**Chap-1**

1. Write two strategies for planning a solution and defining a problem/ Define "Act it out" strategy , “defining a problem” and “planning a solution”/ Gain Background Knowledge / 5 W’s to understand problem **(Lhr 2021(mor) )** **(FSD-2023) (Lhr 2021(eve) ) (MLTN-2021(mor) )** **(Grw-2022 (eve) )** **(MLTN-2021)** **(Grw-2021) (BWP-2022) (RWP-2022)** **(Grw-2022(mor) ) (MLTN-2021(eve) )**
2. Define an Algorithm / efficiency of an algorithm / "Input" and "Output" notation of an algorithm / role of algorithm/ GOTO notation in an algorithm?/two advantages of an algorithm/ algorithm verification. **(LHR-2022(eve) )** **(Grw-2022(eve) ) (BWP-2021) (MLTN-2022) (Grw-2021) (BWP-2022) (Grw-2021) (BWP-2021) (RWP-2023) (MLTN-2021) (BWP-2021) (MLTN-2021)** **(Grw-2022(mor) ) (Lhr 2021(mor) )** **(DGK-2021)**
3. What is prototype? **(RWP-2023)** **(MLTN-2022) (Grw-2021) (BWP-2022) (Grw-2022) (Lhr 2021)**
4. Define the Flow Chart. / Write importance of flowchart / terminal symbol / Flow lines / Diamond Symbol in flowchart?/ two advantages of flowchart **(RWP-2022)** **(MLTN-2022) (MLTN-2021)** **(RWP-2023)** **(MLTN-2023) (DGK-2021) (Grw-2021(eve) ) (Lhr 2021)** **(DGK-2021) (Grw-2021(mor) )(MLTN-2021)** **(Lhr 2021)** **(FSD-2023) (BWP-2023) (LHR-2022)** **(Grw-2022)(Grw-2021) (MLTN-2022)**
5. What is the problem analysis? **(Lhr 2021)** **(BWP-2023) (MLTN-2021)**
6. Describe Candid Solution /Which solution saves our time? **(FSD-2023) (Lhr 2021)** **(LHR-2022)** **(BWP-2021)(DGK-2022) (BWP-2022) (BWP-2023)**
7. Write name or What is meant by Test data/ boundary test data?/ Valid Test Data?/ Absent test data / Explain the importance of Testing **(BWP-2023) (RWP-2023)(FSD-2023) (DGK-2022) (LHR-2022) (RWP-2022)(MLTN-2023)**
8. What is meant by problem solving? / Write the name of the steps involve in problem solving. **(MLTN-2023)(RWP-2022) (LHR-2022) (DGK-2022)**
9. What is meant by trace table? **(DGK-2021)**
10. What is meant by decision making? **(MLTN-2022) (DGK-2021)**
11. What is meant by act-it-out? / understanding problem? / Divide and Conquer Rule? / selecting the best solution **(MLTN-2022) (DGK-2021) (MLTN-2023) (DGK-2021)(BWP-2022)** **(MLTN-2022)**
12. What is the difference between verification and validation? **(MLTN-2022)**
13. What is meant by strategy "use guess" in defining a problem? **(MLTN-2023)**
14. Draw Flowchart to find the Volume of Cube / proposition P.Q+P / find the area of parallelogram. **(Grw-2021)** **(BWP-2022) (RWP-2022)**

**Long**

1. What is flowchart? How the requirements of flowchart are determined? Write down in detail. / write use of its symbols **(MLTN-2021)** **(MLTN-2022) (Grw-2021) (BWP-2023)(Lhr 2021) (LHR-2022) (Grw-2021) (DGK-2021) (Lhr 2021)** **(DGK-2022)** **(DGK-2021) (BWP-2022) (Grw-2022) (MLTN-2021)**
2. Compare verification and validation. Explain with example. **(MLTN-2023)**
3. What is test data? Write a note on three types of test data. **(BWP-2022) (Lhr 2023) (MLTN-2022)**
4. Define Problem solving/Defining a problem? explain understanding a problem./ Steps to solve problem **(LHR-2022)**
5. Define algorithm and Explain the formulation of an Algorithm. / Importance **(Grw-2022) (BWP-2021)**
6. Write note on the types of test data. **(FSD-2023)**

**Chap-2**

1. What is meant by number system Define its types. **(Grw-2021) (Grw-2021) (BWP-2021) (MLTN-2023) (LHR-2022) (BWP-2022) (Grw-2022) (Lhr 2021)** **(DGK-2021(mor) ) (DGK-2021(eve) )(Grw-2021) (Lhr 2021)** **(BWP-2023)**
2. What is difference between bit and byte? **(DGK-2021(mor) ) (DGK-2021(eve) )(LHR-2022)** **(Grw-2021) (Lhr 2021)**
3. What do you mean by the Base or Radix of a Number System? **(MLTN-2022)(BWP-2022)**
4. How is Data represented in Computer? **(Grw-2022) (DGK-2021) (BWP-2022)**
5. Define commutative law / Distributive law / identity law **(DGK-2022) (Grw-2022) (LHR-2022) (RWP-2022)** **(BWP-2022)**
6. Define Boolean algebra / expression **(LHR-2022)** **(BWP-2021) (DGK-2022) (Grw-2022) (RWP-2022)**
7. What is meant by logical expressions? **(LHR-2022)** **(Grw-2022)**
8. Define memory and write the name/Define its types. **(MLTN-2021)** **(Grw-2021) (BWP-2021) (RWP-2022) (Lhr 2021)**
9. How a statement is considered as boolean proposition? / Give example of proposition  **(MLTN-2022) (FSD-2023) (RWP-2023) (Lhr 2021) (MLTN-2022)**
10. Define truth table / Values **(BWP-2022)**  **(LHR-2022)** **(BWP-2021) (MLTN-2021)** **(Lhr 2023)**
11. Write four names of Storage Device / Secondary memory **(FSD-2023) (Grw-2022) (DGK-2022)**
12. What is difference between memory and storage? **(MLTN-2023) (DGK-2022)**
13. Define ASCII code. **(FSD-2023)**
14. What do you know about non-volatile memory? /Write down difference between volatile memory and non volatile- memory / Why RAM is called volatile memory. **/** Explain Volatile Memory with example / Why we called secondary memory is non- volatile memory. **(MLTN-2022(Mor) ) (Lhr 2021)** **(BWP-2023) (DGK-2021) (MLTN-2021)** **(Grw-2021) (BWP-2022) (Grw-2022) (LHR-2022(MOR) )** **(LHR-2022 (eve) ) (MLTN-2021)** **(LHR-2022)** **(MLTN-2022(Eve) ) (RWP-2022)**
15. Write names / Define all Logical operator  **(DGK-2021) (BWP-2023) (Grw-2022) (MLTN-2022) (BWP-2022) (Grw-2021)**

**C.Q’s**

1. Draw Truth Table of logical NOT / AND / OR operator **(MLTN-2022) (LHR-2022(Mor) )** **(LHR-2022(Eve) )** **(DGK-2022) (MLTN-2021) (MLTN-2023) (BWP-2022) (Grw-2022) (Lhr 2023) (LHR-2022)** **(Grw-2021) (RWP-2023)**
2. (11600001)10/ (69610)10 / (101111)2 / (357)10 convert into hexadecimal **(LHR-2022)** **(MLTN-2022) (RWP-2023)** **(Lhr 2021)** **(Grw-2022)**
3. Convert (1000001)2 / (C 921)16 / (1024)16 (1011)2 / (CF21)10 into Decimal Number System. **(BWP-2022) (BWP-2023) (DGK-2022) (LHR-2022) (DGK-2021) (FSD-2023) (MLTN-2021) (MLTN-2023)**
4. Prove that : A.B.C=C.B.A / A.B= B.A **/** x + y = y + x **(BWP-2022) (MLTN-2022) (RWP-2023)**
5. Convert (A23)16 / (A23)16 / (160)10 / (158)10/ (156)10 / (A23)16 / into binary number system. **(MLTN-2022) (MLTN-2021(Mor) )** **(MLTN-2021(eve) )** **(RWP-2022(Mor) )** **(BWP-2022(eve) ) (Grw-2022)**
6. How to convert binary number to a decimal, with an example **(Lhr 2021)**
7. Draw compound proposition table of P+Q+NOT(P). **(Grw-2022)**
8. Write the truth table for X and Y if X= today is Friday Y=It is very cold today **(BWP-2022)**
9. Write expression using associative Law using AND and OR operator **(MLTN-2022)**

**Chap-3**

1. What is meant by Hardware Sharing with example?/ advantage of hardware sharing in a network? **(LHR-2022)** **(Lhr 2023) (Grw-2021) (Grw-2022) (RWP-2023)** **(BWP-2023) (DGK-2021)**
2. Define communication channel.  **(RWP-2023)**
3. Define computer network with example/ increasing storage capacity/Video conferencing? **(BWP-2022)(MLTN-2021)** **(Lhr 2021(Mor) )** **(Lhr 2021(eve) )**
4. Define the protocol / FTP /SMTP / HTTP /How doe HTTP protocol work? **(MLTN-2022(Mor) ) (MLTN-2022(eve) )** **(Lhr 2023)(Lhr 2021(Mor) )** **(Lhr 2021(eve) )** **(LHR-2022)** **(FSD-2023)(Grw-2021(Mor) ) (Grw-2021(eve) ) (BWP-2021)(DGK-2021)(MLTN-2023)(MLTN-2022) (RWP-2022)**
5. How many types are of Connection? Define / Write names **(BWP-2022) (LHR-2022)** **(RWP-2023)**
6. Define File Sharing **(MLTN-2021)** **(DGK-2021)**
7. Define communication./What is meant by message in data communication? **(Lhr 2023) (Grw-2022)(FSD-2023) (MLTN-2021(Mor) )** **(MLTN-2021(Eve) )** **(Lhr 2021)**
8. Write a short note on Client Server/ How to connect client and server with each other on internet /Define Client and server./Why is server more powerful than client?/Why we use server computer? **(LHR-2022)**  **(Lhr 2023) (MLTN-2023) (MLTN-2022) (LHR-2022)(BWP-2023)(Grw-2022)**
9. Explain IP Addressing./Describe the difference between Static and Dynamic IP address/ Define IPv4 address/Write down the standard names of IP addressing. **(DGK-2021) (RWP-2022)(MLTN-2021)** **(MLTN-2023)(Grw-2021)(BWP-2023)**
10. Why addressing is needed in data communication? **(Grw-2022)**
11. Define router?/Routing **(DGK-2021)(LHR-2022)** **(MLTN-2021)** **(MLTN-2022)**
12. What is the function of data link layer?/ Physical / Data link /Application/ Transport Layer **(DGK-2022)(FSD-2023)(DGK-2021)(BWP-2022)(Grw-2021(eve) )(Grw-2021(mor) ) (Grw-2022)**
13. Define control information. **(Grw-2021)**
14. Differentiate between sender and receiver?/function of Sender **(Grw-2021) (BWP-2021)**
15. Define hub or switch. **(Grw-2022)**
16. Define Transmission Medium//Write different types of transmission medium. **(MLTN-2023)(BWP-2021)**
17. Define TCP/IP. **(DGK-2022)**
18. Differentiate between Sender and Receiver **(DGK-2021(Mor) )(DGK-2022) (DGK-2021(eve) )**
19. Write any two advantages of Ring Topology/ disadvantages of Mesh Topology/Define star topology./ Ring Topology.  **(RWP-2023)(BWP-2023(mor) ) (BWP-2022(eve) ) (RWP-2022)** **(BWP-2022)**
20. What is Computer Network model?/ Physical Layer. **(BWP-2022)(MLTN-2021)**
21. URL stands for? **(MLTN-2022)**

**Long**

1. Define computer network model Explain its any 3/4 layers in TCP/IP models **(MLTN-2022) (Lhr 2023) (Lhr 2021) (Grw-2021)(MLTN-2021)**
2. What is meant by Topology? Describe Star / Ring /Bus/ Ring/ Mesh topology and its working Difference and advantages in detail. **(BWP-2022) (DGK-2022) (LHR-2022)** **(RWP-2023)** **(RWP-2022)(MLTN-2022)**
3. Explain Router/Routing process in detail **(Lhr 2021)(Grw-2021)(BWP-2023)**
4. What is data communication? Explain components of communication system. **(DGK-2021) (LHR-2022)** **(BWP-2022)** **(Grw-2022)**
5. Write down notes on the following: (1) File sharing (ii) Hardware Sharing **(Grw-2022)**
6. Define Computer Network and write its importance/ Needs in detail. **(BWP-2021)(FSD-2023)(DGK-2021)(MLTN-2023)(MLTN-2021)**

**Chap-4**

1. What is meant by hard-disk loading? **(Lhr 2021(mor) )** **(Lhr 2021(eve) )**
2. What is counterfeiting?/ difference between online piracy and counterfeiting **(Grw-2021) (Lhr 2021(mor) )** **(Lhr 2021(eve) )** **(Grw-2022)**
3. What is meant by Copy Right?/ Compare the copyright and trade secrets./ piracy and copyright **(Lhr 2023) (Grw-2021)**  **(BWP-2023) (BWP-2022) (RWP-2023)** **(Grw-2022)**
4. Define client server overuse./Fraud and Misuse **(BWP-2022) (RWP-2023)** **(BWP-2022)**
5. What is meant by counter fitting?/ Softlifting./control information. **(FSD-2023) (MLTN-2021)** **(DGK-2021) (Grw-2022)**
6. Write the types of software piracy / Piracy / online piracy/"Key of Software" in Piracy/ types of software piracy **(BWP-2021)** **(Grw-2021) (Grw-2022) (DGK-2021) (FSD-2023) (MLTN-2021)** **(MLTN-2022) (MLTN-2022)**
7. What Is sabotage? / encryption? **(Lhr 2023) (BWP-2023) (LHR-2022)** **(Grw-2021) (Grw-2022) (DGK-2021)**
8. What is difference between hacker and hacking? **(MLTN-2022)(Grw-2022)(LHR-2022)** **(DGK-2021) (Grw-2022)**
9. What is meant by Data Privacy?/ reason to add captcha **(MLTN-2023) (BWP-2021)**
10. What is meant by random Caesar Cipher method? **(DGK-2022)**
11. How does spyware damage? / Cybercrime? **(MLTN-2021(mor) ) (MLTN-2021(eve) )** **(DGK-2022)**
12. Write two issues related to data security. / purpose of password **(LHR-2022)** **(BWP-2022)**
13. Define the phishing attack./ DOS attack **(RWP-2022)** **(FSD-2023)**
14. What does the scammer websites play role in cybercrime? **(RWP-2022)**
15. What is patent and why do we need to register it? **(MLTN-2023) (MLTN-2022)**
16. Differentiate between integrity and confidentially. **(LHR-2022)**

**long**

Explain substitution cipher method with examples **(Lhr 2023) (DGK-2021) (MLTN-2021)**

Why we use data encoding? Also write any three data security issues. **(LHR-2022)**

What is cybercrime? Explain its types **(MLTN-2023) (Lhr 2021)** **(Grw-2021) (DGK-2022)**

What is meant by encryption? Also explain the importance of encryption for every day life on the internet **(MLTN-2021)** **(RWP-2022)** **(FSD-2023) (Lhr 2021)**

What is phishing attack? Write three characteristics of phishing email and phishing websites. **(Grw-2022) (BWP-2022) (LHR-2022)**

What is the use of password? Also write down three characteristics of a good password/ relation between key and password **(Grw-2022) (DGK-2021) (MLTN-2021)**

Analyze the Personal Piracy and Security Concerns that arise with any use of Computational System/ four examples of piracy concerns arise through the mass collection of data **(BWP-2022) (BWP-2023)**

Define Software Piracy. Also explain its any three types in detail. **(BWP-2021)**

Describe DOS (Denial of Service) attack in detail **(MLTN-2022) (RWP-2023)**

**Chap-5**

Name of HTML tags **/**What are the singular tags?/ Paired tag **(MLTN-2022) (BWP-2022) (Grw-2021(mor) ) (Grw-2021(eve) ) (Lhr 2021)** **(MLTN-2023)**

Write the tag for line breaking. **(BWP-2022) (MLTN-2021)** **(LHR-2022)** **(Lhr 2021)**

What is hyperlink?/ Hyper Text /Differentiate between Hyperlink and Anchor/Which tag is used to create hyperlink in HTML? **(Grw-2021)(BWP-2022)(DGK-2021)(DGK-2021)(Lhr 2021)** **(Lhr 2021)** **(BWP-2022) (RWP-2023)** **(BWP-2023)**

What is meant by body section/ head section? in HTML." **(RWP-2022)** **(Lhr 2021)** **(Lhr 2021)(BWP-2023)(Grw-2022)**

How to write heading and sub-headings in an HTML document/ How to write Headings and Sub-headings in an HTML document?**(BWP-2021) (FSD-2023) (MLTN-2021)** **(Lhr 2021)**

What is meant by mark-up language? **(Grw-2021(mor) ) (Grw-2021(eve) ) (Lhr 2021)**

Write down the name of tags types that are used in HTML document./ Give one example of paired tag. **(LHR-2022) (Lhr 2021)**

Which Tag is used for making table in HTML?/ How the table is created in HTML? / Define colspan./ rowspan **(DGK-2022) (FSD-2023) (LHR-2022) (FSD-2023) (Lhr 2023) (BWP-2023)**

Define the Anchor./ difference between Hyper link and Anchor ? **(DGK-2021(mor) ) (DGK-2021(eve) ) (MLTN-2021)** **(MLTN-2022)(MLTN-2022) (BWP-2023) (Grw-2021)**

How many types of list in HTML? / definition list. /difference between ordered and unordered list? **/**nested List **(DGK-2022)(RWP-2022)(MLTN-2023)(Lhr 2023) (LHR-2022)**

Define HTML ? / characteristics of HTML/ phrase "HTML. Is not case sensitive" **(DGK-2022)(MLTN-2021)** **(DGK-2021) (LHR-2022)** **(BWP-2021)**

Why &nbsp, is used in HTML? **(FSD-2023) (LHR-2022)** **(BWP-2022)**

Write name of two attributes of <img> tag. **(MLTN-2023) (BWP-2022)**

What is meant by tag <br> ? / what is <title> tag? **/** <html> tag. **(MLTN-2021)** **(MLTN-2022) (DGK-2021) (DGK-2021)**

Write tag/code for applying back ground color Blue and fore ground color Red to a web page? **(BWP-2022)**

Write down the attributes in HTML tags? **(Grw-2021)**

How to create paragraph in HTML?/ How to add picture in the background **(RWP-2022)** **(DGK-2021)(Grw-2021) (Grw-2022)**

Define paired tag / How to add paired tags? / Why" OL" tag is used? **(MLTN-2022) (BWP-2022) (Grw-2022) (DGK-2021)**

**C.Q’s**

Write down the code of the following list in HTML: **(Grw-2022)**

(1) BISE

(2) FBIS

Write down a tag code of two different headings of "BISE". **(Grw-2022)**

Write the code to procedure to create Hyperlink to Image. **(BWP-2021)**

Write code in HTML to change the color to "Blue" of the text "I Love Pakistan". **(RWP-2022)**

Write the output of following HTML code<p> This is <br> a Line </p>  **(RWP-2023)**

Write the procedure to create Hyperlink to image. **/** code using image tag. **(DGK-2022)(MLTN-2021)**

Write HTML code/tag to make the word "PAKISTAN" italic. **(MLTN-2023)**

Write HTML code to italic the text "I Love Pakistan". **(MLTN-2022)**

Write a code of HTML of font size of text 24 "Punjab". **(LHR-2022)**

What do we come to know about any file extension? **(MLTN-2022)**

Write HTML code to set background color to green. **(MLTN-2022)**

Which Software is used to create a Webpage? **(BWP-2021)**