**Answer keys for Assignment 13: Selection of study population**
(The correct answer is underlined in bold text)

1. Selection of study participants depends on
   a. Representativeness
   b. Acceptable cost
   c. Adequate size
   d. **All of the above**

2. Study sample is a subset of accessible population
   a. **True**
   b. False

3. While choosing the accessible population and the sampling approach for selection of study population, _________________ is an important factor that we need to consider
   a. Simplicity
   b. Technology
   c. **Feasibility**
   d. Reliability

4. A good choice of study participant is important because it serves the vital purpose of ensuring that the findings of the study accurately represent the population of interest
   a. **True**
   b. False

5. Internal validity means
   a. The degree to which the inferences drawn from a study can be generalized to a broader population beyond the study population
   b. **The degree to which the observed findings lead to correct inferences about phenomena of interest in the study sample**
   c. The degree to which a test actually measures what it is designed to measure
   d. The degree to which the findings are reliable

6. Representativeness of a study sample refers to
   a. **The extent to which the characteristics of the sample accurately reflect the characteristics of the population**
   b. The size of the sample which is large enough
   c. Volunteering nature of the study participants from the population
   d. None of the above

7. Non-response in a study can be minimized by
   a. Repeat contact of the study participants
   b. Providing compensation for participants time
   c. Less invasive and less sensitive questionnaires
   d. **All of the above**
8. External validity means
   a. **The degree to which the inferences drawn from a study can be generalized to a broader population beyond the study population**
   b. The degree to which the observed findings lead to correct inferences about phenomena taking place in the study sample
   c. The degree to which a test actually measures what it is designed to measure
   d. The degree to which the findings are reliable

9. Participants may be excluded from the study because of
   a. Interference with the success of study follow-up
   b. Ethical concerns
   c. Interference with the quality of data collection or non-acceptance to participate in the study
   d. **All of the above**

10. Reasons for interference with the success of follow-up in a study may include
    a. Migration of some study participants from the study area
    b. Marriage of some of the female study participants because of which they might move out of the study area
    c. Refusals for follow-up
    d. **All of the above**
Answer keys for Assignment 14: Study plan and project management
(The correct answer is underlined in bold text)

1) Study conducted following an *ad hoc* approach may lead to the following consequences
   a. Generation of useful data in programs or for policy making
   b. Efficient utilization of resources
   c. **Serious difficulties in analysis and interpretation**
   d. All of the above

2) Which of the following can be considered to be *ad hoc* approach as to conduct a research study?
   a. Researcher is not clear about the objectives
   b. Researcher has collected the data but is not clear how to analyse it
   c. Researcher has initiated the study before understanding its rationale fully
   d. **All of the above**
   e. ‘a’ and ‘b’

3) The relationship between the outcome and exposure can get affected by the potential risk factors and confounders. This statement is
   a. **True**
   b. False

4) Sample size is decided based on the following
   a. Assumed/reported prevalence
   b. 95% confidence intervals
   c. Acceptable precision
   d. None of the above
   e. ‘a’, ‘b’ and ‘c’

5) Which of the following verbs can be used to define objective of a study testing hypothesis?
   a. Estimate
   b. **Determine**
   c. Count
   d. Measures

6) Common reasons for research study failures
   a. Poorly defined research question
   b. Vague timelines
   c. Lack of supervision
   d. **All of the above**
7) Which of the following statements regarding study objectives is correct?
   a. **Objectives should be defined at the planning stage of study**
   b. Objectives can be defined at any time of the study
   c. Objectives can be changed even at the end of the study
   d. Objectives should be defined before identifying the research question

8) Which of the following represents the correct sequence in a life cycle of a study?
   a. Identifying data needs, formulating study objectives, planning analysis, spelling out research question
   b. Formulating study objectives, planning analysis, spelling out research question, identifying data needs
   c. **Identifying data needs, spelling out research question, formulating study objectives, planning analysis**
   d. Formulating study objects, spelling out research question, identifying data needs, planning analysis

9) Which of the following statements best describes the study objectives?
   a. They should be minimum, achievable and clear
   b. They can be primary and / or secondary
   c. Adding objectives during study implementation is a good practice
   d. ‘a’ and ‘b’

10) Sample size for a cross-sectional study is decided based on the following
    a. Assumed/reported prevalence
    b. Confidence interval
    c. Acceptable precision
    d. **All of the above**
Answer keys for Assignment 15: Designing data collection tools
(The correct answer is underlined in bold text)

1. The tool to collect data by review of records
   a. Abstraction form
   b. Structured questionnaire
   c. Structured Observation
   d. Interview guide

2. While formulating the questions, all of the following need to be followed except
   a. Short and clear questions
   b. Avoid ambiguities
   c. Avoid words of every-day language
   d. Avoid negatives and double negatives

3. The interviewer does not provide options for responses in
   a. Open-ended questions
   b. Close-ended questions
   c. Semi-open questions
   d. All of the above

4. The information collected regarding housing, family size etc. in a data collection tool constitute
   a. Facts
   b. Knowledge
   c. Judgments
   d. Healthy life styles

5. What is the disadvantage of closed questions with dichotomous options in a study questionnaire?
   a. Detailed information available
   b. Oversimplifies the issues
   c. Forces an unclear position
   d. May not be useful for key well framed issues

6. The type of questions in which there is a possibility to add other answer in addition to the options suggested
   a. Open questions
   b. Semi-open questions
   c. Closed questions
   d. Close questions with multiple options
7. Which component of the data collection instrument is constituted by open, closed and semi-open items?
   a. Introduction
   b. Identifier
   c. **Questions**
   d. Concluding statement

8. Structured observation guide
   a. Is useful to document certain processes
   b. Uses checklist of items
   c. Can be used for in-depth interviews
   d. ‘a’ and ‘b’

9. Self-administered questionnaire can be
   a. **Paper-based or computer-assisted**
   b. Used in face-to-face interviews
   c. Used in telephonic interviews
   d. All of the above

10. The criteria for evaluating a survey questionnaire include
    a. Clarity, balance and length of the survey questions
    b. Comprehensive or constraints of the responses imposed by the questions
    c. Utility of the instructions provided for answering them
    d. **All of the above**