

Total No. of Questions :6]

P29

SEAT No. :

[Total No. of Pages : 2

TE/Insem./APR-33

TE (E&TC)

### 304190 : SYSTEM PROGRAMMING & OPERATING SYSTEM

(2015 Pattern) (Semester - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data, if necessary.

Q1) a) What is interpreter? Explain the role of interpreter with suitable examples. [5]

b) Explain different phases of language processing in detail. [5]

OR

Q2) a) Define MACRO. How macro is different from functions? Explain MACRO with an example. [5]

b) Explain in brief advanced assembler directives with suitable examples.[5]

Q3) a) Explain different phases of compiler with a suitable example. [6]

b) Explain features and functions of a loader. [4]

OR

Q4) a) Explain various code optimizations techniques with suitable examples.[5]

b) Explain Absolute Loader Scheme in detail. [5]

Q5) a) Consider the following processes where arrival time and burst time are as shown below. Calculate average waiting time and average turnaround time if the processes are scheduled using Round Robin scheduling algorithm. Time quantum = 2. [5]

P.T.O.

Process

Burst time

Arrival time

P1 5 0

P2 4 1

P3 2 2

P4 1 4

b) Explain in detail batch operating and distributed operating system. [5]

OR

Q6) a) What is thread? List down benefits of using thread. [4]

b) Define process. Explain Process Control Block with suitable diagram.[6]

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