BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – B.Sc.(PA)-2020
Course Name – Biostatistics and Research Methodology
Course Code - BPA605
(Semester VI)

Full Marks : 60   **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)   1 x 15=15

1.   *Choose the correct alternative from the following :*

(i)   Identify the correct option: A researcher is morally and legally bound to all except

  a) The participants   b) The colleagues
  c) The funders   d) None of these

(ii)   You want to use a drug that may trigger cancer in the participants. Identify the correct option you should follow.

  a) No information regarding the risk should be   b) The risk of cancer should be informed to
     informed to the participants   the participants
  c) Anticancer drug must be administered   d) Chemotherapy and radiotherapy should be
     along with your drug   started initially before your experiment

(iii)   Identify the criteria for authorship in a research article.

  a) The researcher who contributed maximally   b) The researcher who contributed minimally
     should be the first author.   should be the corresponding author.
  c) The guide in the research should not be the   d) Name of the colleague researchers who
     corresponding author.   contributed to the research must be
                                                             included in the paper.

(iv)   You want to write a research proposal. Select the items you should incorporate into the proposal.

  a) Work plan   b) Methodology
  c) Timeline of study   d) All of these

(v)   Identify the basic rule of probability sampling.

  a) Each member of the population has an   b) Each member of the population has an
     equal probability of being selected for   equal probability of being selected for
     inclusion in the galaxy   inclusion in the universe
  c) Each member of the population has an   d) Each member of the population has an
     equal probability of being selected for   equal probability of being selected for
     inclusion in the pyramid   inclusion in the sample

(vi) Select the correct option: Purposive sampling, quota sampling, convenience sampling and snowball sampling are all examples of

a) Probability sampling   b) Non probability sampling

c) Cluster sampling   d) Systematic sampling

(vii) Identify the following which is not a method of research.

a) Observation   b) Survey

c) Randomness   d) Experiment

(viii) Predict the correct option which may not be followed to prepare a good research objective.

a) Pinpoint the major focus of the research   b) Break down the research focus into research objectives

c) Follow the SMART format   d) SMARTEST format should be followed

(ix) Identify the characteristics of pilot study.

a) The researcher tests the design of the research project, usually the data gathering method(s) to be used in the research project, before carrying out the research   b) The research supervisor carries out the research

c) The research project is designed but it is not carried out   d) The student researcher learns how to carry out research

(x) Identify the option which may not be followed to conduct a research problem timely.

a) A timeline must be followed   b) Research objective should be achievable

c) A stopwatch should be used to complete every research procedure in time   d) Major and minor deadlines can be followed for a research

(xi) You measure blood pressure from different student groups. Identify the type of research.

a) Descriptive   b) Analytical

c) Qualitative   d) Applied

(xii) Select the correct option to fill in the blank: Response rate in research project is _____.

a) A record of the speed at which respondents respond in a data gathering exercise   b) A count of the number of responses received in a data gathering exercise

c) A record of the speed at which a research supervisor responds to a request for help during the research project   d) A count of the number of valid responses received in a data gathering exercise

(xiii) Identify the data presentation options.

a) Bar diagram   b) Pie diagram

c) Line diagram   d) All of these

(xiv) Write the significance of research.

a) It helps to understand the world around us   b) It finds solutions to problems

c) It establishes fact   d) All of these

(xv) Select the option which should be considered unethical in research.

a) Honest work   b) Malhandling of subjects

c) Asking for written consent to perform research   d) Citing a copied sentence

Group-B
(Short Answer Type Questions)   3 x 5=15

2. Give examples of grouped data and ungrouped data. (3)
3. Discuss the role of ethics committee in conducting a research. (3)
4. Compute the mode of the given data: 7, 4, 5, 5, 6, 3, 4, 3, 2, 4, 3, 4, 3, 3, 4 (3)
5. Describe the need of sampling in statistics. (3)

6. You are trying to calculate the mean of the marks obtained by 3 students. The marks were 45, 42 and 39. You calculated the mean as 41. Find error in the calculation. (3)

OR

Distinguish between median and mode. (3)

Group-C
(Long Answer Type Questions) 5 x 6=30

7. Differentiate between analytical study and descriptive study. (5)
8. Justify the statement: Plagiarism is a malpractice in research. (5)
9. Write the advantages and disadvantages of data collection through questionnaire method. (5)
10. Discuss about the advantages and disadvantages of primary data. (5)
11. The hospitalization period for COVID19 in 6 patients were 3, 10, 21, 11, 11 and 10 days. Calculate the standard deviation of hospitalization period of COVID19 disease. (5)
12. You measured the hemoglobin of both male students and female students in your class. It has been found that there is significant difference between these two data. Explain this statement. (5)

OR

There were 3 students who got 0-20 marks, 4 students who got 20-40 marks and 3 students who got 40-60 marks. Calculate the standard deviation of marks of the students. (5)

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