Final Question Patterns

BIM: 1st Semester- IT 231: Foundation of Information Technology

Time: 3 Hrs.   **FM: 60   PM: 30**

1. Brief Answer Questions   10x1=10
2. Short Answer Questions (Attempt any FIVE Questions)   5x3=15
3. Long Answer Questions (Attempt any THREE Questions)   3x5=15
4. Comprehensive Answer / Case / Situation / Analysis Questions   2x10=20

IMP Questions

Unit-1: Introduction to Computers

Brief Answer Questions

1. Define Computer.
2. What is a hybrid computer?
3. Name the different calculating devices developed in Mechanical era.
4. What is the contribution of George Boole in the development of modern computers?
5. Write short note on John Von Neumann.
6. List out the different generation of Computers with their technology used.
7. What is AI?
8. What are the advantages of laptop over desktop PC?
9. List out the application areas of super computer.
10. What is ASCII?

Short Answer Questions

1. Explain the characteristics of computer in brief.
2. What are the capabilities and limitations of Computer?
3. Write down the advantages and disadvantages of Computer?
4. Differentiate between Analog and Digital Computer.
5. Why is Charles Babbage called as father of Computers?
6. Differentiate between third and fourth generation of computers.
7. Write down the characteristics of fifth generation of computer.
8. Explain different portable microcomputers.
9. Differentiate between minicomputer and mainframe computer.
10. How is program represented in computer?

Long Answer Questions

1. Explain the history of computer in short.
2. What do you mean by generations of computer? Write down the characteristics of different generations of computer.
3. Explain different types of computers on the basis of speed/size
4. What are the different data representation codes used in computer? Explain.
5. Explain the different application areas of computer in detail.

Comprehensive Answer / Case / Situation / Analysis Questions

1. Why computer is more popular and famous device. Explain its advantages.
2. Explain what can be expected from computers in 2030.

Unit-2: Information Technology and Business

Brief Answer Questions

1. What is an information age?
2. Define organizational structure
3. What is a business information system?
4. List out the components of business information system.
5. What is the use of TPS?

Short Answer Questions

1. What are the roles of IT in business?
2. What the critical factors that needs to be considered while defining an organization structure?
3. What are the roles of IT in context to organizational structure?
4. Differentiate between MIS and DSS.
5. Explain about ESS with its use.

Long Answer Questions

1. What is an Information system? Explain different types of business information systems detail
2. Explain different organizational structures.
3. Why do organization invest in IS and IT? Explain.
4. Explain the components of Business Information System.
5. Explain in detail about how IT can support business.
6. Describe the impact of IT in individuals.
7. Write a note on Computers in past and present.

Comprehensive Answer / Case / Situation / Analysis Questions

1. Assess how the use of technology might be beneficial to your chosen organization to support it's...
2. How do IT resources matter in terms of the different roles they play in an organization? Which...

Unit-3: Computer System Hardware

Brief Answer Questions

1. What are the functions of CPU?
2. Define softcopy output.
3. What is the function of Instruction register?
4. Define control bus.
5. What is a motherboard?
6. Write short note on BIOS.
7. What is the smallest unit of memory?
8. List out the different magnetic memories.
9. Why is RAM used in computer?
10. What are the types of ROM?
11. What is a cache memory?
12. Define optical memory.
13. What is SSD?
14. What is the function of MICR?
15. What is a digitizer?
16. Differentiate between LCD and LED.
17. What do you mean by dpi?
18. List out different impact printers.
19. What is a plotter?
20. What is HDMI?

Short Answer Questions

1. Differentiate between softcopy and hardcopy output.
2. Explain different subcomponents of CPU.
3. What are the different registers used? Explain with their function.
4. What is a bus? Explain different types of bus
5. Differentiate between primary and secondary memory.
6. Explain the memory hierarchy.
7. Differentiate between RAM and ROM.

8. How is direct access different from sequential access?

9. Describe about laser printer.

10. Explain different communication ports.   11. Write the advantages of using cache memory.

Long Answer Questions

1. Explain the different components of a computer with its logical diagram.

2. What is a memory? Explain different memory devices used in computer in detail.

3. Describe different input devices used in the computer.

4. Explain different types of monitors with their advantages and disadvantages.

5. Write about impact and non-impact printers in detail.

6. How are the different units of computer interconnected? Explain.

Comprehensive Answer / Case / Situation / Analysis Questions

1. What is a system bus? What are the characteristics of different system bus?
2. What is a computer system? What are the hardware components of a typical computer system? Describe.

Unit-4: Computer Software

Brief Answer Questions

1. Define the terms program and software.

2. What is utility software?

3. Differentiate between tailored and packaged software.

4. What do you mean by open source software?

5. Define programming language.

6. Name some fourth generation programming languages.

7. What is a language processor?

8. List out the popular operating systems.

9. What is memory management?

10. Write short note on Linux.

Short Answer Questions

1. Differentiate between application software and system software.

2 Explain the ways in which the software is acquired by an organization.

3. Differentiate between compiler and interpreter.

4. What is an operating system? What are the objectives of operating system?

5. Define multitasking OS.

6. Differentiate between multiprogramming and multiprocessing.

7. Differentiate between GUI and CUL

8. Write down the feature of Windows.

9. Write short notes on iOS and Android.

10. What are the new trends in software industry?

Long Answer Questions

1. What is software? Explain the different types of software in detail.
2. Explain different programming languages with their merits and demerits.
3. Describe different language translators in detail.
4. Explain the different types of operating system in detail.
5. What are the functions of operating system? Explain.

Comprehensive Answer / Case / Situation / Analysis Questions

1. Why did you choose a career in software development?
2. What is software scope? What does the process involve?

Unit-5: Data Communication and Computer Network

Brief answer Questions

1. What is communication?
2 Define computer network.
3. List out the different communication media used.
4. What are the advantages of fiber-optic cable over other transmission media?
5. What is Wi-Fi?
6. What is a modulation? List out different types of modulation.
7. Define message switching.
8. What is client-server network?
9. Define ring topology.
10. List out the selection criteria for a network topology.
11. What is OSI?
12. Define Telnet.
13. What is a switch?
14. Write short note on router.

Short Answer Questions

1. What are the advantages and disadvantages of using computer network?
2. Describe the communication system with its basic elements.
3. Explain different transmission modes used.
4. Describe about analog and digital signal.
5. Differentiate between circuit switching and packet switching
6. Compare and contrast between peer-to-peer network and client-server network.
7. Differentiate between star topology and ring topology.
8. List out different network protocols with their use.
9. What are the different wireless technology used at present?
10. Mention the benefits of using wireless communication systems.

■Long Answer Questions

1. Explain different communication media in detail.
2. What are the different types of computer network? Explain them.
3. What is a network topology? Explain different network topologies with their advantages and disadvantages.
4. Explain OSI reference model in detail.
5. Why are communication devices required? Explain different communication devices used in network.

Unit-6: Internet and Internet services

Brief Answer Questions

1. What is an Internet?
2. List out the popular services of Internet.
3 What is ARPANET?
4. What is the role of IANA?
5. What is ISP?
6. Define ISDN.
7. What is an IP address? What are its functions?
8. Define DNS.
9. What is HTTPS?
10. Differentiate between Internet and WWW.
11. Differentiate static and dynamic webpage.
12 Define web browser.
13. List out different search engines.
14. What is CQC E-Commerce?

15. What is smart city?

Short Answer Questions
1. What are the uses of Internet? Explain.
2. Write brief history of Internet.
3 Explain Internet architecture in brief.
4. Write are the different organizations involved in managing the Internet?
5. What are the different options for connecting the Internet? Explain.
6. Explain about FTP in detail.
7. What are the advantages of E-Commerce to the customers?
8. What is E-Governance? Explain with its benefits and challenges.
9. How can you make your city smart?
10. What is censorship? Why do government/organizations use censorship?

Long Answer Questions
1. What are the positive and negative impacts of Internet?
2. Explain E-Mail with its uses, advantages, disadvantages and types.
3. What is E-Commerce? Explain with example.
4. Define privacy. Explain privacy issues, possible ways for protection against online privacy threats and laws related to privacy in Nepal.
5. Explain the terms Internet, Intranet and Extranet in detail.

Unit-7: Multimedia and the web
Brief Answer Questions
1. What is multimedia?
2. List out the fields in which multimedia are used.
3. Define animation.
4. Name different image formats.
5. What is the application of multimedia in education?

Short Answer Questions
1. Write down the advantages and disadvantages of using multimedia.
2. What are the different applications of multimedia in business?
3. Describe different common image formats.
4. Explain web based multimedia with the technologies and considerations about the future of web based multimedia.

Long Answer Questions
1. Explain the different elements of multimedia in detail.
2 Describe the different application areas of multimedia.

Unit-8: Database and Database Management System
Brief Answer Questions
1. Define database and DBMS
2. Differentiate between data and information.
3. What is a database model? List out different database models.
4. What is data redundancy?
5. Define primary key.
6. What are the symbols used in E-R diagram?
7. Define logical or conceptual level in database architecture.
8. List out the benefits of distributed database system.

9. What is the use of database in banking sector?
10. Define DBaaS,

Short Answer Questions
1. Write short note on data storage hierarchy.
2. List out the objectives of DBMS.
3. Explain the functions of DBMS.
4. What is a key in database? Explain different types of keys.
5. What is an E-R diagram? List out its advantages in system design. Differentiate between centralized and distributed database system.
6. Differentiate between centralized and distributed database system.
7. What are two-tier and three-tier architectures?
8. 8. Explain the applications of database.

■Long Answer Questions
1. What is a database? Why is it required? What are the major uses of database applications?
2. Explain different database models in detail.
3. Explain DBMS with its advantages and disadvantages,
4. Describe database system architecture in detail.
5. What is cloud database? Explain with its features and benefits.

Unit-9: Computer Security and Privacy
Brief Answer Questions
1. Define computer security.
2 What is a security threat?
3. List out the mechanisms used to protect against unauthorized access and use.
4. What is computer sabotage?
5. Define cyberespionage
6. What is counterfeiting?
7. List out the symptoms of a computer being affected by computer virus
8. What is a Trojan horse?
9 Name common antivirus software's.
10. Define cipher text.

Short Answer Questions
1. What do you mean by unauthorized access and unauthorized use?
2. What is software piracy? Explain the different anti-piracy techniques?
3. List out the common methods used for the protection from computer virus
4. Write short notes on: worm and virus.
5. Explain the ethical issues related to computer.
6. What are hardware and software firewalls?
7. Define the terms data and message security.
8 Differentiate between symmetric and asymmetric cryptography.

Long Answer Questions
1. Explain different types of computer crimes and the protection mechanisms against them
2. What is a computer virus? Explain its different types.
3. Explain about Network security in detail.
4. Describe the Electronic Transaction Act, 2063 in detail.
5. Explain encryption and decryption technology in detail.

Unit-10: Introduction to contemporary Technologies

■Brief Answer Questions

1. What is Search Engine Marketing?
2 List out the advantages of data mining.
3. Name the areas where the concept of big data is used.
4 What is machine learning?
5. Define Business Intelligence.
6. What is cyber security?
7. What is CIA?
8. List out the advantages of cloud computing
9 What are the advantages of Web 2.0?
10 What is semantic web?
11. What is Data Science?
12. List out the application of Artificial Neural Network
13 Define green computing
14. What are the services that can be accessed virtually?
15 What is Blockchain?
16. Name some GIS applications.
17. Define social media.

Short Answer Questions

1 What is digital economy? Explain with its features
2. Explain data mining with the steps used in data mining process
3. Describe about big data with its characteristics
4. What are the application areas of machine learning?
5. Explain the major components of AI.
6. Differentiate between business intelligence and data analytics.
7. What is Web 2.0? Explain with its features.
8. Explain Web 3.0 with its features.
9. What are the applications of Data Science?
10. What are the advantages of Artificial Neural Network?
11. Explain the techniques involved in green computing
12. What are the types of Blockchain?
13. What is remote sensing? List out its uses.

■Long Answer Questions

1. Explain about digital marketing in detail.
2 Explain about data warehouse with its applications and benefits
3. What is AI? Explain with its uses and applications.
4 Describe cloud computing in detail with types and services models
5. What is loT? List out its advantages and disadvantages
6. How can we support green computing?
7 Describe virtual computing with its advantages and disadvantages
8. What are the areas in which Blockchain is used?
9. What is GIS? Explain its applications.
10. Explain the social media strategy with its importance and example.