1. The following lines of code feature how many “steps”?

```
data &CarType;
   set sashelp.cars;
   where Type="&CarType";
run;
proc print data=&CarType;
   var Type Make Model MSRP; run; proc means data=&CarType;
   var MSRP MPG_Highway;
run;
```

   a) 1
   b) 2
   c) 3
   d) 0

2. Which of the following is TRUE regarding SAS statements?

   a) All statements end with a comma.
   b) A statement is a sequence of SAS steps.
   c) Most statements begin with a keyword.
   d) Only B and C are true.
   e) All of the above (A, B, and C) are true.

3. Please select invalid global statement(s):

   a) ods proclabel "Descriptor";
   b) title2 "Descriptor Portion # &num";
   c) libname mylib "/folders/myfolders/stat604_datasets/XYzzzzz_HW09_output.xlsx";
   d) title footnote;
   e) options errors=100;
   f) run;
   g) length fg &10;

4. Study the code snippet as illustrated in the SAS exam slides 16-17, SAS04 and answer the question below

```
data temp
  set sashelp.class;
  where Age<10;
  drop ‘hEigHt’ ‘Weight’
```

Identify the current changes in the above code snippet

a) No Changes required
b)
```
data temp;
  set sashelp.class;
  where Age<10;
  drop ‘hEigHt’ ‘Weight’
```
c)
```
data temp;
  set sashelp.class;
  where Age<10;
  drop height weight;
run;
```
d)
```
data temp;
  set=sashelp.class;
  where Age <10;
  drop ‘Height’ ‘Weight’
run ;
```

5. Which one of the following lines of code is NOT a comment?

a) /* This code is too powerful. Be careful to only execute as needed*/
b) *==========*\
c) * beans = sum(of bean1-bean10);
d) *\ name: statistical master of the universe */;

6. Which of the below code snippets will *NOT* result in syntax errors?

a)
```
*Subsetting data
prc print data=sashelp.AIRLINE;
  where AIR between 100 AND 150;
run;
```
b)
```
proc print data= sashelp.baseball (obs=10);
  title "Print first 10 records of table';
  run;
```
c)
```
proc print data= auto;
  var make mpg
  run;
```
d)
```
footnote;
  proc means data=cert.stress;
  where tolerance="I";
  var resthr maxhr ;
run;
```

7. Which of the following is true regarding automatic SAS libraries?

a) The work library is a permanent SAS library
b) The contents of the work library are deleted at the end of the SAS session
c) If no library is specified, the work library is the default
d) data=work.test and data=test do not mean the same thing
e) data=sashelp.cars includes sample data that you can use

8. Which of the following is true for Sashelp library?

a) Is temporary in nature
b) Contents are deleted as soon as the session ends
c) Acts as the default choice if no library is specified
d) Includes a sample data that can be used by the users

9. Which of the following would NOT be an acceptable name for a library in SAS (you may pick more than one answer)?

a) Lib234b
b) _Libraryc
c) li_braryd
d) library234e
e) lib234_f
f) lib@234

10. Which of the follow are valid library and data set names based on SAS's default naming rules?

    a) mylibrary.covid19
    b) &mylib.covid19
    c) mylib.covid19
    d) my_lib.texascovid19
    e) mYllb.covid19

11. What step will write out the current system options to the SAS log?

    a) Options;
       Run;
    b) Data options;
       Run;
    c) Proc options;
       Run;
    d) System options;
       Run;
    e) You can't write out system options to the SAS log

12. From the given options, which is the correct way to define a variable based on the given condition and which will not produce an error?
    Option validvarname = v7;

    a) 4var_name
    b) _var4name
    c) var@name
    d) var name
    e) None of the above

13. Which of the following choices are invalid variable/dataset names that follow the use of (options validmemname = EXTEND)? More than one answer is correct.

    a) Cov!d19D@ta
    b) .sensei63
    c) I_Still_Know(1998)Data Set
    d) 7Things/IHate
    e) reimb.account.2020.datasets

14. Which of the following values are not stored as numbers in SAS?

    a) 2020
    b) '23oct21'd
    c) -19.43e6
    d) '31aug2020'

15. The following SAS program is run:

```
data work.car;
   brand='Tesla';
   brand='Land Rover';
   brand='Lincoln';
   length brand $ 15;
run;
```

    What is the length of the brand variable?=

    a) 5
    b) 10
    c) 7
    d) 15

16. Which of the following represents missing numeric data in SAS?

    a) .
    b) NA
    c) A blank space
    d) *

17. What is the correct way to read to create a library reference for a folder called Exam?

    a) Libname d1 xlsx “filepath\Exam.csv”;
    b) Libname d1 xlsx “filepath\Exam”;
    c) Libname 1d base “filepath\Exam”;
    d) Libname 1d filepath\Exam;
    e) Libname d1 base filepath\Exam;
    f) Libname _d1 “filepath\Exam”;
    g) Libname d1 base “filepath/Exam”;
    h) Libname d1 base “filepath\Exam”

18. After you run the following statements, quit SAS. Which dataset(s) you can find in the folder myfile on your pc?

```
libname mylib "D:\stat604\myfile";
filename covid "D:\stat604\COVID-19_Activity.csv";
data mylib.Texas;
set mylib.covid;
where PROVINCE_STATE_NAME="Texas";
run;
libname mylib clear;

libname mylib "D:\stat604\myfile";
filename covid "D:\stat604\COVID-19_Activity.csv";
data mylib.wisconsin;
set mylib.covid;
where PROVINCE_STATE_NAME="Wisconsin";
run;
```

a) Texas
b) Wisconsin
c) Texas and Wisconsin
d) None of them

19. The library Food contains 3 data sets: Banana, Muffin and Doughnut. Which line of code will give the list of all the files inside the library without listing the descriptor portion of the data sets?

a) PROC CONTENTS DATA = FOOD._ALL_; RUN;
b) PROC CONTENTS DATA = FOOD.BANANA FOOD.MUFFIN FOOD.DOUGHNUT; RUN;
c) PROC CONTENTS DATA = FOOD NODS; RUN;
d) PROC CONTENTS DATA = FOOD_ALL_ NODS; RUN;
e) PROC CONTENTS DATA = FOOD._ALL_ NODS;RUN;
f) Both D and E

20. Which one is the correct engine to read excel file?

a) XLSX
b) EXCL
c) V9
d) XL

21. After assigning the libref “cert” to the practice data given by SAS. Which line(s) of code takes advantage of the libref efficiency by using a two level name to access a specific table within the “cert” library database.

a) proc print data=cert.loan;
   run;
b) proc contents data=cert;
   run;
c) data work.temp;
   set cert;
   where make=”Honda”;
   run;
d) data femalediabetes;
   set cert.diabetes;
   where sex="F";
   run;

22. What would be the correct way to remove the title of a proc means procedure and insert “Annual Sales Mean” followed by “Year report”?

a) title “Annual Sales Mean
   Year Report”;
b) title1 “Annual Sales Mean”;
   title2 ”Year Report”;
c) title1 ““Annual Sales Mean
   Year Report”;
d) title1 “Annual Sales Mean”;
   title2 ”Year Report”;
   ods noproctitle;

23. Which code produces results with a custom title and footnote, and no automatically created procure titles?

a)
```
title1 'Texas Data Yall';
footnote 'One SASy footnote';
proc contents data = mylib.alltexas;
    where proctitle = FALSE;
run;
title1;
```

b)
```
ods noproctitle;
title1 'Texas Data Yall';
footnote 'One SASy footnote';
proc contents data = mylib.alltexas;
run;
title1;
```

c)
```
title1 'Texas Data Yall';
proc contents data = mylib.alltexas;
    where proctitle = FALSE;
run;
title1;
footnote;
```

d)
```
ods noproctitle;
title1 'Texas Data Yall';
title1;
proc contents data = mylib.alltexas;
run;
footnote;
```

24. Which of the following is/are to clear titles

a) NO TITLE;
b) TITLE NONE;
c) TITLE CLEAR;
d) TITLE;
e) All of above

25. What will the value of VAR3 be after the following datastep has finished running?

```
data exampledata;
  length var1 var2 var3 $50.;
  var1="March 29th, 2013  08:05:39";
  var2=compress(var1, ",:");
  var3=compress(var2, "9 ");
  run;
```

a) “March 29th 2013 080539”
b) “March 2th 2013 08053”
c) “March 2th, 2013 08053”
d) “March2th201308053”

26. Which of the following opens multiple destinations and then closes both for viewing?

a)
```
ods pdf (ID=one) file = “c:\user\documents\”;
ods excel (ID=two) file = “c:\user\documents\”;
/*output code*/
ods pdf close;
ods excel close;
```
b)
```
ods pdf file = ” c:\user\documents\one.pdf”;
ods excel file= “c:\user\documents\two.xlsx”;
/*output code*/
ods _all_ close;
```
c)
```
ods pdf file = “c:\user\documents\one.pdf”;
ods xlsx file = “c:\user\documents\two.xlsx”;
/*output code*/
ods _all_ close;
```
d)
```
ods pdf file = “c:\user\documents\one.pdf”;
ods excel file = “c:\user\documents\two.xlsx”;
/*output code*/
ods close;
```

27. Please examine part of a SAS program below and answer the question that follows:

```
ods _ALL_ close;
ods pdf (ID=outputA) file="/folders/myfolders/Stat 604/HW_outputA.pdf"
ods pdf (ID=outputB) file="/folders/myfolders/Stat 604/HW_outputB.pdf"
proc contents data=work.myexcel;
title "National Park tables";
ods proclabel= "National Park tables";
run;
ods pdf (ID=outputB) close;
proc contents data=cert.mechanics varnum;
title1 "Mechanics Data Set";
run;
ods pdf(ID=outputA) close
```

Which of the following statements are false about the program above? (multiple answers are possible)

a) outputB includes data contents from only one procedure.
b) "ID" will be included in the name of the document when execution is completed.
c) After execution of the program above, no ods destinations are active.
d) There is a mistake in the step to close one or both of the ods destinations.

28.

29. Which of the following would not produce a pdf output?

a)
```
ODS PDF FILE ="HW_output"
   CONTENTS=YES
   BOOKMARKLIST=HIDE;
proc contents data=cert._all_ nods;
run;
ODS PDF CLOSE;
```

b)
```
ODS PDF FILE ="HW_output.pdf"
   CONTENTS=YES
   BOOKMARKLIST=SHOW
   PDFTOC=1;
proc contents data=cert._all_ nods;
run;
ODS PDF CLOSE;
```

c)
```
ODS PDF FILE ="HW_output.pdf"
   CONTENTS=YES
   BOOKMARKLIST=HIDE;
proc contents data=cert._all_ nods;
run;
```

d) Both (a) and (b)
e) Both (a) and (c)

f) Both (b) and (c)
g) None of the above

30. There will be a line of code and a statement describing what the code does. Check the box of each answer where the statement correctly explains what the code does.

a)
```
ODS PDF FILE="drpepper.pdf"
  STARTPAGE=YES
  CONTENTS=YES
  BOOKMARKLIST=HIDE;
  ODS PROCLABEL "label";
/* SAS code that produces output */
ODS PDF CLOSE;
```
b)
```
ODS PDF FILE="drpepper.pdf"
  STARTPAGE=YES
  NOTOC;
/* SAS code that produces output */
ODS PDF CLOSE;
```
c)
```
ODS PDF FILE="drpepper.pdf"
  STARTPAGE=YES
  CONTENTS=YES
  BOOKMARKLIST=HIDE
  PDFTOC=n;
  ODS PROCLABEL "label";
/* SAS code that produces output */
ODS PDF CLOSE;
```
d)
```
ODS PDF FILE="drpepper.pdf";
/* SAS code that produces output */
ODS PDF CLOSE;
```
e)
```
ODS PDF FILE="drpepper.pdf"
  STARTPAGE=YES
  CONTENTS=YES
  BOOKMARKLIST=HIDE;
  ODS PROCLABEL "label";
/* SAS code that produces output */
ODS PDF CLOSE;
```

31. When using a temporary data set called “youngfit” created from data in the cert folder we’ve used in class, which of the following codes will successfully run without errors and export the temporary data set to an html file called “FitYoungAdults”? (Assume the cert folder and temporary data set have already been assigned/referenced to the SAS session.)

a)
```
ods html path = "/folders/myfolders/Libraries"
  file = "FitYoungAdults.html";
```

```
   proc print data=work.youngfit;
run;
ods html close;
```

b)
```
ods html path = "/folders/myfolders/Libraries"
   file = "FitYoungAdults.html"contents=yes;
   proc print data=work.youngfit;
run;
ods html close;
```

c)
```
ods html path = "/folders/myfolders/Libraries"
   body = "FitYoungAdults.html" (URL=none);
   proc print data=work.youngfit;
run;
ods html close;
```

d)
```
ods html path = "/folders/myfolders/Libraries"
   file = "FitYoungAdults";
   proc print data=work.youngfit;
run;
ods html close;
```

32. When assigning an output file by declaring 'ODS EXCEL FILE = [filename]', does one have to specify an '.xlsx' extension to [filename]?

a) No, as of SAS 9.4, the EXCEL engine affixes '.xlsx' by default.
b) No, '.xlsx' and '.xls' are just two of several acceptable file extensions in SAS 9.4
c) Yes, '.xlsx' this needs to be explicitly stated at the end of the file name.
d) No, since FILE is a sub-option (like SHEET_NAME, SUPPRESS_BYLINES, etc.), the only requirement is consistency of single or double quotes.

33. Which lines in the following code have errors?

```
ods excel data="report.xlsx"      /*1*/
   options (SHEET_NAME = "January"  /*2*/
            SHEET_INTERVAL="bygroup" /*3*/
            SHEET_LABEL='2020'      /*4*/
            EMBEDDED_TITLES="yes",   /*5*/
            SUPPRESS_BYLINES="yes")  /*6*/
/* code that has output */
ods excel close;
```

a) 1, 4, 5
b) 4, 5, 6
c) 2, 3, 4
d) 1, 5, 6

34.

35. Which of the following explanations for the statement is true?
filename outputfile 'C:\Users\Administrator\Desktop\sas-test\utf.txt'

a) This statement is false because the name must be 8 characters or less.
b) This statement is true. It can assign a file reference name (fileref) to an external file.
c) This statement is false because the name should begin with the capital letters.
d) This statement is true. It can define the variable formats.

36.

37.

38. Which of the following is the correct proc statement for importing a sheet named “wine” from an excel file:

a)
```
Proc import datafile = “C:\users\drinks.xlsx”
   dbms= xlsx
   out= work.wines replace;
   sheet=wine;
run;
```
b)
```
Proc import datafile = “C:\users\drinks.xlsx”
   dbms= xlsx
   out= work.wines replace
   sheet=wine;
run;
```
c)
```
OPTIONS sheet= wine;
Proc import datafile = “C:\users\drinks.xlsx”
   dbms= xlsx
   out= work.wines replace;
run;
```
d)
```
Proc import datafile = “C:\users\drinks.xlsx”;
   dbms= xlsx;
   out= work.wines replace;
   sheet=wine;
run;
```

39. A researcher needs to review an old excel file “data.xls“ that stored in PC on October 22, 1999. The researcher is using SAS 9.4 & up-to-dated Windows OS system. Which statement is correct to read the excel data using SAS LIBNAME engine and correct data set name?

a) The researcher writes statement,
LIBNAME xldata XLSX "C:\SAS_Files\data.xls";
then open the file name data$ from xldata library.
b) The researcher needs ACE server and write statement,
LIBNAME xldata EXCEL "C:\SAS_Files\data.xls";
then open the file name data$ from xldata library.

c) The researcher needs ACE and PCFILES server and write statement,
LIBNAME xldata PCFILES type=excel path="C:\SAS_Files\data.xls";
then open the file name $data from xldata library.

d) The researcher writes statement,
LIBNAME xldata XLSX "C:\SAS_Files\data.xls";
then open the file name data from xldata library.

40. The name literal function is an “n” appended to the end of a worksheet code. For example:

```
libname cardio xlsx "/folders/myfolders/cert/heart.xlsx";
data work.'info'n;
set cardio.heart;
run;
```

Which of these is the proper use of a name literal function?

a)
```
libname cardio xlsx "/folders/myfolders/cert/heart.xlsx";
data work.'random'n;
set cardio.heart;
run;
```

b)
```
libname cardio xlsx "/folders/myfolders/cert/heart.xlsx";
data work.'random_info'n;
set cardio.heart;
run;
```

c)
```
libname cardio xlsx "/folders/myfolders/cert/heart.xlsx";
data work.'random info'n;
set cardio.heart;
run;
```

d)
```
libname cardio xlsx "/folders/myfolders/cert/heart.xlsx";
data work.'randominfo'n;
set cardio.heart;
run;
```

41. Which of the following choices could export an excel file?

a)
```
PROC EXPORT DATA=sashelp.cars
  outfile="C:/Users/QL/output/cars.xlsx"
  dbms=xlsx
  replace;
run;
```

b)
```
PROC EXPORT DATA=sashelp.cars
  outfile="C:/Users/QL/output/cars.xlsx"
  dbms=tab
  replace;
run;
```

c)
```
PROC EXPORT DATA=sashelp.cars
```

```
    outfile="C:/Users/QL/output/cars.PDF"
    dbms=xlsx
    replace;
  run;
```

d)
```
PROC EXPORT DATA=sashelp.cars
    outfile="C:/Users/QL/output/cars.txt"
    dbms=xlsx
    replace;
  run;
```

42. You have a data set called cohort1 that is located within a permanent library called study. You would liketo create a subset of this data that only includes rows in which one of the variables, age, is greater than 65. And you want to export the new data subset into a new Excel file called "cohort1_age_groups.xlsx". Which one of these options is a correct way to do so?

a)
```
LIBNAME agegroup xlsx "/User/Documents/SASdata/cohort1_age_groups.xlsx";
Data agegroup.seniors;
  Set study.cohort1;
  If age > 65;
Run;
```

b)
```
LIBREF study xlsx "/User/Documents/SASdata/cohort1_age_groups.xlsx";
Data study.cohort1;
  Set agegroup.seniors;
  If age > 65;
Run;
```

c)
```
LIBNAME study xlsx "/User/Documents/SASdata/cohort1_age_groups.xlsx";
Data study.cohort1;
  Set agegroup.seniors;
  If age > 65;
Run;
```

d)
```
LIBREF agegroup xlsx "/User/Documents/SASdata/cohort1_age_groups.xlsx";
Data agegroup.seniors;
  Set study.cohort1;
  If age > 65;
Run;
```

43. Suppose you are creating two data sets for all COVID-19 cases from Texas on August 31 and are using the code below:

```
libname mylib "/folders/myfolders/STAT604/assignments";
data aug31 mylib.texas;
  where PROVINCE_STATE_NAME = "Texas";
  where REPORT_DATE = "31AUG2020"d;
  set mylib.covid19;
run;
```

Why would this data step not produce the intended output? Select all that apply.

a) The SET statement should come before the WHERE statement.
b) The input SAS data set must come from the WORK library.
c) The data sets do not follow SAS variable naming rules.
d) There are multiple WHERE statements.
e) There are no errors.

44. Consider the Following Code:

```
data mylib.OctSales;
set Q3.October;
Total = Credit + Cash;
SalePrice= Cash-Promo;run;
```

The data set Q3.October has the following variables:
Month, Credit, Cash, Type, Promo
Which variables will be written to the PDV?

a) Month, Credit, Cash, Type, Promo
b) Total, SalePrice
c) Month, Credit, Cash, Type, Promo, Total, SalePrice
d) Month, Credit, Cash, Type, Promo, Total, SalePrice, _N_, ERROR_
e) Total, SalePrice, _N_, ERROR_

45. I would like to calculate the 'cost per unit' of each item in the following table. I have created the following code. What is my expected PDV when _N_ = 1 and _N_ = 2?

```
data shopping;
   putlog _all_;
   set prices;
   unitCost = Cost / Units;
run;
```

Prices Data:

Item	Cost	Units
Boots	100	2
HikingPoles	90	0
sleepingBag	300	1

a) Item=Boots Cost=100 Units=2 unitCost=50 _ERROR_=0 _N_=1
   Item=hikingPoles Cost=90 Units=0 unitCost=0 _ERROR_=0 _N_=2
   Item=hikingPoles Cost=90 Units=0 unitCost=0 _ERROR_=1 _N_=2
b) Item= Cost=. Units=. unitCost=. _ERROR_=0 _N_=1
   Item=Boots Cost=100 Units=2 unitCost=. _ERROR_=0 _N_=2
   Item=hikingPoles Cost=90 Units=0 unitCost=. _ERROR_=1 _N_=2
c) Item= Cost=. Units=. unitCost=. _ERROR_=0 _N_=1

Item=Boots Cost=100 Units=2 unitCost=50 _ERROR_=0 _N_=2
Item=hikingPoles Cost=90 Units=0 unitCost=0 _ERROR_=0 _N_=2

d) Item=Boots Cost=100 Units=2 unitCost=. _ERROR_=0 _N_=1
Item=hikingPoles Cost=90 Units=0 unitCost=. _ERROR_=0 _N_=2

46. DATA WORK.MYCARS;
SET SASHELP.CARS;
RUN;
Which of the following statements can be added to the code above to write only the MSRP column values in the PDV to the log?

a) PUT %MSRP;
b) PUTLOG “MSRP”;
c) PUTLOG MSRP;
d) PUTLOG _ALL_;

47. If you wanted to print a table with that displays only the item named HOT ITEMS coupled with only displaying the values of number sold is greater than 2000 to your default destination. The input data is in a permanent library named Permfil and the data is named In. What would your PROC code look like?

a) proc print data=Permlib.In;
where Items="HOT ITEMS" and NUMSOLD >= 2000;
run;
b) proc print data=Permfil.In;
where Items="HOT ITEMS" and NUMSOLD >= 2000;
run;
c) proc print data=Permfil.In;
where Items="HOT ITEMS";
where NUMSOLD >= 2000;
run;
d) proc print data=Permfil.In;
where Items="HOT ITEMS" or NUMSOLD >= 2000;
run;

48. Consider the Following output

REPORT_DATE	DATA_SOURCE_NAME	PEOPLE_DEATH_NEW_COUNT	COUNTY_FIPS_NUMBER	COUNTRY_ALPHA_3_CODE	COUNTRY_SHORT_NAME
2020-08-31	New York Times	0	48041	USA	United States
2020-08-31	New York Times	0	48309	USA	United States
2020-08-31	New York Times	0	48145	USA	United States
2020-08-31	New York Times	0	48396	USA	United States

Assuming that the code below produced it, select the option that would substitute ‘XXXXXX’

%let date1 = XXXXXX

```
proc print data=mylib.data;
   where REPORT_DATE=&date1;
run;
```

a) '31/Aug/2020'
b) ‘2020/08/31’d
c) '31/Aug/2020'd
d) ‘2020-08-31’
e) ‘2020/08/31d’
f) ‘2020-08-31’d

49. Which of the following statements will not give the rows from a table where the value of the Country Column is Germany, France, or Canada?

a) where Country in ("Germany" "France" "Canada");
b) where Country in (Germany France Canada);
c) where Country in ("Germany", "France", "Canada");
d) where Country = "Germany" or Country = "France" or Country = "Canada";

50. Which of the following code would correctly provide output of rows where blood pressure values are between 120 and 140?

a) where blood_pressure is between “120” and “140”;
b) where blood_pressure between 120 and 140;
c) where 120 < blood_pressure < 140;
d) where 121 <= blood_pressure <= 139;
e) C & D only

51.

52. I would like to ensure that both of the following observations are printed in my print procedure:
Almost_finished
just_Finished
Which ONE of the following `where` statements will ensure that both observations are printed, assuming they are observations on variable “var”? (assume also that white spaces between underscores do not actually exist, these are here to make it clear that there are two underscores).

a) where var like “%_ _inished” ;
b) where var like “\%_ _inished” escape “\” ;
c) where var like “%_ _inished” escape “_” ;
d) where var like “%_ _inished” escape “\” ;

53. Which of the following will display New York store data with the title Shoe store sales in New York?

a)
```
%let city = New York;
title1 "Shoe store sales in &city";
proc print data=sashelp.shoes;
   where Subsidiary="&city";
   var Region Product Stores Sales;
run;
```

b)
```
%let city = New York;
title1 "Shoe store sales in %let";
proc print data=sashelp.shoes;
   where Subsidiary="%let";
   var Region Product Stores Sales;
run;
```

c)
```
%let city = “New York”;
title1 "Shoe store sales in &city";
proc print data=sashelp.shoes;
   where Subsidiary=&city;
   var Region Product Stores Sales;
run;
```

d)
```
%let city = “New York”;
title1 "Shoe store sales in &let";
proc print data=sashelp.shoes;
   where Subsidiary=&let;
   var Region Product Stores Sales;
run;
```

54. Which of the following requires the SAS PC Files server;

a) Excel LIBNAME Engine.
b) XLSX LIBNAME Engine.
c) PCFILES LIBNAME Engine.
d) all of the above.

55. What is the result of the following assignment statement (varZ)?

```
varZ=varA**varB+varC/4-2
```

varA	varB	varC
2	3	4

a) . (missing)
b) 5
c) 7
d) 8
e) 10
f) None of the above

56. data sales1;
set sashelp.sales;
if revenue<10000 then Sales_Category=1;
else if MSRP< 15000 then Sales_Category=2;
else Sales_Category=3;
run;
Based on the above code, answer the following question:
When will the last else statement will execute?

a) When if statement is false
b) When else if statement is false
c) Both 1 and 2
d) None of the above

57. Within the Data Step, the statement below;
LENGTH VALUE $ 6;
Will:

a) Assign to a numeric column a value of "$ 6";
b) Creates a numeric column with 6 bytes in length;
c) Creates a character column called value with a fixed length of 6 bytes;
d) Assign to a character column a value of "$ 6";

58. When the below data step is executed, which section of the code will produce an error that stops the step from processing?

```
data low_risk med_risk high_risk unk_risk;
   set sashelp.heart;
   length Overall_risk $ 7;
   length Contact $ 3;
   >code a<
   >code b<
   >code c<
   >code d<
run;
```

a)
```
if chol_status="Desirable" then do;
      Overall_risk="Low";
      Contact="No";
      output low_risk;
   end;
```
b)
```
else if chol_status="Borderline" then do;
      Overall_risk="Medium";
      Contact="Yes";
```

```
      output med_risk;
    end;
c)  else if chol_status="High" then
      Overall_risk="High" and
      Contact="Yes";
      output high_risk;
    end;
d)  else do;
      Overall_risk="Unknown";
      Contact="No";
      output unk_risk;
    end;
```

59. Which of the following does not contain valid IF Statement?
Assume the data and set steps are correct and that variable1 and variable2 are numeric and variable 3 is type Char.

```
a)  data dataset 1;
      set data;
      if variable1 ne 3 then delete;
    run;
b)  data dataset 1;
      set data;
      if variable1=3;
    run;
c)  data dataset 1;
      set data;
      if variable1 ne 3 and variable2= 5 delete;
    run;
d)  data dataset 1;
      set data;
      if variable3 not (“x”, “y”, “z”);
    run;
```

60. Power-to-weight ratio is a calculation often used to measure the performance of a motor vehicle, and is obtained by dividing the engine’s power output (horsepower in customary units) by the weight of the vehicle. A greater power-to-weight ratio is generally seen as a measure of high performance. Which of the following SAS codes both correctly and efficiently uses the “sashelp.cars” data to create a new data set with a column measuring both the performance of sports cars and a column classifying this performance as either high or low?

```
a)  data Performance;
      set sashelp.cars;
      where Type='Sports';
```

```
    Performance=(Horsepower/Weight);
    if Performance>0.1 then Class='High';
    else Class='Low';
run;
```

b)
```
proc print data=sashelp.cars;
    where Type='Sports';
    Performance=(Horsepower/Weight);
    if Performance>0.1 then Class='High';
    else Class='Low';
run;
```

c)
```
data Performance;
    where Type='Sports';
    Performance=(Horsepower/Weight);
    set sashelp.cars;
    if Performance>0.1 then Class='High';
    else Class='Low';
run;
```

d)
```
data Performance;
    set sashelp.cars;
    Performance=(Horsepower/Weight);
    if Performance>0.1 then Class='High';
    else Class='Low';
run;
```

61. original

Var1	Var2	Var3	Var4	Var5
1	2	3	4	5

Using above table, select all options that would result in the creation of the below dataset. (Select all that apply)

Derived

Var1	Var2	Var3	Var5
1	2	3	5

a)
```
data derived;
    set original;
    keep Var1-Var5;
run;
```

b)
```
data derived;
    set original;
    keep Var1-numeric-Var3 Var5;
run;
```

c)
```
data derived;
    set original;
    keep Var1 Var2 Var3 Var5;
```

```
run;
```

d)
```
data derived;
  set original;
  drop Var4;
run;
```

62. Which of the following correctly uses a call routine to replace the values in the volume column with missing values for each row with a date of December in the temporary data set stocks2002?

a)
```
data stocks2002;
  set sashelp.stocks;
  where date between "01jan2002"d and "31dec2002"d;
  if "01dec2002"d <= date <= "31dec2002"d then call missing(volume);
run;
```

b)
```
data stocks2002;
  set sashelp.stocks;
  where date between "01jan2002"d and "31dec2002"d;
  if "01dec2002"d <= date <= "31dec2002"d then volume = call missing();
run;
```

c)
```
data stocks2002;
  set sashelp.stocks;
  where date between "01jan2002"d and "31dec2002"d;
  volume = call missing("01dec2002"d <= date <= "31dec2002"d);
run;
```

d)
```
data stocks2002;
  set sashelp.stocks;
  where date between "01jan2002"d and "31dec2002"d;
  call missing(volume);
run;
```

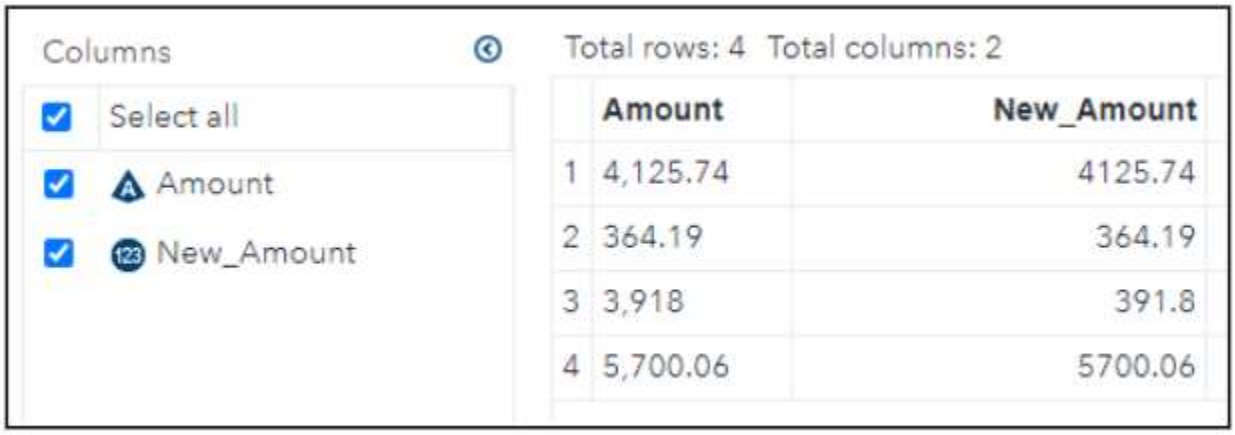
63. You are running a program for your client, Walt Disney World.The original data file that you inputted into your SAS program includes a "Total_Tickets" column and a "Ticket_Cost" column that you will use to create a new variable of "Total_Profit" but keep getting an error statement. What is the correct code to create your new Total_Profit variable?A snippet of the original excel file attached:

Total_Tickets	Ticket_Cost
392850	$189

a) Total_Profit = input(Total_Tickets, DOLLAR12.) * Total_Tickets;
b) Total_Profit = input(DOLLAR12., Total_Cost) * Total_Tickets;
c) Total_Profit = Total_Tickets * Ticket_Cost;
d) Total_Profit = input(6., Total_Tickets);

e) Total_Profit = input(Ticket_Cost, DOLLAR12.) * Total_Tickets;

64.



	Amount	New_Amount
1	4,125.74	4125.74
2	364.19	364.19
3	3,918	391.8
4	5,700.06	5700.06

Given the data set above, which of the following steps could have created the New_Amount column? Select all that apply.

a)
```
data mylib.newdata;
    set mylib.data;
    New_Amount=input(amount,comma10.1);
    keep amount new_amount;
run;
```

b)
```
data mylib.newdata;
    set mylib.data;
    New_Amount=input(amount,comma10.2);
    keep amount new_amount;
run;
```

c)
```
data mylib.newdata;
    set mylib.data;
    New_Amount=input(amount,comma8.1);
    keep amount new_amount;
run;
```

d)
```
data mylib.newdata;
    set mylib.data;
    New_Amount=input(amount,comma8.2);
    keep amount new_amount;
run;
```

e)

```
data mylib.newdata;
    set mylib.data;
    New_Amount=input(amount,comma6.1);
    keep amount new_amount;
run;
```

65. Why is the difference calculated in the code below not equal to zero?

```
data date_time_test;
  varA='15OCT2020'd;
  varB='15OCT2020:00;00;00.00'dt;
  difference=varA-varB;
run;
proc print data=work.date_time_test; run;
```

a) VarA assume a time of 12:00:00.00 (Noon).
b) VarA displays number of days and VarB displays number of seconds.
c) VarA is a SAS date and VarB is a SAS datetime which are different classes and cannot be compared.
d) VarA and VarB are character values and cannot be compared.

66. Which one of the following statements is NOT true about the PUT function?

a) It produces character values by converting numeric or character values.
b) Length of the new variables is equal to the source length.
c) It can be used to change the format of values.
d) A new variable needs to be created to store values when using the PUT function.

67. Which of the below statements returns the X with the most zeros?

a) Data _NULL_; X=50000; format X dollar12.1; put X; run;
b) Data _NULL_; X=50000; format X dollar9.1; put X; run;
c) Data _NULL_; X=50000; format X dollar8.2; put X; run;
d) Data _NULL_; X=50000; format X dollar5.2; put X; run;

68. After the variable's type is established, it be changed.

a) TRUE
b) FALSE

69. Variable renaming, Which is the new variable that is being created ?
SAS-data-set(RENAME=(PayX=PayY))

a) PayX

b) PayY

70. In the below code,

```
data hrdata;
   set orion.convert(rename=(GrossPay= CharGross));
   GrossPay=input(CharGross,comma6.);
   drop CharGross;
run;
```

a) A new variable called CharGross is created and then assigned to GrossPay
b) A new variable called GrossPay is created and then assigned to to CharGross
c) The columns GrossPay and CharGross are being compared for size differences.
d) The drop function does nothing

71. Given the following data input:

```
Data example;
Datetime= '20Oct2020 18:45:00'dt;
Run;
```

Which of the following statements would create a separate column that excludes the time?

a) Justdate= date(datetime);
b) Justdate= timepart(datetime);
c) Justdate= date(datetime,9);
d) Justdate= datepart(datetime);

72. which one is correct to calculate the actual number of days between 1/1/1970 and today?

a)
```
data test;
Date=3653; format Date date9.;
Today=today(); format Today date9.;
Days_Interval=datdif(Date,Today,'ACT/ACT');
run;
proc print data=test;
run;
```
b)
```
data test;
Date=1; format Date date9.;
Today=today(); format Today date9.;
Days_Interval=datdif(Date,Today,'ACT/ACT');
run;
proc print data=test;
run;
```
c)
```
data test;
Date=MDY(01,01,70); format Date date9.;
Today=today(); format Today date9.;
```

```
Days_Interval=yrdif(Date,Today,'AGE')*365;
run;
proc print data=test;
run;
```

d)
```
data test;
Date=MDY(01,01,70); format Date date9.;
Today=today(); format Today date9.;
Days_Interval=datdif(Date,Today);
run;
proc print data=test;
run;
```

e)
```
data test;
Date=MDY(01,01,70); format Date date9.;
Today=today(); format Today date9.;
Days_Interval=Today-Date;
run;
proc print data=test;
run;
```

73. which of the following statements would not assign value 1 to x?

a) X=intck('month', '31DEC2019', '01JAN2020', 'd');
b) X=intck('year', '31DEC2019', '01JAN2020', 'd');
c) X=intck('month', '21OCT2019', '09DEC2019', 'd');
d) X= intck('month', '21OCT2019', '09DEC2019', 'c');

74. Which of the following statements regarding to the INTCK function is incorrect?
INTCK('interval', start-date, end-date< 'method'>)

a) The possible interval also include hour.
b) The continuous method indicates that each intervals is measured relative to the start date or time and the discrete method indicates that each intervals has a fixed boundary.
c) For the same start-date and end-date, the INTCK function only gives a smaller result if we choose to use the continuous method.
d) The INTCK function calculates the number of interval between two dates while INTNX function calculates the date of a given number of intervals.

75. PDV

Phone_Number
512-555-5555

Which SUBSTR function can extract the group of three numbers from the beginning of the Phone_Number value?

a) Austin512=SUBSTR(Phone_Number, 512)

b) Austin512=SUBSTR(Phone_Number, 5,1,2)
c) Austin512=SUBSTR(Phone_Number, 3,1)
d) Austin512=SUBSTR(Phone_Number, 1,3)

76. The PDV shows the current value of Exam:

Exam
PLEASE/GIVE-US ALL AN*A

Please choose the following option that will convert the value of Exam to this

Exam
Please/Give-Us All An*A

a) Exam = propcase (Exam) ;
b) Exam = lowcase (Exam) ;
c) Exam = propcase (Exam, '/-*') ;
d) Exam = propcase (Exam, ' /-*') ;
e) Exam = propcase (Exam, ' /-') ;
f) Exam = lowcase (Exam, ' /-*') ;

77. What expression completes the assignment statement to correctly extract 2 from the line variable?

```
data example;
line= "Exam+2+multiple+choice";
exam_number= ?;
run;
```

a) SCAN(line, -2)
b) SCAN(line, 2)
c) SCAN(line, -3)
d) SCAN(line, 2, "+")
e) Both b & c
f) b, c & d

78. Given the raw data record in the file phone.txt:

EmpFName	EmpLName	Gender	Age
David	White	Man	25

The SAS program is as following:

```
data WORK.Employee;
  infile 'Employee.xlsx';
  input EmpLName $ EmpFName $ Gender $ Age;
  <_insert_your_code_here_>
run;
```

Which following statement will complete this program and get the value of "David White" for the FullName variable?

a) FullName=CAT(' ',EmpFName,EmpLName);
b) FullName=CATX(' ',EmpFName,EmpLName);
c) FullName=CATS(' ',EmpFName,EmpLName);
d) FullName=CATT(' ',EmpFName,EmpLName);

79. Given Text='STAT 604 Exam2, 2020-10-27', which of the following syntax will return 12? Please select all that are applicable.

a) find(Text,'a');
b) find(Text,'a ','it');
c) find(Text,'a','i');
d) find(Text,'a ','t');
e) find(Text,'A',5);
f) find(Text,'A ','it',5);

80. We select two observations from the Covid19 dataset, and we name this dataset 'random'.

	PROVINCE	REPORT_DATE
1	Nova Scotia	2020-07-08
2	Prince Edward Island	2020-07-22

What kind of result will we get for the 'PROVINCE'column?

```
data temp;
set random;
substr(PROVINCE,14,7) = 'Province';
run;
```

a) 'Nova Scotia', ''
b) 'ScotiaProvinc', 'Prince Edward Provinc'
c) '', ''
d) 'Nova ScotiaProvinc', 'Prince Edward Province'
e) 'Nova Scotia Provinc', ' Prince EdwardProvinc'

81. Before executing the code:

Obs	LEVEL2	LEVEL1	LEVEL5	DEPTHEAD
1	TOKYO	International Ai	So Suumi	1
2	TOKYO	International Ai	Steffen Graff	2
3	TOKYO	International Ai	Karin Schmidt	2
4	LONDON	International Ai	Anne Bauer	1
5	TOKYO	International Ai	Barbara Bial	2
6	TOKYO	International Ai	Lisa Lammers	2

The figure above shows a part of the original data set. If we want to replace "TOKYO" with "JAPAN", like the figure shown below. Which code should we use?

After executing the code:

Obs	LEVEL2	LEVEL1	LEVEL5	DEPTHEAD
1	JAPAN	International Ai	So Suumi	1
2	JAPAN	International Ai	Steffen Graff	2
3	JAPAN	International Ai	Karin Schmidt	2
4	LONDON	International Ai	Anne Bauer	1
5	JAPAN	International Ai	Barbara Bial	2
6	JAPAN	International Ai	Lisa Lammers	2

a) LEVEL2=tranwrd(LEVEL2,'JAPAN','TOKYO');
b) LEVEL2=tranwrd(LEVEL2,'TOKYO','JAPAN');
c) 'TOKYO'=tranwrd('JAPAN');
d) 'JAPAN'=tranwrd('TOKYO');

82.