

**Subject: OPERATING SYSTEMS & SYSTEMS SOFTWARE**

Time: 3 Hours

Max. Marks: 100

**DECEMBER 2010**

**NOTE: There are 9 Questions in all.**

- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
  - **The answer sheet for the Q.1 will be collected by the invigilator after half an hour of the commencement of the examination.**
  - **Out of the remaining EIGHT Questions, answer any FIVE Questions, selecting at least TWO questions from each Part. Each question carries 16 marks.**
  - **Any required data not explicitly given, may be suitably assumed and stated.**
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**Q.1 Choose the correct or the best alternative in the following: (2×10)**

- a. A process can not be activated until some finite amount of .....memory is allocated to it .
- (A) Primary (B) Secondary  
(C) Auxiliary (D) All of the above
- b. A.....System is a system in which transaction accessing and updating of a file is quick enough and immediate to affect the original decision making
- (A) Batch Processing (B) Real Time  
(C) Online Processing (D) Information Processing
- c. This refers to the delay between the read/write request, and the appearance of the required sector under the read/write head.
- (A) Access Time (B) Seek Time  
(C) Latency Time (D) None
- d. Which of the following are language processors?
- (A) Assembler (B) compiler  
(C) Interpreter (D) All of the above
- e. Virtual memory can be implemented with
- (A) Segmentation (B) Paging  
(C) Demand Paging (D) all of the above
- f. Which of the following is most general phase structured grammar?
- (A) Context – Sensitive (B) Regular  
(C) Context-Free (D) None of the above
- g. An interpreter is a language processor which bridges an ..... Without generating a machine language program



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- Q.7** a. What is the role of the following:- (2,2,2,2)  
(i) Scanner  
(ii) Parser  
(iii) Parse tree  
(iv) Abstract syntax tree
- b. Explain the use of macros in assembly language and also define following terms associated with macros (2+(2 ×3))  
(i) macro definition  
(ii) macro call  
(iii)macro expansion
- Q.8** a. What is Assembly Language programming? Explain its elements. (8)
- b. Describe the pass structure and design of a two pass Assembler. (8)
- Q.9** a. Differentiate between logical address and physical address (6)
- b. Discuss the advantages and disadvantages of compiler and interpreter over each other. (6)
- c. Explain the concept of dynamic linking. (4)