

**(PGDIT01)**

**Total No. of Questions : 10]**

**[Total No. of Pages : 01**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2017  
INFORMATION TECHNOLOGY**

**Basics of IT**

**Time : 3 Hours**

**Maximum Marks : 70**

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**Answer any Five of the following**  
**All questions carry equal marks**

- Q1)** What is meant by Management Information System (MIS)? Write about various MIS capabilities.
- Q2)** Discuss about various categories of IT people and their careers.
- Q3)** Write about structure of Central processing unit and give its specifications.
- Q4)** Explain about videos display devices and touch screen devises with neat sketch.
- Q5)** Explain classification of programming languages based its applications.
- Q6)** Explain about different system software's and Enterprise software's.
- Q7)** Discuss about how to store and access the data from traditional file system.
- Q8)** Write about network topologies and network communication software.
- Q9)** Explain about intranets, mobile internets and enterprise information portals.
- Q10)** Discuss about various services are provided by internet.



(PGDIT 02)

Total No. of Questions : 10]

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P.G. Diploma DEGREE EXAMINATION, MAY – 2017

INFORMATION TECHNOLOGY

Data Structures with C

Time : 3 Hours

Maximum Marks: 70

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Answer any FIVE questions

All questions carry equal marks

- Q1)** Consider integer array a [15] [20] declared in C program. If the base address is 900, find the address of the element a [8] [15] with row major and column minor representation.
- Q2)** Explain about structures and unions in C with suitable example.
- Q3)** What is queue? Write C program to implement various operation on queue using arrays.
- Q4)** State and discuss about various applications of stack.
- Q5)** Write a C code for the deletion and insertion of an element in single linked list.
- Q6)** Construct binary search tree for the following character set:  
J, R, D, G, T, E, M, H, P, A, F, Q
- Q7)** Discuss various tree traversing techniques with suitable example.
- Q8)** Write a pseudo C routine to sort the following numbers using bubble sort. Show all the passes to sort the values in ascending order:  
45, 80, 20, 34, 90, 12, 40.
- Q9)** Assume 10 numbers in an array. Consider first number is pivot element and show how quick sort works for these numbers.
- Q10)** Write a C program to implement searching an element from list of elements using linear search.

**(PGDIT 03)**

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**P.G. Diploma DEGREE EXAMINATION, MAY – 2017**

**INFORMATION TECHNOLOGY**

**DBMS (Data Base Management Systems)**

**Time : 3 Hours**

**Maximum Marks: 70**

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**Answer any FIVE questions**

**All questions carry equal marks**

- Q1)** Draw and explain the three level architecture of the database system.
- Q2)** Describe various types of attributes present in the E-R model.
- Q3)** Explain network database management system with suitable example.
- Q4)** What are the types of data integrity constraints? Explain primary key and foreign key constraint with suitable example.
- Q5)** Describe the advantages of relational database management system over file management system.
- Q6)** Draw a Entity Relation diagram for the Hospital Management System. Consider the different types of Patients with respect to Disease and In-Patient and Out-Patient Department in the design. Consider the availability of all well qualified Doctors. Consider various types of tests and operations to be conducted. Explain the mapping cardinality used. Assume suitable attributes. Use generalization and Specialization.
- Q7)** What is normalization? Explain the need for normalization. Discuss various types of normal forms.
- Q8)** Discuss various anomalies in the process of database design.
- Q9)** What is Relational Algebra? Enlist and explain the fundamental operation of relational algebra with suitable example.
- Q10)** Describe different DDL and DML commands with syntax.

**(PGDIT04)**

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**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2017**

**INFORMATION TECHNOLOGY**

**Computer Networks**

**Time : 3 Hours**

**Maximum Marks : 70**

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***Answer any Five questions***  
***Each question carries equal marks***

***(5 × 14 = 70)***

- Q1)** Discuss different data communication media and channels.
- Q2)** State and discuss about various multiple access technologies.
- Q3)** Discuss about various network topologies with neat sketches.
- Q4)** Explain in detail about packet switching and circuit switching.
- Q5)** What is DNS? Discuss the services provided by DNS?
- Q6)** Write about stop – and – wait and sliding window protocols in detail with an illustration.
- Q7)** Explain about link state routing algorithm with suitable example.
- Q8)** Explain about Address Resolution Protocol (ARP) and Ethernet.
- Q9)** Discuss about various network security issues.
- Q10)** Write about binary arithmetic and IP address calculation.



**(PGDIT05)**

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**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2017**

**INFORMATION TECHNOLOGY**

**Computer Organization**

**Time : 3 Hours**

**Maximum Marks : 70**

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**Answer any Five questions**

**Each question carries equal marks**

- Q1)** Explain about the functional view of the computer with neat sketch and also different possible operations.
- Q2)** Discuss the evaluation of intel x86 architecture and their features.
- Q3)** What is PCI? Explain about various PCI bus configurations with neat diagrams.
- Q4)** Explain about bus interconnection scheme with neat sketch.
- Q5)** Write about CD - ROM and DVD – ROM Block Formats.
- Q6)** Define the terms with respect to external memory.
- a) seek time
  - b) rotational delay
  - c) access time
  - d) transfer time
  - e) track
  - f) cylinder
- Q7)** Explain about the following Floating-Point Arithmetic with example:
- a) Addition
  - b) Subtraction
  - c) Multiplication
- Q8)** Illustrate the difference between the twos complement representation of a number and the twos complement of a number with example.
- Q9)** Explain about organizations of processor with neat diagram.
- Q10)** Explain about ARM register organization.

(PGDIT 06)

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P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2017

INFORMATION TECHNOLOGY

Operating Systems

Time : 3 Hours

Maximum Marks: 70

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Answer any FIVE questions

All questions carry equal marks

- Q1)** Discuss about evaluation of operating systems.
- Q2)** Describe the inter process communication in client server systems.
- Q3)** What is thread? Describe various issues to be considered with multi-threading programs and also mention various thread models.
- Q4)** What do you mean by scheduler? State and explain different types of schedulers.
- Q5)** Discuss the critical section problem. State the basic requirements of critical section problem solution.
- Q6)** State clearly four necessary conditions for deadlocks to occur. Explain Banker's algorithm for deadlock avoidance.
- Q7)** What is meant by paging? Write about the techniques for structuring the page table.
- Q8)** Explain the indexed and linked file allocation methods. Discuss the advantages and Disadvantages in those methods.
- Q9)** Explain the RAID levels and problems associated with RAID.
- Q10)** What is virus and worm? How to handle worms and virus by operating systems.

