subject	visitn	visit	score
001	0	Week 0	151
001	1	Week 2	150
001	2	Week 4	.
001	3	Week 6	157
001	4	Week 8	155
001	5	Week 10	.
001	6	Week 12	.
001	7	Followup	152

The following SAS program is submitted:

```
data LOCF ;
  set score ;
  by subject visitn ;
  <insert code here>
run ;
```

Resulting in this LOCF data set.

subject	visitn	visit	score	LOCF
001	0	Week 0	151	151
001	1	Week 2	150	150
001	2	Week 4	.	150
001	3	Week 6	157	157
001	4	Week 8	155	155
001	5	Week 10	.	155
001	6	Week 12	.	155
001	7	Followup	152	152

Variable LOCF contains the imputed score that would replace the missing SCORE value (based on last observation carried forward method). Which SAS statements complete the program?

A. LOCF = lag(score) ;
   if first.subject then LOCF = . ;
   if score ^= . then LOCF = score ;
B. retain LOCF ;
   if first.subject then LOCF = . ;
   if score ^= . then LOCF = score ;
C. if first.subject then LOCF = . ;
   if score = . then LOCF = lag(score) ;
D. retain score ;
   if first.subject then LOCF = . ;
   if score ^= . then LOCF = score ;

Correct Answer: B

QUESTION 18
The following SAS program is submitted:

```
data work.sum;
   num1=1;
   num2=' ';
   num3=num1+num2;
run;
```

What will be the result when the program executes?

A. num3 assigned a value of 0
B. An error due to mixed variable types in the assignment statement.
C. num3 assigned a missing value
D. num3 assigned a value of 1

Correct Answer: C

QUESTION 19
A SAS report procedure results in the log below.

```
13          proc report data=vitals ;
14             column patid visit height weight sysbp diabp ;
15          run ;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 26 observations read from the data set WORK.VITALS.
NOTE: At least one W.D format was too small for the number to be printed. The
      decimal may be shifted by the "BEST" format.
NOTE: The PROCEDURE REPORT printed page 1.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.01 seconds
      cpu time            0.01 seconds
```

What should you add to the PROC REPORT to address the blue note in this log?

A. Specify COLWIDTH= option with a value large enough to print all values in the data
B. Use DEFINE statements where FLOW is specified for each numeric variable
C. Use DEFINE statements with the WIDTH= option set large enough to print all values for each variable
D. Use a FORMAT statement with formats large enough to print all values for each numeric variable

Correct Answer: D

QUESTION 20
Given the following data set DEMOG:

SITE	PATID	DOB	SEXCD	RACECD	TRTMNT
1	1	11/25/1946	2	1	1
1	2	11/01/1972	1	1	2
1	3	10/13/1969	2	1	1
1	4	05/18/1958	2	1	2
1	10	05/24/1999	2	1	1
2	1	03/15/1974	1	2	1
2	2	01/04/1983	2	1	2
2	3	12/22/1963	1	1	1
2	4	12/28/1976	1	9	2
2	5	10/04/1958	1	1	1
2	10	07/05/1969	1	2	2

Which selection below would be considered hard-coding?

A. if site eq 1 then sexcd = 2 ;
   else if site eq 2 then sexcd = 1 ;
B. if site eq 1 and sexcd ne 2 then check = 1 ;
   else if site eq 2 and sexcd ne 1 then check = 2 ;
C. if sexcd eq 1 then sex = "Male" ;
   else if sexcd eq 2 then sex = "Female" ;
D. birthdt = input(dob, mmddyy10.) ;

Correct Answer: A

QUESTION 21
This question will ask you to provide a line of missing code. Given the dataset RAWBP that is sorted by SUBJECT TEST WEEK:

SUBJECT	WEEK	TEST	VALUE
101	0	DBP	160
101	1	DBP	140
101	2	DBP	130
101	3	DBP	120
101	0	SBP	90
101	1	SBP	87
101	2	SBP	85
101	3	SBP	80

The following SAS program is submitted

```
data bp;
  set rawbp;
  by subject test week;
  retain baseline;
  if first.test then baseline = .;
  if week = 0 then baseline = value;
  else if week > 0 then  do;
    <insert code here>
  end;
run;
```

Which statement must be added to the program to calculate relative change in percent (percent change) from baseline?

A. pct_chg = ((baseline - value) /baseline)*100;
B. pct_chg = ((value - baseline) /baseline)*100;
C. pct_chg = ((baseline - value) /value)*100;
D. pct_chg = ((value - baseline) /value)*100;

Correct Answer: B

QUESTION 22
This question will ask you to provide a line of missing code.

Given the following log entry:

```
45          data adsl ;
46             merge dm    (in=indm)
47                   disp (in=indisp);
48             by subjid ;
49             <insert code here>
50          run ;

MERGE ISSUE: subjid=003 indm=1 indisp=0
MERGE ISSUE: subjid=005 indm=0 indisp=1
NOTE: There were 4 observations read from the data set WORK.DM.
NOTE: There were 4 observations read from the data set WORK.DISP.
NOTE: The data set WORK.ADSL has 5 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time           0.07 seconds
      cpu time            0.01 seconds
```

Which line of code would produce the blue notes in the log?

A. %if indm ne indisp %then %put 'MERGE ISSUE: ' subjid= indm= indisp=;
B. if indm ne indisp then output 'MERGE ISSUE: ' subjid indm indisp ;
C. if indm ne indisp then put 'MERGE ISSUE: ' subjid= indm= indisp=;
D. if indm ne indisp then put 'MERGE ISSUE: ' _all_ ;

Correct Answer: C

QUESTION 23
Given the SAS data set containing subject's phone numbers