

CPSC 231 Final Exam Review: Fall 2006

Short answer questions

1. Write the code for the 'display' procedure for the movie tracker program from A8. You can assume that the list of movies has already been initialized with either some default starting values or the information has been read in from file. In the former case the list is empty and 'movieCount' is set to zero. In the latter case movieCount will be set to a value equal to the number of movies currently stored in the list. If the list is empty then the procedure should display some sort of status message e.g., "Collection is empty". Otherwise the procedure should display onscreen element-by-element each movie in the collection. Each field of each movie should be on its own separate line and each movie should be separated by a line of stars. Beyond that you don't have to worry about formatting the output. However: only occupied array elements should be displayed, empty elements should not appear.

<< Write your answer here >>

```
procedure display (aMovieList : MovieList;
                  movieCount : integer );
var
  i : integer;
  j : integer;
begin
  if (movieCount = 0) then
    writeln('Collection is empty');

  for i := 1 to movieCount do
    begin
      with aMovieList[i] do
        begin
          writeln(name);
          for j := 1 to MAX_CAST do
            writeln(cast[j]);
          writeln(genre);
          writeln(stars);
          writeln('*****');
        end;
      end;
    end;
end;
```

2. What is the output of the following program?

<< Write your answer here >>

```
a b
A B
A B
# *
A *
```

3. Write the code for a recursive module that will display the nodes of the list in order (from beginning to end) all on one line. You can assume the list has already been initialized with some starting values.

<< Write your answer here >>

```
procedure display (head : NodePointer);
begin
  if (head <> NIL) then
    begin
      write(head^.data);
      display(head^.next);
    end;
end;
<< End of answer space >>
```

4. In the space provided below you are to indicate what will be the output of the following program.

<< Write your answer here >>

```
111
222
333
```

5. What is the main difference between global memory and dynamic memory?

Global memory is allocated for the life of a program. Dynamic memory may be allocated and de-allocated as the program runs.

Multiple choice questions

1. Answer: e
2. Answer: c
3. Answer: c