

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT
(An Autonomous College U/s UGC Act 1956)

IMSc-IT. SEMESTER-I, SEMESTER END EXAMINATION - WINTER 2024

Subject Code: 1BS103

Date: 17-12-2024

Subject Name: FUNDAMENTAL OF COMPUTER

Time: 11:00 AM to 01:30 PM

Total Marks: 70

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Write answers of **Section A** and **Section B** in **separate answer books**.
3. Attempt all questions from both **Section A** and **Section B**.
4. Each section carries **35 marks**, with a total of **70 marks** for the examination.
5. The figures to the right of each question indicate full marks, make suitable assumptions with justification.
6. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

SECTION A

	Marks	BL	CO
Q.1 Objective-Type Questions	[05]		
(a) What does CPU stand for in a computer?	1	R	1
(i) Control Processing Unit			
(ii) Central Program Unit			
(iii) Central Programming Unit			
(iv) Central Processing Unit			
(b) The main circuit board of a computer is known as the:	1	U	1
(i) CPU			
(ii) RAM			
(iii) Motherboard.			
(iv) Hard Drive			
(c) Which of the following number systems uses base 16?	1	U	3
(i) Decimal			
(ii) Binary			
(iii) Octal			
(iv) Hexadecimal			
(d) Which of the following is the default shell in most Linux distributions?	1	R	5
(i) Zsh			
(ii) Bash			
(iii) Fish			
(iv) Csh			
(e) Which command is used to display the current working directory in Linux?	1	U	5
(i) pwd			
(ii) cd			
(iii) ls			
(iv) mkdir			

Q.2 Attempt Any Two	[10]		
(a) What is a computer? Explain it in detail.	5	U	1
(b) Describe the applications of computers in society	5	N	1
(c) State the differences between system software and application software.	5	R	1
Q.3 Attempt Any Two	[10]		
(a) What is BCD? Explain it in detail with truth table and example	5	U	3
(b) 1.Convert			
A.Decimal to binary number : $(274)_{10}$			
B. Binary to decimal number. : $(01011010)_2$			
C.Octal to binary number : $(573)_8$	5	E	3
2. Compute the addition of the binary numbers :			
111111 + 111000			
3. Compute the subtraction of the binary numbers:			
1100001 - 110000			
(c) Write a short note on decimal number system	5	N	3
Q.4 Attempt Any Two	[10]		
(a) Explain the Features of Linux in detail.	5	R	5
(b) Define below given Linux command. cat, cmp, wc, sort	5	U	5
(c) Define below given Linux command. who, date, ls, ps	5	U	5

SECTION B

	Marks	BL	CO
Q.5 Objective-Type Questions	[05]		
(a) Which of the following is not valid Number System?	1	R	3
(i) Octal			
(ii) BDC			
(iii) Binary			
(iv) Hexadecimal			
(b) Which of the following alpha-numeric is not used in Hexadecimal number system?	1	U	3
(i) F			
(ii) 9			
(iii) G			
(iv) A			
(c) What is the full form of ASCII?	1	R	3
(i) Asian Standard Code for Information Interchange			
(ii) American Standard Code for Information Interchange			
(iii) American Standard Code for Information Internet			
(iv) Asian Standard Code for Internet Interchange			
(d) Operating system is the interface between	1	U	4
(i) Program and Hardware			
(ii) Software and User			
(iii) User and Hardware			
(iv) Software and Hardware			
(e) What type of file system is NTFS?	1	U	4
(i) Journaling file system			
(ii) Basic file system			
(iii) Hierarchical file system			
(iv) Flash file system			
Q.6 Attempt Any Two	[10]		
(a) Convert: $(144)_{10} = (?)_2$ and $(?)_8$	5	A	3
(b) Write a short note on 4-bit BCD System.	5	U	3
(c) What is Operating System? Explain need of Operating System.	5	R	3

Q.7 Attempt Any Two	[10]
(a) What is Computer booting process? Explain Disk partitioning.	5 U 4
(b) Write a short note on functions of operating system.	5 R 4
(c) Differentiate Single user and Multi user operating system.	5 A 4

Q.8 Attempt Any Two	[10]
(a) Explain FAT file system.	5 U 4
(b) What is Linux? Explain installation of Linux.	5 R 4
(c) Differentiate Batch processing and Time-sharing operating system.	5 A 4
