B.Sc PSYCHOLOGY

2nd SEM CORE COURSE UNIVERSITY OF CALICUT

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2019 ADMISSION

CBA COLLEGE OF G

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COURSE CODE	PSY2B01
TITLE OF THE COURSE	Basic Themes in psychology-II
SEMESTER IN WHICH THE	2 nd
COURSE TO BE TAUGHT	with one of
NO. OF CREDITS	3 th excellence
NO. OF CONTACT HOURS	64 (4hrs/week)

Objectives of the course:

- To generate interest in Psychology
- To make familiar the basic concept of the field of Psychology with an emphasis on the applications of Psychology in everyday life
- To understand the basics of various theories in Psychology ٠
- To provide basic knowledge about systems and processes like cognition, memory, ٠

motivation and emotions.

Course Details

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MODULE NO.	NAME OF MODULE	MODULE HOURS	
1	Cognitive Processes	16	
2	Memory	18	
3	Motivation	16	
4	Emotion	14	

Module 1: COGNITIVE PROCESSES

- Cognition a general term used to describe thinking and many other aspects of our higher mental processes.
- **Cognition:** The mental activities associated with thought, knowledge and memory.
- Thinking: an activity that involves the manipulation of mental representations of various features of the external world.
- Thinking includes Reasoning: a mental activity through which we transform available information in order to reach conclusions.
- Decision Making: The process of choosing between two or more alternatives on the basis of information about them.
- **Problem solving:** which typically involves processing information in various ways in order to move toward desired goals.
- Language: an aspect of cognition that provides the basis for much of the activity occurring in each of the processes listed so far. It is through language that we share the results of our own cognition with others and receive similar input from them.
- Basic units of thoughts; concepts, Images and Language.
- **Concepts:** Mental categories for objects or events that are similar to one another in certain respects.
- Concepts play a central role in our task of understanding the world around us and representing it mentally.
- concepts allow us to represent a lot of information about diverse objects, events, or ideas in a highly efficient manner.
- artificial concepts are very useful in many areas of mathematics and science.

- Artificial concepts can be clearly defined by a set of rules or properties.
- **Natural Concepts:** Concepts that are not based on a precise set of attributes or properties, do not have clear-cut boundaries, and are often defined by prototypes.
- the boundaries of natural concepts are somewhat indistinct. Such natural concepts are often based on prototypes.
- **Prototypes:** The best or clearest examples of various objects or stimuli in the physical world.
- **Probabilistic strategy:** Strategy seems to adopt in determining whether a specific item fits within a natural concept.
- Images: Concepts are represented by several possibilities.

- First, Concepts are formed, the attributes associated with them may be stored in memory.

- A second possibility is through visual images: mental pictures or representations of objects or events in the external world.

- Finally, it is important to note that concepts are closely related to schemas, cognitive frameworks that represent our knowledge of and assumptions about the world

- To sum up, concepts certainly play an important role in thinking and in our efforts to make sense out of a complex and ever-changing external world.
- **Propositions:** Sentences that relate one concept to another and can stand as separate assertions.
- Verbal Protocol Analysis: A technique for studying cognitive processes in which participants are asked to talk aloud while making a decision or solving a problem.
- **Images:** Mental Pictures of the World-mental images serve important purposes in the thinking process.
- **Reasoning:** Transforming Information to Reach Conclusions

• Formal versus Everyday Reasoning

-In formal reasoning, all the required information is supplied, the problem to be solved is straightforward, there is typically only one correct answer, and the reasoning we apply follows a specific method

- syllogistic reasoning—reasoning in which conclusions are based on two propositions called premises.

Reasoning: Deductive reasoning and Inductive reasoning

- The process of thinking about something, in a rational manner, so as to draw valid conclusions, is known as Reasoning. It is a daily activity that we use to make decisions, which involves the construction of thoughts and converting them into a proposition to give reasons on why we have opted for a particular alternative over the other. Reasoning (logic) can take two forms inductive reasoning or deductive reasoning.
- In inductive reasoning alludes to the logical process, in which specific instances or situations are observed or analysed to establish general principles. In this process, the multiple propositions are believed to provide strong evidence, for the truth of the conclusion. It is used to develop an understanding, on the basis of observing regularities, to ascertain how something works.
- Some Basic Sources of Error

The Role of Mood States: You may not be surprised to learn that the way we feel our current moods or emotions can dramatically reduce our ability to reason effectively.
The Role of Beliefs: Reasoning is often influenced by emotion-laden beliefs. When powerful beliefs come face to face with logical arguments, it is often the latter that give way.0

- The Social Context: Social context can also exert powerful effects on

reasoning (Hilton, 1995). The aspects of the social context contribute significantly to the accuracy of the conclusions we reach.

- **The Confirmation Bias:** The tendency to pay attention primarily to information that confirms existing views or beliefs

- Hindsight Effect: The tendency to assume that we would have been better at predicting actual events than is really true.

- Decision Making: The process of choosing among various courses of action or alternatives.
- Expected Utility: The product of the subjective value of an event and its predicted probability of occurrence
- Heuristics: Mental rules of thumb that permit us to make decisions and judgments in a rapid and efficient manner.
- Availability Heuristic: A cognitive rule of thumb in which the importance or probability of various events is judged on the basis of how readily they come to mind.
- **Representativeness Heuristic:** A mental rule of thumb suggesting that the more closely an event or object resembles typical examples of some concept or category, the more likely it is to belong to that concept or category.
- Anchoring-and-Adjustment Heuristic: A cognitive rule of thumb for decision making in which existing information is accepted as a reference point but then adjusted in light of various factors.
- **Framing**: Presentation of information concerning potential outcomes in terms of gains or in terms of losses.
- Escalation of Commitment: The tendency to become increasingly committed to bad decisions even as losses associated with them increase.

- Naturalistic Decision Making: A movement toward studying decision making as it occurs in applied or real-world settings.
- **Problem Solving:** Efforts to develop or choose among various responses in order to attain desired goals.
- problem solving involve four major aspects:
 - understand the problem oping with excellence
 - formulate potential solutions
 - evaluate each alternative and the outcomes it will produce
 - try potential solutions and evaluate them on the basis of the effects they produce
- Methods for Solving Problems

-**Trial and Error:** A method of solving problems in which possible solutions are tried until one succeeds.

-Algorithm: A rule that guarantees a solution to a specific type of problem.

-Means-Ends Analysis: A technique for solving problems in which the overall problem is divided into parts and efforts are made to solve each part in turn.

-Analogy: A strategy for solving problems based on applying solutions that were previously successful with other problems similar in underlying structure

Facilitating Effective Problem Solving

- Metacognitive Processing: An expanded level of awareness that allows us, in a sense, to observe ourselves in the problem-solving process.

- Factors That Interfere with Effective Problem Solving
- **Functional Fixedness:** The tendency to think of using objects only as they have been used in the past.

- Mental Set: The impact of past experience on present problem solving; specifically, the tendency to retain methods that were successful in the past even if better alternatives now exist.
- Artificial Intelligence: A branch of science that studies the capacity of computers to demonstrate performance that, if it were produced by human beings, would be described as showing intelligence.
- Neural Networks: Computer systems modelled after the brain and made up of highly interconnected elementary computational units that work together in parallel.
- **Creative thinking:** Creative thinking means thinking outside the box. Often, creativity involves lateral thinking, which is the ability to perceive patterns that are not obvious
- Types of creative thinking; convergent and divergent thinking
- Divergent thinking is a thought process or method used to generate creative ideas by exploring many possible solutions. It typically occurs in a spontaneous, free-flowing, "non-linear" manner, such that many ideas are generated in an emergent cognitive fashion.
- Convergent thinking is a term coined by Joy Paul Guilford as the opposite of divergent thinking. It generally means the ability to give the "correct" answer to standard questions that do not require significant creativity, for instance in most tasks in school and on standardized multiple-choice tests for intelligence.
- Characteristics of convergent and divergent thinking explained.
- Difference between convergent and divergent thinking explained
- Stages of creative thought: Some of the stages of creativity thinking are: 1. Preparation 2. Incubation 3. Illumination 4. Verification!
- Language: A system of symbols, plus rules for combining them, used to communicate information.

- Language: Its Basic Nature
- **Phonemes:** A set of sounds basic to a given language.
- Morphemes: The smallest units of speech that convey meaning.
- Syntax: Rules about how units of speech can be combined into sentences in a given language.
- Surface Structure: The actual words of which sentences consist.
- **Deep Structure:** Information that underlies the form of a sentence and is crucial to its meaning.
- Basic components of language development:

-**Phonological Development:** Development of the ability to produce recognizable speech.

-Semantic Development: Development of understanding of the meaning of spoken or written language.

-Grammar: Rules within a given language indicating how words can be combined into meaningful sentences.

-Babbling: An early stage of speech development in which infants emit virtually all known sounds of human speech.

- Semantic Development:
- The Acquisition of Meaning: Children's vocabulary increases rapidly after they reach the age of two, and they learn many new words each day
- The Development of Grammar: Every language has grammar, a set of rules dictating how words can be combined into sentences. Children must learn to follow these rules, as well as to utter sounds that others can recognize as words
- The Role of Nonverbal Communication in Language Development along with research findings.

- Language with cognition- Linguistic Relativity Hypothesis: The view that language shapes thought.
- Animals possess language- Growing evidence suggests that some species of animals, including bonobo chimpanzees.



Module 2 - MEMORY

- Memory comes from the latin word memoria which means remembrance or historical account.
- Key process in memory: 1. Encoding 2. Storage 3. Retrieval
- Types of memory:
- 1. Sensory memory
- 2. Short term memory (STM)
- 3. Long term memory (LTM)
- sensory memory: information is first encoded and can hold an exact copy of what is see or hear, for a few seconds (>1sec)
- STM : it is much aware of STM because it persist more than a sensory store. (>20 sec).
 It loses very quickly.
- Rehearsal and chunking are the techniques to enhance STM
- Working memory: it is defined as a set of temporary memory stores that actively manipulate and rehearse information. It includes a central executive system and two subsidiary slave systems.
- LTM: here the information can be kept for a longer period of time. (Lifelong). It includes various skills, memories of episodes, laws, theories, concept etc
- Types of LTM:
- 1. Declarative memory and procedural memory
- 2. Episodic memory and semantic memory
- 3. Explicit memory and implicit memory

- **Priming:** exposure of one stimulus influences a response to a subsequent stimulus, without any conscious intention.
- Flashbulb memory: highly emotional events are remembered far better than ordinary.
- **Tip Of the Tongue**(**TOT**): feeling that a memory is available but not quite retrievable.
- Measuring memory:
- 1. Recall- reproduce memorised inf with a minimum of external cues.
- 2. Recognition: ability to correctly identify previously learned inf.
- 3. Relearning: learning again something that was previously learned.
- **Retrieval cues:** Encoding specificity: memory is improved when inf available at encoding us also available at retrieval.
- State dependent memory: inf is more easily retrieved when one is in the same emotional state as when the memory was originally encoded.
- Context dependent memory: is more easily retrieved in context in which it was encoded and store.
- **Reconstructive memory:** the process of bringing up old memories. Here the chance of aulter and modifying the memory is high.
- Source monitoring: the unconscious mental test that humans perform inorder to determine if a memory is real and accurate as opposed to being from a source like dream or a movie.
- Eyewitness testimony: it is an account given by people of an event they have witnessed.
- False memory: fabricated or distorted recollection of an event.
- Metamemory: self monitoring and self control of our own memory process.

- Serial position effect: it shows both the primacy and recency effect. Primacy effect occurs when the items presented early in a list are remembered better and recency effect occurs when the items presented late in a list are remembered best.
- Forgetting: inability to recall information. forgetting curve (Ebbinghaus): in this curve we can see a rapid initial loss of memory. It occurs first nine hrs after an exposure to new material.
- Reasons of forgetting: 1. Ineffective encoding, 2. Decay, 3. Interference, 4. Retrieval failure, 5. Motivated forgetting, 6. Repression
- Strategies for remembering: 1. Rehearsal, 2. Elaboration, 3. Organization



Module 3 – MOTIVATION

- Motivation: Internal processes that activate, guide, and maintain behavior over time.
- A model of Motivation: an important characteristic of motives is that we never observe them directly. We infer their existence from what people say about the way they feel and from observing that people and animals work toward certain goals.
- Sources of Motivation-Drives: A theory of motivation suggesting that behavior is "pushed" from within by drives stemming from basic biological needs.
- **Incentives:** Rewards individuals seek to attain.
- **Instincts**: Patterns of behavior assumed to be universal in a species.
- Theories of motivation
- Drive theory: A theory of motivation suggesting that behavior is "pushed" from within by drives stemming from basic biological needs.
- Homeostasis: A state of physiological balance within the body.
- According to drive theory, biological needs lead to the arousal of drives, which activate efforts to reduce them. Behaviors that are successful in reducing drives are strengthened and tend to be repeated when the drive is aroused again. Behaviors that fail to reduce the drive are weakened and are less likely to recur when the drive is aroused once again.



- Instinct Theory: A theory of motivation suggesting that many forms of behavior stem from innate urges or tendencies.
- **Hierarchy of needs theory**: In Maslow's theory of motivation, an arrangement of needs from the most basic to those at the highest levels.



- Arousal theory Yerkes-Dodson's Law: A theory of motivation suggesting that human beings seek an optimal level of arousal, not minimal levels of arousal. Yerkes–Dodson Law: The suggestion that the level of arousal beyond which performance begins to decline is a function of task difficulty.
- **optimal arousal**—a level of arousal that is best suited to our personal characteristics and whatever activity in which we are currently engaged
- **Goal setting theory**: This theory states that goal setting is essentially linked to task performance. It states that specific and challenging goals along with appropriate feedback contribute to higher and better task performance.

- **Evolutionary theory**: According to evolutionary psychology, individuals are motivated to engage in behaviors that maximize their genetic fitness.
- **Cognitive theories**: Cognitive theories of motivation seek to explain our behaviors as a product of the careful study and active processing and interpretation of information received.
- **Balance theory**: Balance Theory Balance Theory is a motivational theory of attitude change proposed by Fritz Heider, which conceptualizes the consistency motive as a drive toward psychological balance. Heider proposed that "sentiment" or liking relationships are balanced if the affect valence in a system multiplies out to a positive result.
- **Cognitive dissonance theory**: The theory of cognitive dissonance proposes that people are averse to inconsistencies within their own minds. It offers one explanation for why people sometimes make an effort to adjust their thinking when their own thoughts, words, or behaviors seem to clash with each other.
- Expectancy theory: A theory of motivation suggesting that behavior is "pulled" by expectations of desirable outcomes.
- Work Motivation: The tendency to expend energy and effort on one's job or on a specific task.
- Attribution theory: Kelley's attribution theory emphasizes our use of consen5us information, consistency of behavior, and distinctiveness of behavior in making inferences about the internal or external causes M another's behavior
- Types of Motives: Psychologists have divided motives into three types—Biological motives, social motives and personal motives!
- **Biological motives and learned motives** : the biological motives are to a large extent, rooted in the physiological state of the body. There are many such motives, including

hunger, thirst, a desire for sex, temperature regulation, sleep, pain avoidance and a need for oxygen.

- The motivation of hunger and eating: The motivation to obtain and consume food.
- **Biological factors in the regulation of hunger:** Eating is regulated by complex biochemical systems within the body involving detector cells in the hypothalamus and elsewhere; it is also affected by the sight of food, by feedback from chewing and swallowing, and by cultural factors.
- Environmental factors in the regulation of hunger: the sight of food, cultural facts, feeling of disgust, factors of weight gain, stress etc.
- Sexual motivation: motivation to engage in various forms of sexual relations.
- Gonads: the primary sex organs males
- **Ovary:** the primary sex organ females.
- Hormones and human sexual behaviour: Testosterone in males, Estrogen in females are the sex hormones. In human sexual behaviours there are four distinct phase like, excitement phase, plateau phase, orgasmic phase and resolution phase. In males later a refractory period may occur.
- Sexual orientation. **Homosexual** (Sexual Orientation): A sexual orientation in which individuals prefer sexual relations with members of their own sex.
- **Bisexual** (Sexual Orientation): A sexual orientation in which individuals seek and enjoy sexual contact with members of both sexes.
- **Heterosexual** (Sexual Orientation): A sexual orientation in which individuals prefer sexual relations with members of the opposite sex.
- Sexual Jealousy: A negative state aroused by a perceived threat to a sexual relationship with another person.

- Achievement Motivation: The desire to accomplish difficult tasks and meet standards of excellence.
- Need for Cognition: Motivation for engaging in effortful cognitive activities.
- Presence of Individual differences in achievement motivation through research findings situational determinants of achievement behaviour: Situational determinants have an incomplete stimulation function; the way of the behavior is dogged by an individual's character in achievement motivation. In the relation to our earlier difference between motive and motivation, this method represents the reading of motivation based exclusively on reasons and not on motivation.
- Measuring achievement motivation: **Thematic Apperception Test:** A psychological test used to assess individual differences in several different motives, such as achievement motivation and power motivation.
- Aggressive motive: Aggression: Behavior directed toward the goal of harming another living being who wishes to avoid such treatment.
- Aggressive Motivation: The desire to harm or injure others in some manner.
- **Frustration:** The blocking of ongoing, goal-directed behavior.
- Workplace Violence: Violent outbursts in which employees attack and even kill other persons with whom they work.
- **Power motive:** The key defining element of the power motive is one person having an impact on the behavior or emotions of another, or **being concerned about prestige and reputation**. This basic imagery is often elaborated with anticipations, actions designed to have impact, prestige, pleasure at reaching the goal, and so forth.
- Affiliation motive: Affiliation motive is the need for affiliation which makes us seek for the company of other people.
- Intrinsic and extrinsic motivation:

-Intrinsic motivation is when you engage in a behavior because you find it rewarding. You are performing an activity for its own sake rather than from the desire for some external reward. The behavior itself is its own reward

-Extrinsic motivation is when we are motivated to perform a behavior or engage in an activity because we want to earn a reward or avoid punishment. You will engage in behavior not because you enjoy it or because you find it satisfying, but because you expect to get something in return or avoid something unpleasant.



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Module 4 - EMOTION

- Emotion: (APA), emotion is defined as "a complex reaction pattern, involving experiential, behavioral and physiological elements."
- The elements of emotional experience: Subjective Experiences, Physiological Responses and Behavioral Responses.
- The cognitive component: component is described as how we interpret emotions and think about situations.
- The physiological component: the component is how the body reacts to an emotion. Eg; before sitting in a exam hall, your body feels sweaty, and your heart beats faster.
- The behavioural component: The components is how you express and show your emotions. Eg: after good news, you smile and behave more positively to those around you
- **Primary emotions:** Primary emotions are the body's first response, and they are usually very easy to identify because they are so strong.
- Emotion and the brain: Brain is also involved in directing the behaviour driven by the emotional state and is necessary for the emotional feelings we have.
- **Physiology and emotion:** fight or flight, sudden death, lie detectors.
- Expression of emotions: Facial expressions, non-verbal cues and body language;

• Assessment of emotions: Emotions can be studied in the laboratory by conducting different experiments. It is important to judge the emotions.

Theories of emotion:

- James-Lang theory: A theory of emotion suggesting that emotion- provoking events produce various physiological reactions and that recognition of these is responsible for subjective emotional experiences. Facial Feedback Hypothesis: A hypothesis indicating that facial expressions can influence as well as reflect emotional states
- Cannon-Bard theory: A theory of emotion suggesting that various emotion-provoking events simultaneously produce subjective reactions labeled as emotions and physiological arousal
- **Opponent process theory:** A theory suggesting that an emotional reaction is followed automatically by an opposite reaction.

Cognitive appraisal theories of emotion.

- Schachter's two-factor theory: A theory of emotion suggesting that our subjective emotional states are determined, at least in part, by the cognitive labels we attach to feelings of arousal; also known as two-factor theory.
- Lazarus's theory of cognitive appraisal: The theory says that the emotions we feel result from appraisals, or evaluations, of information coming from the environmental situation and from within the body
- Evolutionary theories of emotion: The theory of evolution and natural selection has been applied to the study of human communication, mainly by Charles Darwin in his 1872 work, The Expression of the Emotions in Man and Animals. Paul Ekman is most noted in this field for conducting research involving facial expressions of emotions.

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