BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS

SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL

PRE-MID TERM EXAMINATION (2024-25)

PSYCHOLOGY (037)

CLASS: XI **Time: 1 Hour**

Date: 01-08-2024 **MARKING SCHEME** **Max. Marks: 25**

SECTION A **(5X1=5)**

1. What is the main purpose of hypothesis testing in psychology? **1**

a) To generate random guesses about behaviour
b) To confirm the personal beliefs of the researcher
c) To make predictions that can be tested through research
d) To avoid conducting experiments

Correct Option: c) To make predictions that can be tested through research

2. Which of the following is a key characteristic of objective research? **1**

a) Subjective interpretation of data b)Bias and personal opinions
b) Replicability of results d d)Use of anecdotal evidence

Correct option: c) Replicability of results

3. How many types of correlations are there in psychology? **1**

a) 1 b) 2 c) 3 d) 4

Correct Option: c) 3

4. What is a neurotransmitter? **1**

a) A type of vitamin essential for brain health.
b) A chemical messenger that transmits signals between neurons.
c) A hormone produced by the pituitary gland.
d) An enzyme responsible for breaking down proteins in the brain.

Correct answer: b) A chemical messenger that transmits signals between neurons.

5. What is the function of a dendrite? **1**

a) To transmit signals away from the cell body.
b) To provide structural support to the neuron.
c) To receive incoming signals from other neurons.
d) To produce neurotransmitters for communication.

Correct answer: c) To receive incoming signals from other neurons.

SECTION B **(4X3=12)**

Q 1: What are the different types of interviews? What are the possible combinations of participants in an interview? Explain in brief. **3**

Answer: There are several types of interviews, including structured and unstructured interviews. In structured (standardized) interviews, questions are prepared in advance, listed in an interview schedule, and asked in a specific sequence without changing their wording, often with predefined responses. In unstructured (non-standardized) interviews, the interviewer has the flexibility to decide on the questions, their wording, and order, allowing for open-ended answers.

Interviews can also vary based on the participants involved: Individual to Individual (one person interviews another), Individual to Group (one person interviews a group), Group to Individual (a group of interviewer's interviews one person), and Group to Group (one group interviews another group, often for discussions or negotiations).

Q 2: What is the quantitative method in the analysis of data, provide an example? 3

Answer: Psychological tests, such as structured interviews and questionnaires, consist of a series of questions and participants choose answers from options in a format, like rating from 1 to 5 or 1 to 10. Scoring in these tests varies; some questions have right or wrong answers, scored accordingly. Researchers calculate a total score from all responses to analyse the participant's level on a specific trait, for example intelligence. The total scores are then compared, often using statistical methods like mean, median, mode or advanced tools like correlation coefficients help researchers analyse and interpret the data to draw meaningful conclusions.

Q 3: What is a nerve impulse? 3

Answer: Information travels within the nervous system through electrical changes in neurons. When a weak stimulus interacts with receptors, it causes small electric changes that may not generate a nerve impulse, thus not felt. A strong stimulus, however, triggers electrical impulses that travel towards the central nervous system. Nerve fibres operate on the all-or-none principle, meaning they either fully respond to a stimulus or not at all. The strength of the nerve impulse remains consistent along the nerve fibre, regardless of the stimulus strength that initiated it.

Q4. Draw the structure of a neuron and explain the roles of neuron, dendrite, and soma briefly? 3

Answer: Neuron Structure:

A neuron consists of three main parts: dendrites, soma (cell body), and axon.

- Dendrites: Dendrites are branch-like structures that extend from the cell body. They receive signals (chemical or electrical) from other neurons or sensory receptors.
- Soma (Cell Body): The soma is the central part of the neuron that contains the nucleus and other organelles. It integrates incoming signals from dendrites and determines whether to transmit signals further to the axon.
- Axon: The axon is a long, slender projection that transmits signals away from the cell body to other neurons, muscles, or glands.
- Neuron: A neuron is a specialized cell that transmits electrical and chemical signals throughout the body. It is the basic unit of the nervous system.
- Dendrite: Dendrites receive signals from other neurons or sensory receptors and transmit these signals towards the cell body.

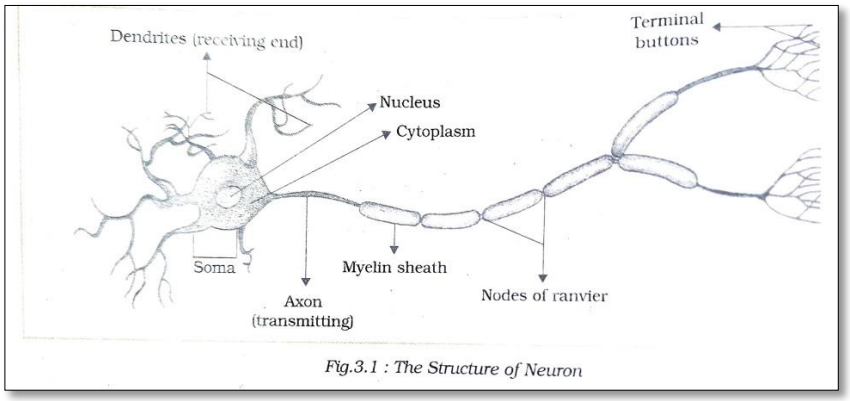

Fig.3.1 : The Structure of Neuron

SECTION C (5X1=5)

Q 1: What are the goals of psychological inquiry? 5

Answer: The goals of psychological inquiry is to understand human behaviour and mental processes:

- Description: Systematically observing and recording behaviour and mental processes to provide accurate and detailed accounts of what occurs.
- Prediction: Identifying patterns in behaviour and mental processes to anticipate future behaviours or outcomes based on observed patterns.
- Explanation: Developing theories and principles that organize and integrate observations, providing reasons for behaviours and mental processes.
- Control: Applying psychological knowledge to influence, modify, or change behaviours in a desired way, often through interventions or treatments.
- Application: Using psychological principles and theories to address practical problems and improve human experiences in various fields like education, health, and industry.

SECTION D (3X1=3)

Q. 1: Imagine you want to learn about how children socialize and make friends at school. What steps would you take to study this in detail? Write about how you would do your research or investigation in psychology. 3

Answer: The following steps can be taken while conducting a research based on the aforementioned case.

1. Observation Preparation: Choose a school and grade where you can watch children playing.
2. Natural Observation Process: Visit the school playground during playtime, observe how children interact, what games they play, and who they play with. Take notes on what you see and hear, like who leads the play and how they solve problems.
3. Interviewing: Ask some children questions like "What do you like to play?" or "Who do you play with?" Write down or record their answers to remember them later.
4. Psychometric testing (if required)
5. Note-taking and recording: Organize your notes and recordings to keep track of everything you've learned. Write down any interesting or important details about how children play together.
6. Analysis and Conclusion: Look over your notes and recordings to find patterns or similarities in how children play. Decide what you've learned about how children interact and play together at school.

******All the best******