International Institute of Health Management Research Delhi

Term Exam (Batch- 2016-18)

Data Management and Analysis

Total marks: 70 **Duration: 3 hrs**

Answer 'Section A' in question paper itself and attach with the answer sheet. Questions of Section A, if answered in answer sheet, will not be evaluated at all.

Section A: MCQs (20 marks)

1) How many variables are required for computing a bi-variate correlation analysis?
(a) One (b) Two (c) Three (d) Four

2) How is a variable name different from a variable label?
a) It is shorter and less detailed b) It is longer and more detailed.
c) It is abstract and unspecific d) It refers to codes rather than variables.

3) Which measure of central tendency is derived from the most common value?
a) Mean b) Median c) Mode d) Distribution

4) An 'outlier' is
(a) An arithmetic mean (b) a type of variable that cannot be quantified
(c) An extreme value at either end of a distribution (d) A score left out of analysis due to missing data

5) An independent t-test can be used to assess?
(a) Differences between scores obtained on two separate occasions from the same participants
(b) Relationships between two interval data sets
(c) Differences between two groups of participants
(d) Relationships between two ratio data sets

6) To explore the relationship between attitudes towards exercise and physical fitness levels, which among the following you will use:
(a) Bar Chart (b) Pie Chart (c) Scatterplot (d) None

7) In SPSS, all the outputs are generated in a separate window True / False

8) Can "cases/records" from two different SPSS datasets having similar variables name be merged? True/False

9) Is it possible to import data stored in excel file to SPSS? True/False

10) A correlation coefficient of "+0.4" can be considered as a _____ relationship:
(a) Strong (b) Weak (c) Zero (d) None

Section B: Short Questions (25 marks)

Q11) Differentiate between quantitative and qualitative data.

Q12) Explain the relationship between data, information and knowledge.

Q13) Briefly mention about the different functions of database management system.

Q14) Briefly discuss any two common source of information flaws.

Q15) Briefly discuss about any two public health data source.

Section C: Long questions (25 marks)

Q16) Interpret output 1 and output 2: **(10 marks)**

Output 1:

Statistics

Age (in years)

N	Valid	133
	Missing	0
Mean		25.20
Std. Deviation		13.248
Minimum		5
Maximum		65

Output 2:

Statistics

Anxiety * Tension Crosstabulation

			Tension		Total
			low	high	
Anxiety	low	Count	5	21	26
		%	19.2%	80.8%	100.0%
	high	Count	15	7	22
		%	68.2%	31.8%	100.0%

Q17) Suppose a researcher wants to study the effect of sugar (represented by variable SUGAR) on memory for words (represented by variable WORDS). You have two groups (also called conditions) in your experiment, sugar (represented by 1) and no sugar (represented by 2). Each participant only participates in one condition of the experiment. Participants in the first condition are not related in any way to participants in the second condition. **(5 marks)**

a) How many participants are there in each condition
b) Which test will you use and for what?
c) Interpret the following group statistics obtained while performing the test.

Group Statistics

	SUGAR	N	Mean	Std. Deviation	Std. Error Mean
WORDS	1.00	5	4.2000	1.3038	.5831
	2.00	5	2.2000	.8367	.3742

Q17) Interpret the following output **(10 marks)**

Gender*Employment Category in Hospital Cross tabulation

			Employment Category in Hospital			Total
			Clerical	Supervisor	Manager	
Gender	Female	Count	206	0	10	216
		%within Gender	95.4%	.0%	4.6%	100.0%
	Male	Count	157	27	74	258
		%within Gender	60.9%	10.5%	28.7%	100.0%
Total		Count	363	27	84	474
		%within Gender	76.6%	5.7%	17.7%	100.0%

Chi-Square Tests

	Value	Df	Asym. Sig. (2-sided)
Pearson Chi-Square	79.277	2	.000
Likelihood Ratio	95.463	2	.000
No. of Valid Cases	474		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.30