution channel. | 8 |
| | b | Write a note on Reverse Logistics | 6 |
| | c | Explain the functions performed in distribution channels. | 6 |
| 4 | a | Describe the components of warehouse? Explain the functions of warehouse. | 8 |
| | b | Write a note on packaging and its importance. | 6 |
| | c | Explain the transportation cost structure. | 6 |
| 5 | a | Discuss the components of Customer Service? What is the role of Customer Service in Logistics? | 8 |
| | b | Write a note on CVA. | 6 |
| | c | Explain the criteria's for selecting the carrier. | 6 |
| 6 | a | Explain supplier Selection, Evaluation and Measurement process. | 8 |
| | b | Explain the concept of Bill of Lading. | 6 |
| | c | When the purchasing will be called as effective purchasing? Explain. | 6 |
| 7 | a | Write a note on global integrated logistics management | 8 |
| | b | Explain the role of Electronic channels as intermediaries in service response logistics. | 6 |
| | c | What is LIS? What are the principles of Logistics Information? | 6 |

- N. B.: (1) Question **No. 1** is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(4) Answers to the **same question** must be **written together**.
(5) Numbers to the **right** indicate **marks**.
(6) Draw **neat labeled diagrams** wherever **necessary**.
(7) Use of **Non-programmable** calculators is **allowed**.

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|---|---|--|---|
| 1 | A | What are the types of uses that are usually deemed fair uses? | 5 |
| | B | What are the criminal remedies and administrative remedies against the infringement of copyright? | 5 |
| | C | What are powers of central government with respect to patent? | 5 |
| | D | What are the five levels to a Product? Explain. | 5 |
| 2 | A | What is the judicial process or order restraining a person from continuing with wrongful act? Explain its types in detail. | 8 |
| | B | “SPA developed an eight point program for ensuring software compliance with software license agreements”. Comment. | 6 |
| | C | What are the types of patent applications? | 6 |
| 3 | A | What are non-compete agreements? What is the purpose of non-compete agreements? How does it protect employers and state the factors on which the enforcement of non-compete agreement depends? | 8 |
| | B | What is trademark? What are its functions? What are the rights of the proprietor of trademark? | 6 |
| | C | Explain in detail meta-tagging and framing. | 6 |
| 4 | A | How to secure a copyright? Also explain Notice of Copyright. | 8 |
| | B | What is Innovation? What are the key elements of sustained innovation? What are its four P’s? | 6 |
| | C | What is s Non-Profit Corporation? Write a note on the tax concerns when a Non-Profit Corporation earns profit. | 6 |
| 5 | A | What is the procedure for trademark registration? What are the rights conferred by Trademark? | 8 |
| | B | Discuss the Information Technology Act 2000. State and explain the Regulations of Certifying Authorities. | 6 |
| | C | What are the characteristics of Copyright? | 6 |
| 6 | A | State and explain the steps involved in forming a Non-Profit Corporation. | 8 |
| | B | Write a short note on Types of Domains | 6 |
| | C | What are the criminal remedies and administrative remedies against the infringement of copyright? | 6 |
| 7 | A | What is a Questionnaire? What is an Interview? What are its purpose, advantages and disadvantages? | 8 |
| | B | What are the conditions to be satisfied by the inventions to be patentable? Explain the procedure to obtain a patent. | 6 |
| | C | Write a short note on cyber squatting. | 6 |

- N. B.: (1) Question **No. 1** is **compulsory**.
(2) Attempt **any four** from **Question Nos. 2 to 7**.
(3) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(4) Answers to the **same question** must be **written together**.
(5) Numbers to the **right** indicate **marks**.
(6) Draw **neat labeled diagrams** wherever **necessary**.
(7) Use of **Non-programmable** calculators is **allowed**.

- 1 A company wishes to start a e-commerce project so that their customers can buy products online. Considering this as a project answer the following questions
- A Define the scope of the project. Conduct the feasibility study for the project. 5
B What are the problems expected in the project, assuming you are the project manager, how will you solve the problem. 5
C What are the risk factors in the project? 5
D Which organizational structure should be followed and why? 5
- 2 A Discuss decision-making and economic analysis. 8
B What factors are considered most important in the decision to terminate a project? 6
C Differentiate between matrix organization and functional organization. 6
- 3 A What are the roles of the project manager? What are the most important characteristics of the project manager? 8
B What are the three perceptions of project cost? 6
C What is tendering? How to evaluate tenders? 6
- 4 A What is audit? How it differs from review. List out and explain the phases in the audit life cycle. 8
B Explain controlling of a project in terms of performance, time and cost. 6
C What are the elements of a project plan? 6
- 5 A Explain top-down and bottom-up budgeting. 8
B Discuss the career path of a project manager. 6
C Define the following terms: i) Optimistic time ii) Pessimistic time 6
- 6 A Write a short note on TQM. 8
B Explain different types of documentation. 6
C Give some major guidelines for choosing an organizational form for a project. 6
- 7 A What are the different types of project? Explain each. 8
B Explain the impact of socio-economic environment in detail. 6
C Explain the kinds of “Cybernetic Control Systems”. 6
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