1. Find the output of the following C codes:

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| Code | Output |
| #include <stdlib.h>atof( st) 🡪 convert string to doubleatoi(st ) 🡪 convert string to integer atol(st ) 🡪 convert string to long intstrtod( st , d) 🡪 converts a piece of a string to a double |
| double x;int y; x=**atof("22.6");** printf(" The value of x = %lf \n", x); y=**atoi("5");** printf(" The value of y = %d \n", y);  |  |
| char \*st=" 19.5 is your grade";char \*str;double x; **x=strtod(st, &str);**  printf(" The value of st= %s \n", **st**); printf(" The value of str= %s \n", **str**); printf(" The value of x= %lf \n", **x**);  |   |
| #include <string.h>**strcpy( st1,st2)** 🡪 copy array st2 into array st1**strncpy( st1,st2,n)** 🡪 copy n characters of array st2 into array st1 **strcat( st1,st2)** 🡪 adds the characters of string **st2** to the end of string **st1** **strncat( st1,st2,n)** 🡪 adds the first n characters of string **st1** to the end of string **st2** |
| char s1[]=" My name is sara";char s2[20];**strcpy(s2,s1);**printf(" The value of s1= %s \n", s1);printf(" The value of s2= %s \n", s2);  |   |
| char s1[]=" My name is sara";char s2[20];**strncpy(s2,s1,8);****s2[8]='\0';**printf(" The value of s1= %s \n", s1); printf(" The value of s2= %s \n", s2);  |  |
| **/\* without adding ‘\0’ to the end of s2\*/**char s1[]=" My name is sara";char s2[20];strncpy(s2,s1,8);printf(" The value of s1= %s \n", s1); printf(" The value of s2= %s \n", s2); |   |
| char s1[80]=" My name is Ahmed ";char s2[]= "Salem";printf("s1= %s\n",s1);printf("s2= %s\n",s2);printf("strcat(s1,s2)= %s \n", **strcat(s1,s2)**); printf("s1= %s\n",s1);printf("s2= %s\n",s2); |  |
| char s1[80]=" My name is Ahmed ";char s2[]= "Salem";printf("s1= %s\n",s1);printf("s2= %s\n",s2);**strncat(s1,s2,2);** printf("s1= %s\n",s1);printf("s2= %s\n",s2); |  |

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| Code | Output |
| #include <string.h>**strcmp( st1,st2)** 🡪 compare string st1 with string st2if equal returns 0if st1 grater than st2 return grater than 0if st1 less than st2 return less than 0**strncmp( st1,st2)** 🡪 compare up to n characters of string st1 with string st2if equal returns 0if st1 grater than st2 return grater than 0if st1 less than st2 return less than 0**strchr( st1,ch)** 🡪 searches for the first instance of **ch** in **st1****strlen(st) 🡪** returns the length of **st** |
| char \*s1="Happy new year";char \*s2="Happy new year";char \*s3="Happy holiday";printf("s1= %s\n",s1);printf("s2= %s\n",s2);printf("s3= %s\n\n",s3);printf("strcmp(s1,s2)= %d\n\n", **strcmp(s1,s2)**);printf("strcmp(s1,s3)= %d\n\n", **strcmp(s1,s3)**);printf("strcmp(s3,s1)= %d\n\n", **strcmp(s3,s1)**);  |  |
| char \*s1="Happy new year";char \*s2="Happy new year";char \*s3="Happy holiday";printf("s1= %s\n",s1);printf("s2= %s\n",s2);printf("s3= %s\n\n",s3);printf("strncmp(s1,s3,6)= %d\n\n",**strncmp(s1,s3,6)**);printf("strcmp(s1,s3,7)= %d\n\n", **strncmp(s1,s3,7)**);printf("strcmp(s3,s1,7)= %d\n\n", **strncmp(s3,s1,7)**); |  |
| char \*s1="Happy new year";char ch1='a';char ch2='z';if (strchr(s1,ch1))printf("The character ' %c ' is found in strring %s\n",ch1,s1);elseprintf("The character ' %c ' is NOT found in strring %s\n",ch1,s1);if (strchr(s1,ch2))printf("The character ' %c ' is found in strring %s\n",ch2,s1);elseprintf("The character ' %c ' is NOT found in strring %s\n",ch2,s1); |
|  |
| char \*s1="Happy new year";char \*s2=" HELLO";int size;size=strlen(s1);printf("The number of letters in string s1 (%s) is = %d \n\n",s1,size);printf("The number of letters in string s2 (%s) is = %d \n\n",s2,strlen(s2)); |
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1. Find the output of the following C codes:

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| #define STRSIZ 17int main(){char f1[STRSIZ] = "Mona "; char f2[STRSIZ] = "Ali "; char last[STRSIZ] = "Al-khaldi"; strcat(f1, last); strncat(f2, last, 7); printf("f1 = %s \n\n",f1);printf("f2 = %s \n\n",f2);printf("last = %s \n\n",last); |
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1. Write a program that accepts words from a user. The process stops when the user enters a predefined sentinel.

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| #include <stdio.h>#define SENT “END”Int main(void){ char word[15]; printf (“Enter a word\n”); scanf (“%s”, word); while (strcmp(word, SENT) != 0) { printf (“Enter a word\n”); scanf (“%s”, word); //process word…. } |
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**self-check exercises**

Given the following declarations:

char s5[5], s10[10], s20[20];

char aday[7] = “sunday”;

char another[9] = “saturday”;

**What is the output of the following:**

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| **Code** | **Output** |
| strncpy(s5, another, 4);  s5[4] = ‘\0’;printf("%s\n",s5); |  |
| strcpy (s10, &aday[3]);printf("%s\n",s10); |  |
| printf("%d\n",strlen(another)); |  |
| printf("%s\n",strcpy (s20, aday) ); |  |
| strcat(s20, another); |  |