CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 A

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S *r;
   Point_S  s;
   Point_S  t;

   b = new int;
   c = &a;

   f = new double;
   g = &e;

   p = new Point_S;
   q = new Point_S;
   r = &s;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

Indicate whether, at that point in time, the expression given in the table on the left

- refers to a memory location on the *stack*,
- refers to a memory location on the *heap*,
- would cause an *error* (e.g. dereferencing something that isn't a pointer.)

Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 A

Name____

Section 1. Multiple Choice

1. (a)
2. (b)
3. (c)
4. (d)

Section 2. Short Answer(answer on this sheet)

5.

expression	Answer
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	heap
*q	heap
*r	stack
*s	error
*t	error

expression	type
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double
*d	error
e	double
&e	double *
p	Point_S *
*r	Point_S
&s	Point_S *
t->x	error
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version A
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 B

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int *b;
   int  c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S  p;
   Point_S *q;
   Point_S *r;
   Point_S *s;
   Point_S  t;

   a = new int;
   b=&c;

   e = new double;
   f = &d;

   q = new Point_S;
   r = &p ;
   s = &t;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 B

Name____________________

Section 1. Multiple Choice

1. (b)
2. (c)
3. (d)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	error
*q	heap
*r	stack
*s	stack
*t	error

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double
*d	error
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	error
q.y	error
q->y	int
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version B

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 C

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)



{
   int *a;
   int  b;
   int *c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S  p;
   Point_S  q;
   Point_S *r;
   Point_S *s;
   Point_S *t;

   c = new int;
   a=&b;

   d = new double;
   e=&f;

   r = new Point_S;
   s = new Point_S;
   t=&p;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*		
a	stack	heap	error
*a	stack	heap	error
b	stack	heap	error
*b	stack	heap	error
c	stack	heap	error
*c	stack	heap	error
*d	stack	heap	error
*e	stack	heap	error
f	stack	heap	error
*f	stack	heap	error
g	stack	heap	error
*g	stack	heap	error
p	stack	heap	error
*p	stack	heap	error
*q	stack	heap	error
*r	stack	heap	error
*s	stack	heap	error
*t	stack	heap	error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 C

Name____

Section 1. Multiple Choice

1. (d)
2. (b)
3. (a)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	error
*q	error
*r	heap
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double *
*d	double
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version C
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 D

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S *p;
   Point_S  q;
   Point_S  r;
   Point_S *s;
   Point_S *t;

   b = new int;
   c = &a;

   g=new double
   d=&e;

   s = new Point_S;
   t = &r;
   p=&q;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 D

Name____

Section 1. Multiple Choice

1. (a)
2. (d)
3. (b)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	stack
*q	error
*r	error
*s	heap
*t	stack

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double *
*d	double
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version D
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 E

Name______________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int *b;
   int  c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S  r;
   Point_S  s;
   Point_S *t;

   a = new int;
   b=&c;

   f = new double;
   g = &e;

   t = new Point_S;
   p = new Point_S;
   q = &r

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 E

Name______________________________________

Section 1. Multiple Choice

1. (a)
2. (d)
3. (c)
4. (b)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	heap
*q	stack
*r	error
*s	error
*t	heap

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double
*d	error
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S *
t->x	int
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version E

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 F

Name______________________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int  b;
   int *c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S *p;
   Point_S *q;
   Point_S *r;
   Point_S  s;
   Point_S  t;

   c = new int;
   a=&b;

   e = new double;
   f = &d;

   p = new Point_S;
   q = new Point_S;
   r = &s;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 F

Name____

Section 1. Multiple Choice

1. (a)
2. (b)
3. (d)
4. (c)

Section 2. Short Answer(answer on this sheet)

expression	type
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double
*d	error
e	double *
&e	double **
p	Point_S *
*r	Point_S
&s	Point_S *
t->x	error
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

5.

expression	Answer
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	heap
*q	heap
*r	stack
*s	error
*t	error

End of Key, seed 12346 version F
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 G

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S  p;
   Point_S *q;
   Point_S *r;
   Point_S *s;
   Point_S  t;

   b = new int;
   c = &a;

   d = new double;
   e=&f;

   q = new Point_S;
   r = &p ;
   s = &t;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out Hi.

Indicate whether, at that point in time, the expression given in the table on the left

- refers to a memory location on the *stack*,
- refers to a memory location on the *heap*,
- would cause an *error* (e.g. dereferencing something that isn't a pointer.)

Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (.) on something that isn't a struct.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 G

Name____

Section 1. Multiple Choice

1. (b)
2. (c)
3. (d)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	error
*q	heap
*r	stack
*s	stack
*t	error

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double *
*d	double
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	error
q.y	error
q->y	int
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version G

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 H

Name____________________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)



{
   int *a;
   int *b;
   int  c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S  p;
   Point_S  q;
   Point_S *r;
   Point_S *s;
   Point_S *t;

   a = new int;
   b=&c;

   g=new double
   d=&e;

   r = new Point_S;
   s = new Point_S;
   t=&p;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 H

Name____

Section 1. Multiple Choice

1. (b)
2. (c)
3. (a)
4. (d)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	error
*q	error
*r	heap
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double *
*d	double
e	double
&e	double *
p	Point_S
*r	Point_S
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version H

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 I

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int  b;
   int *c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S *p;
   Point_S  q;
   Point_S  r;
   Point_S *s;
   Point_S *t;

   c = new int;
   a=&b;

   f = new double;
   g = &e;

   s = new Point_S;
   t = &r;
   p=&q;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = 'S';`

   (b) `p[1] = 't';`

   (c) `q[0] = 'D';`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = 'D';`

   (d) `r[1] = 'i';`

   (e) `p = condiment;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = 'r';`

   (c) `r[1] = 'u';`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = 'u';`

   (c) `q = side;`

   (d) `p[1] = 'u';`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 I

Name____

Section 1. Multiple Choice

1. (c)
2. (a)
3. (d)
4. (b)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	stack
*q	error
*r	error
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double
*d	error
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version I
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 J

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S *p;
   Point_S *q;
   Point_S  r;
   Point_S  s;
   Point_S *t;

   b = new int;
   c = &a;

   e = new double;
   f = &d;

   t = new Point_S;
   p = new Point_S;
   q = &r

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 J

Name____

Section 1. Multiple Choice

1. (a)
2. (b)
3. (d)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	heap
*q	stack
*r	error
*s	error
*t	heap

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double
*d	error
e	double *
&e	double **
p	Point_S *
*r	error
&s	Point_S *
t->x	int
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version J
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 K

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)

{
   int *a;
   int *b;
   int  c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S *p;
   Point_S *q;
   Point_S *r;
   Point_S  s;
   Point_S  t;

   a = new int;
   b=&c;

   d = new double;
   e=&f;

   p = new Point_S;
   q = new Point_S;
   r = &s;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 K

Name____

Section 1. Multiple Choice

1. (c)
2. (b)
3. (a)
4. (d)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	heap
*q	heap
*r	stack
*s	error
*t	error

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double *
*d	double
e	double *
&e	double **
p	Point_S *
*r	Point_S
&s	Point_S *
t->x	error
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version K
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 L

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)

{
   int *a;
   int  b;
   int *c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S  p;
   Point_S *q;
   Point_S *r;
   Point_S *s;
   Point_S  t;

   c = new int;
   a=&b;

   g=new double
   d=&e;

   q = new Point_S;
   r = &p ;
   s = &t;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 L

Name____

Section 1. Multiple Choice

1. (a)
2. (d)
3. (b)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	error
*q	heap
*r	stack
*s	stack
*t	error

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double *
*d	double
e	double
&e	double *
p	Point_S
*r	Point_S
&s	Point_S **
t->x	error
q.y	error
q->y	int
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version L
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 M

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S  p;
   Point_S  q;
   Point_S *r;
   Point_S *s;
   Point_S *t;

   b = new int;
   c = &a;

   f = new double;
   g = &e;

   r = new Point_S;
   s = new Point_S;
   t=&p;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 M

Name____

Section 1. Multiple Choice

1. (a)
2. (b)
3. (c)
4. (d)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	error
*q	error
*r	heap
*s	heap
*t	stack

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double
*d	error
e	double
&e	double *
p	Point_S
*r	Point_S
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version M
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 N

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)

{
   int *a;
   int *b;
   int  c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S *p;
   Point_S  q;
   Point_S  r;
   Point_S *s;
   Point_S *t;

   a = new int;
   b=&c;

   e = new double;
   f = &d;

   s = new Point_S;
   t = &r;
   p=&q;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 N

Name____________________________________

Section 1. Multiple Choice

1. (c)
2. (b)
3. (a)
4. (d)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	stack
*q	error
*r	error
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double
*d	error
e	double *
&e	double **
p	Point_S *
*r	error
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version N

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 O

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}
```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int  b;
   int *c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S *p;
   Point_S *q;
   Point_S  r;
   Point_S  s;
   Point_S *t;

   c = new int;
   a=&b;

   d = new double;
   e=&f;

   t = new Point_S;
   p = new Point_S;
   q = &r

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 □O

Name____

Section 1. Multiple Choice

1. (a)
2. (d)
3. (b)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	heap
*q	stack
*r	error
*s	error
*t	heap

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double *
*d	double
e	double *
&e	double **
p	Point_S *
*r	error
&s	Point_S *
t->x	int
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version O
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 P

Name______________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S *r;
   Point_S  s;
   Point_S  t;

   b = new int;
   c = &a;

   g=new double
   d=&e;

   p = new Point_S;
   q = new Point_S;
   r = &s;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*		
a	stack	heap	error
*a	stack	heap	error
b	stack	heap	error
*b	stack	heap	error
c	stack	heap	error
*c	stack	heap	error
*d	stack	heap	error
*e	stack	heap	error
f	stack	heap	error
*f	stack	heap	error
g	stack	heap	error
*g	stack	heap	error
p	stack	heap	error
*p	stack	heap	error
*q	stack	heap	error
*r	stack	heap	error
*s	stack	heap	error
*t	stack	heap	error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 P

Name

Section 1. Multiple Choice

1. (c)
2. (a)
3. (b)
4. (d)

Section 2. Short Answer(answer on this sheet)

expression	type
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double *
*d	double
e	double
&e	double *
p	Point_S *
*r	Point_S
&s	Point_S *
t->x	error
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

5.

expression	Answer
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	heap
*q	heap
*r	stack
*s	error
*t	error

End of Key, seed 12346 version P
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 Q

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}
```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int *b;
   int  c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S  p;
   Point_S *q;
   Point_S *r;
   Point_S *s;
   Point_S  t;

   a = new int;
   b=&c;

   f = new double;
   g = &e;

   q = new Point_S;
   r = &p ;
   s = &t;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 Q

Name____

Section 1. Multiple Choice

1. (c)
2. (a)
3. (d)
4. (b)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	error
*q	heap
*r	stack
*s	stack
*t	error

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double
*d	error
e	double
&e	double *
p	Point_S
*r	Point_S
&s	Point_S **
t->x	error
q.y	error
q->y	int
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version Q
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 R

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)



{
   int *a;
   int  b;
   int *c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S  p;
   Point_S  q;
   Point_S *r;
   Point_S *s;
   Point_S *t;

   c = new int;
   a=&b;

   e = new double;
   f = &d;

   r = new Point_S;
   s = new Point_S;
   t=&p;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`
   (b) `p[1] = ’r’;`
   (c) `r[1] = ’u’;`
   (d) `r = cheese;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`
   (b) `s[1] = ’u’;`
   (c) `q = side;`
   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`
   (b) `q = condiment;`
   (c) `r[0] = ’D’;`
   (d) `r[1] = ’i’;`
   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`
   (b) `p[1] = ’t’;`
   (c) `q[0] = ’D’;`
   (d) `p = bread;`
   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
`a`	stack heap error
`*a`	stack heap error
`b`	stack heap error
`*b`	stack heap error
`c`	stack heap error
`*c`	stack heap error
`*d`	stack heap error
`*e`	stack heap error
`f`	stack heap error
`*f`	stack heap error
`g`	stack heap error
`*g`	stack heap error
`p`	stack heap error
`*p`	stack heap error
`*q`	stack heap error
`*r`	stack heap error
`*s`	stack heap error
`*t`	stack heap error

expression	*type*
`a`	`int *`
`*a`	
`&a`	
`b`	
`*b`	
`&b`	
`d`	
`*d`	
`e`	
`&e`	
`p`	
`*r`	
`&s`	
`t->x`	
`q.y`	
`q->y`	
`(*p).x`	
`&(p.x)`	
`argc`	
`argv[0]`	
`argv[0][1]`	
`argv`	
`&argc`	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 R

Name____

Section 1. Multiple Choice

1. (d)
2. (b)
3. (a)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	error
*q	error
*r	heap
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double
*d	error
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version R
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 S

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S *p;
   Point_S  q;
   Point_S  r;
   Point_S *s;
   Point_S *t;

   b = new int;
   c = &a;

   d = new double;
   e=&f;

   s = new Point_S;
   t = &r;
   p=&q;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 S

Name____

Section 1. Multiple Choice

1. (d)
2. (a)
3. (b)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	stack
*q	error
*r	error
*s	heap
*t	stack

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double *
*d	double
e	double *
&e	double **
p	Point_S *
*r	error
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version S
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 T

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int *b;
   int  c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S  r;
   Point_S  s;
   Point_S *t;

   a = new int;
   b=&c;

   g=new double
   d=&e;

   t = new Point_S;
   p = new Point_S;
   q = &r

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 T

Name____

Section 1. Multiple Choice

1. (c)
2. (d)
3. (b)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	heap
*q	stack
*r	error
*s	error
*t	heap

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double *
*d	double
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S *
t->x	int
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version T
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 U

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int  b;
   int *c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S *r;
   Point_S  s;
   Point_S  t;

   c = new int;
   a=&b;

   f = new double;
   g = &e;

   p = new Point_S;
   q = new Point_S;
   r = &s;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 U

Name____

Section 1. Multiple Choice

1. (b)
2. (d)
3. (c)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	heap
*q	heap
*r	stack
*s	error
*t	error

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double
*d	error
e	double
&e	double *
p	Point_S *
*r	Point_S
&s	Point_S *
t->x	error
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version $\boxed{\text{U}}$
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 V

Name______________________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double  d;
   double *e;
   double *f;
   double  g;

   Point_S  p;
   Point_S *q;
   Point_S *r;
   Point_S *s;
   Point_S  t;

   b = new int;
   c = &a;

   e = new double;
   f = &d;

   q = new Point_S;
   r = &p ;
   s = &t;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
`a`	stack heap error
`*a`	stack heap error
`b`	stack heap error
`*b`	stack heap error
`c`	stack heap error
`*c`	stack heap error
`*d`	stack heap error
`*e`	stack heap error
`f`	stack heap error
`*f`	stack heap error
`g`	stack heap error
`*g`	stack heap error
`p`	stack heap error
`*p`	stack heap error
`*q`	stack heap error
`*r`	stack heap error
`*s`	stack heap error
`*t`	stack heap error

expression	*type*
`a`	`int`
`*a`	
`&a`	
`b`	
`*b`	
`&b`	
`d`	
`*d`	
`e`	
`&e`	
`p`	
`*r`	
`&s`	
`t->x`	
`q.y`	
`q->y`	
`(*p).x`	
`&(p.x)`	
`argc`	
`argv[0]`	
`argv[0][1]`	
`argv`	
`&argc`	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 V

Name____

Section 1. Multiple Choice

1. (a)
2. (b)
3. (d)
4. (c)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	error
*e	heap
f	stack
*f	stack
g	stack
*g	error
p	stack
*p	error
*q	heap
*r	stack
*s	stack
*t	error

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double
*d	error
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	error
q.y	error
q->y	int
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version V
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 W

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)



{
   int *a;
   int *b;
   int  c;

   double *d;
   double *e;
   double  f;
   double  g;

   Point_S  p;
   Point_S  q;
   Point_S *r;
   Point_S *s;
   Point_S *t;

   a = new int;
   b=&c;

   d = new double;
   e=&f;

   r = new Point_S;
   s = new Point_S;
   t=&p;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = 'S';`

   (b) `p[1] = 't';`

   (c) `q[0] = 'D';`

   (d) `p = bread;`

   (e) `q = side;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = 'u';`

   (c) `q = side;`

   (d) `p[1] = 'u';`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = 'r';`

   (c) `r[1] = 'u';`

   (d) `r = cheese;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = 'D';`

   (d) `r[1] = 'i';`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
a	stack heap error
*a	stack heap error
b	stack heap error
*b	stack heap error
c	stack heap error
*c	stack heap error
*d	stack heap error
*e	stack heap error
f	stack heap error
*f	stack heap error
g	stack heap error
*g	stack heap error
p	stack heap error
*p	stack heap error
*q	stack heap error
*r	stack heap error
*s	stack heap error
*t	stack heap error

expression	*type*
a	int *
*a	
&a	
b	
*b	
&b	
d	
*d	
e	
&e	
p	
*r	
&s	
t->x	
q.y	
q->y	
(*p).x	
&(p.x)	
argc	
argv[0]	
argv[0][1]	
argv	
&argc	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 W

Name____________________________________

Section 1. Multiple Choice

1. (c)
2. (b)
3. (d)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	heap
b	stack
*b	stack
c	stack
*c	error
*d	heap
*e	stack
f	stack
*f	error
g	stack
*g	error
p	stack
*p	error
*q	error
*r	heap
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int *
*b	int
&b	int**
d	double *
*d	double
e	double *
&e	double **
p	Point_S
*r	Point_S
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	error
&(p.x)	int *
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version W

Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 X

Name____

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int *a;
   int  b;
   int *c;

   double *d;
   double  e;
   double  f;
   double *g;

   Point_S *p;
   Point_S  q;
   Point_S  r;
   Point_S *s;
   Point_S *t;

   c = new int;
   a=&b;

   g=new double
   d=&e;

   s = new Point_S;
   t = &r;
   p=&q;

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

Indicate whether, at that point in time, the expression given in the table on the left

- refers to a memory location on the *stack*,
- refers to a memory location on the *heap*,
- would cause an *error* (e.g. dereferencing something that isn't a pointer.)

Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
`a`	stack heap error
`*a`	stack heap error
`b`	stack heap error
`*b`	stack heap error
`c`	stack heap error
`*c`	stack heap error
`*d`	stack heap error
`*e`	stack heap error
`f`	stack heap error
`*f`	stack heap error
`g`	stack heap error
`*g`	stack heap error
`p`	stack heap error
`*p`	stack heap error
`*q`	stack heap error
`*r`	stack heap error
`*s`	stack heap error
`*t`	stack heap error

expression	*type*
`a`	`int *`
`*a`	
`&a`	
`b`	
`*b`	
`&b`	
`d`	
`*d`	
`e`	
`&e`	
`p`	
`*r`	
`&s`	
`t->x`	
`q.y`	
`q->y`	
`(*p).x`	
`&(p.x)`	
`argc`	
`argv[0]`	
`argv[0][1]`	
`argv`	
`&argc`	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 X

Name____

Section 1. Multiple Choice

1. (b)
2. (d)
3. (c)
4. (a)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	stack
b	stack
*b	error
c	stack
*c	heap
*d	stack
*e	error
f	stack
*f	error
g	stack
*g	heap
p	stack
*p	stack
*q	error
*r	error
*s	heap
*t	stack

expression	*type*
a	int *
*a	int
&a	int **
b	int
*b	error
&b	int *
d	double *
*d	double
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S **
t->x	int
q.y	int
q->y	error
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version X
Total Points: 0

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 Y

Name________________________________

Section 1. Multiple Choice

The first four questions deal with the following program listing:

```
// foo.cc

#include <iostream>
using namespace std;

int main(void)
{
   char cheese[10]="Cheddar";
   char bread[10]="Rye";
   char condiment[10]="Mayo";
   char side[10]="Pickle";

   char *p = cheese;
   const char *q = bread;
   char * const r = condiment;
   const char * const s = side;


   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

   // where some extra code might go

#include "foo1.cc"

   cout << p << endl;
   cout << q << endl;
   cout << r << endl;
   cout << s << endl;

}

```

The following questions deal with this code excerpt:

```
// quiz question
#include <iostream>
using namespace std;

int main(void)




{
   int  a;
   int *b;
   int *c;

   double  d;
   double  e;
   double *f;
   double *g;

   Point_S *p;
   Point_S *q;
   Point_S  r;
   Point_S  s;
   Point_S *t;

   b = new int;
   c = &a;

   f = new double;
   g = &e;

   t = new Point_S;
   p = new Point_S;
   q = &r

   cout << "Hi" << endl;
   return 0;
}
```

Answer these questions on your brown scantron form using a number-2 pencil.

1. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `q = p;`

   (b) `p[1] = ’r’;`

   (c) `r[1] = ’u’;`

   (d) `r = cheese;`

2. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p[0] = ’S’;`

   (b) `p[1] = ’t’;`

   (c) `q[0] = ’D’;`

   (d) `p = bread;`

   (e) `q = side;`

3. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `s = cheese;`

   (b) `q = condiment;`

   (c) `r[0] = ’D’;`

   (d) `r[1] = ’i’;`

   (e) `p = condiment;`

4. (2 pts) Which of these lines of code would produce a compiler error if place at the spot indicated by `// where some extra code might go` ?

   (a) `p = side;`

   (b) `s[1] = ’u’;`

   (c) `q = side;`

   (d) `p[1] = ’u’;`

Section 2. Short Answer(answer on this sheet)

5. (44 pts) Suppose you run the C++ program on the following page, and the program reaches the line of code that prints out `Hi`.

   Indicate whether, at that point in time, the expression given in the table on the left

   - refers to a memory location on the *stack*,
   - refers to a memory location on the *heap*,
   - would cause an *error* (e.g. dereferencing something that isn't a pointer.)

   Then, in the table on the right, fill in the type of each expression, or write "error" if the expression would not be valid (e.g. dereferencing something that isn't a pointer, or using the dot operator (`.`) on something that isn't a `struct`.

expression	*Circle stack, heap or error*
`a`	stack heap error
`*a`	stack heap error
`b`	stack heap error
`*b`	stack heap error
`c`	stack heap error
`*c`	stack heap error
`*d`	stack heap error
`*e`	stack heap error
`f`	stack heap error
`*f`	stack heap error
`g`	stack heap error
`*g`	stack heap error
`p`	stack heap error
`*p`	stack heap error
`*q`	stack heap error
`*r`	stack heap error
`*s`	stack heap error
`*t`	stack heap error

expression	*type*
`a`	`int`
`*a`	
`&a`	
`b`	
`*b`	
`&b`	
`d`	
`*d`	
`e`	
`&e`	
`p`	
`*r`	
`&s`	
`t->x`	
`q.y`	
`q->y`	
`(*p).x`	
`&(p.x)`	
`argc`	
`argv[0]`	
`argv[0][1]`	
`argv`	
`&argc`	

CISC 181 sections 010-015, Practice Quiz Q01 11/09/05 Y

Name________________________________

Section 1. Multiple Choice

1. (d)
2. (c)
3. (a)
4. (b)

Section 2. Short Answer(answer on this sheet)

5.

expression	*Answer*
a	stack
*a	error
b	stack
*b	heap
c	stack
*c	stack
*d	error
*e	error
f	stack
*f	heap
g	stack
*g	stack
p	stack
*p	heap
*q	stack
*r	error
*s	error
*t	heap

expression	*type*
a	int
*a	error
&a	int *
b	int*
*b	int
&b	int**
d	double
*d	error
e	double
&e	double *
p	Point_S *
*r	error
&s	Point_S *
t->x	int
q.y	error
q->y	int
(*p).x	int
&(p.x)	error
argc	int
argv[0]	char *
argv[0][1]	char
argv	char **
&argc	int *

End of Key, seed 12346 version Y
Total Points: 0