

# CHILD DEVELOPMENT & PEDAGOGY

for CTET & TETs Exams 2021  
PAPER-I & II

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Reeta Chauhan / S. Krishna Kumari

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Prepared by:

Reeta Chauhan / S. Krishna Kumari



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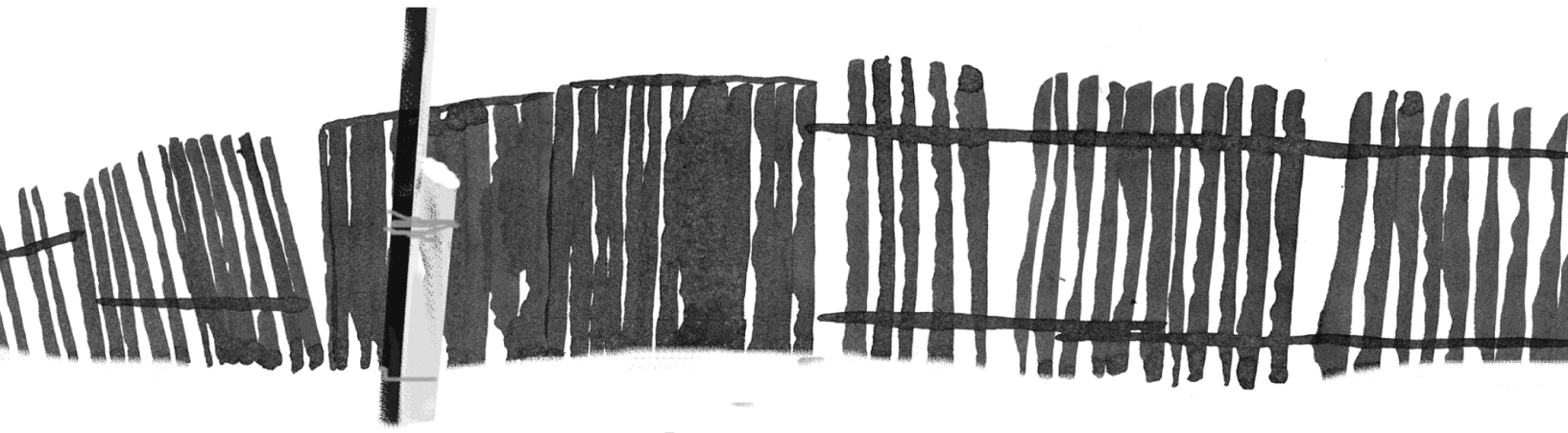
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### CHILD DEVELOPMENT AND PEDAGOGY

S. no.	Chapter's Name	26-6-2011	29-1-2012	18-11-2012	28-7-2013	16-2-2014	21-9-2014	22-2-2015	20-9-2015	21-2-2016	18-9-2016	9-12-2018	9-7-2019	8-12-2019
1.	Concept of development and its relationship with learning and principles	2	2	3	4	1	4	5	5	3	2	1	3	4
2.	Influence of heredity and environment	0	1	0	1	1	0	0	1	0	1	1	0	
3.	Socialisation processes: social world and children (teacher, parents, peers)	0	1	1	1	0	1	1	2	1	1	0	1	1
4.	Piaget, Kohlberg and Vygotsky: constructs and critical perspectives	5	3	1	2	2	4	2	2	4	7	4	6	5
5.	Child centred and progressive education	1	2	0	0	2	0	0	1	2	1	2	1	1
6.	Critical perspective of the construct of intelligence, multi-dimensional intelligence	1	1	2	3	2	3	1	2	1	1	1	1	1
7.	Language and thought	0	0	1	0	1	1	2	3	3				2
8.	Gender as a social construct, gender roles, gender bias and educational practice	0	1	1	1	0	3	3	0	1	1	2	2	2
9.	Individual differences	0	1	1	2	1		1	2	1	1	0	0	1
10.	Evaluation and assessment	1	1	1	2	2	3	3	1	1	1	2	1	1
11.	Achievement tests		1	4	1	0	1	1	0	0	1	0	0	

S. no.	Chapter's Name	26-6-2011	29-1-2012	18-11-2012	28-7-2013	16-2-2014	21-9-2014	22-2-2015	20-9-2015	21-2-2016	18-9-2016	9-12-2018	9-7-2019	8-12-2019
12.	Addressing learners from diverse backgrounds including disadvantaged and deprived	2	2	2	3	3	1	1	2	2	3	2	2	2
13.	Addressing the needs of the children with learning difficulties, impairment	2	1	2	3	1		2	1	2	1	0	0	1
14.	Gifted / talented, creative, specially abled learners	2	0	1	2	2	1	1	2	1	2	3	1	
15.	Thinking and learning of children	2	2	2	1	2	1	1	1	0	0	2	0	1
16.	Basic processes of teaching and learning: strategies of learning, social activity and social context of learning	4	7	2	1	1	0	3	2	2	3	4	5	
17.	Child as a problem solver and 'scientific investigator'	3	3	4	2	6	4	0	2	6	2	2	4	6
18.	Cognition and emotions	3	1	1								1	1	1
19.	Motivation and learning	2	0	1	1		3	1	1	0	3	1	2	1

## Analytical Chart of CTET (6-8) Question Papers

### CHILD DEVELOPMENT AND PEDAGOGY

S. no.	Chapter's Name	26-6-2011	29-1-2012	18-11-2012	28-7-2013	16-2-2014	21-9-2014	22-2-2015	20-9-2015	21-2-2016	18-9-2016	9-12-2018	9-7-2019	8-12-2019
1.	Concept of development and its relationship with learning and principles	6	1	2	3	1	1	2	3	3	3	3	2	2
2.	Influence of heredity and environment	1	2	0	0	1	0	1	1	0	1	1	0	1
3.	Socialisation processes: social world and children (teacher, parents, peers)	1	1	0	1	1	0	1	1	2	0	0	1	1
4.	Piaget, Kohlberg and Vygotsky: constructs and critical perspectives	1	3	2	4	5	4	7	3	5	5	0	6	6
5.	Child centred and progressive education	0	1	2	0	1	1	1	2	1	1	1	1	1
6.	Critical perspective of the construct of intelligence, multi-dimensional intelligence	0	2	2	2	3	3	1	2	1	0	1	0	1
7.	Language and thought	1		1	0	0	0	1		1	2	2	0	0
8.	Gender as a social construct, gender roles, gender bias and educational practice	1	1	2	1	0	1		2	2	1	1	2	1
9.	Individual differences	0	1	0	0	0	1		0	0	0	1	1	
10.	Evaluation and assessment	4	1	1	3	4	3	2	2	2	0	1	1	1
11.	Achievement tests	0		0	1	0	0	0	0	0	0	0	1	



S. no.	Chapter's Name	26-6-2011	29-1-2012	18-11-2012	28-7-2013	16-2-2014	21-9-2014	22-2-2015	20-9-2015	21-2-2016	18-9-2016	9-12-2018	9-7-2019	8-12-2019
12.	Addressing learners from diverse backgrounds including disadvantaged and deprived	1	1	3	3	3	2	3	1	3	4	4	2	2
13.	Addressing the needs of the children with learning difficulties, impairment	1	3	0	1	3	3	0	1	2	1	2	2	3
14.	Gifted / talented, creative, specially abled learners	3	3	2	0	1	2	2	1	1	1	1	1	1
15.	Thinking and learning of children	2	1	1	0	0	0	3	2	0	2	1		1
16.	Basic processes of teaching and learning: strategies of learning, social activity and social context of learning	3	2	3	3	3	1	1	5	1	3	2	5	3
17.	Child as a problem solver and 'scientific investigator'	4	5	5	6	3	5	4	1	4	4	6	3	3
18.	Cognition and emotions	0		0	0	0	1	0	0	0	1	3		1
19.	Motivation and learning	1	2	2	2	1	2	1	3	2	1	0	2	2

# CTET (1-5) & (6-8) SYLLABUS

## CHILD DEVELOPMENT AND PEDAGOGY

### I. Child Development and Pedagogy

30 Questions

#### (a) Child Development (Primary School Child)

15 Questions

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- ◆ Principles of the development of children
- ◆ Influence of Heredity & Environment
- ◆ Socialization processes: Social world & children (Teacher, Parents, Peers)
- ◆ Piaget, Kohlberg and Vygotsky: constructs and critical perspectives
- ◆ Concepts of child-centered and progressive education
- ◆ Critical perspective of the construct of Intelligence
- ◆ Multi-Dimensional Intelligence
- ◆ Language & Thought
- ◆ Gender as a social construct; gender roles, gender-bias and educational practice
- ◆ Individual differences among learners, understanding differences based on diversity of language, caste, gender, community, religion etc.
- ◆ Distinction between Assessment for learning and assessment of learning; School-Based Assessment, Continuous & Comprehensive Evaluation: perspective and practice
- ◆ Formulating appropriate questions for assessing readiness levels of learners; for enhancing learning and critical thinking in the classroom and for assessing learner achievement.

#### (b) Concept of Inclusive education and understanding children with special needs

5 Questions

- ◆ Addressing learners from diverse backgrounds including disadvantaged and deprived
- ◆ Addressing the needs of children with learning difficulties, 'impairment' etc.
- ◆ Addressing the Talented, Creative, Specially abled Learners

#### (c) Learning and Pedagogy

10 Questions

- ◆ How children think and learn; how and why children 'fail' to achieve success in school performance.
- ◆ Basic processes of teaching and learning; children's strategies of learning; learning as a social activity; social context of learning.
- ◆ Child as a problem solver and a 'scientific investigator'
- ◆ Alternative conceptions of learning in children, understanding children's 'errors' as significant steps in the learning process.
- ◆ Cognition & Emotions
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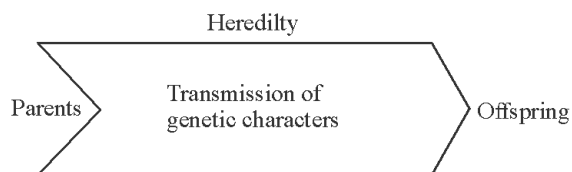


# Chapter 2

## INFLUENCE OF HEREDITY AND ENVIRONMENT

You must have come across with dull children of bright parents or bright children of dull parents and you must have exclaimed : “How is it that the children of such intelligent parents are dullards or the children of pious persons are rogues !” Such an exclamation on your part is largely on account of your attitude which you have developed through the influence of your social group. You have a fixed notion that children are always like their parents. To some degree, this attitude of yours may be on account of your own observation as well. But it is more plausible that your society which is generally caste-ridden and which puts much emphasis on the heredity factors must have unconsciously influenced this attitude of yours. It may also be true in certain cases that the children born in good families show good behaviour and conduct. But this may be due to the family traditions, customs, and manners of living. Or in short, it may be on account of a healthy family environment. What then are the reasons for our being what we are ? Is our growth as well as social, moral and intellectual development based on our heredity, or, on the environment in which we are born ? This is a very ticklish problem and various researches have tried to resolve it. It is a pet theme for many novelists also who either give excessive importance to environment or to heredity. In providing education to our children, we cannot be successful unless we understand the mechanism of heredity and the influence of environment upon them. Our understanding about the role of heredity and environment is very essential. In this chapter, we will deal with the issue of heredity and environment.

### Concept of Heredity



Heredity is considered as the sum total of inborn individual traits. Biologically it has been defined as ‘the sum total of the traits potentially present in the fertilized ovum.’ The members of the species resemble one another and possess characteristics common to their respective species. Heredity is a biological concept, which means that an offspring inherits most of

the personality traits of his parents and forefathers which make him resemble them.

Before we take into consideration the relative importance of heredity and environment, let us understand as to what we mean by heredity. Heredity is considered as *the sum total of inborn individual traits*. Biologically it has been defined as “*the sum total of the traits potentially present in the fertilized ovum.*” It has been seen that a cat gives birth to a kitten, a dog to a puppy and a human-being to a human-being. It is on account of this factor that we say that the class of dogs will give birth to puppies, or that ‘*like begets like*’. However, we find much variation between different dogs or cats or human-beings even if they are born to the same parents. The reason to this has been explained by Galton, Weismann and some other biologists.

Every individual gains following three chief traits from his parents and fore fathers and called heredity :

- I. Similarities,
- II. Dissimilarities and
- III. Some un-natural strangeness.

### Some Definitions of Heredity :

- “Heredity may be defined as what one gets from his ancestral stock through his parents.” —**H. A. Peterson**
- “Heredity covers all the factors that are present in the individual when he begins life not at birth but at the time of conception about nine months before birth.”  
—**R. S. Woodworth**
- “One’s heredity consists off all the structures, physical characteristics, functions or capacities derived from parents, other ancestry or species.”  
—**O. B. Douglas and B. F. Holland**
- “Heredity is transmission of traits from parents of offsprings.”:  
**Ruth Benedict**
- “Heredity is mainly a genetic relation between successive generations.”  
—**J.A. Thomson**
- “Every act of heredity in nature is the transmission of certain biological or psychological characteristics by the parents to their offspring through generations. The com-

plex of the characteristics thus transmitted is known by the name of heredity.” —**P. Gisbert**

- “Heredity is the sum total of inborn individual traits.” —**B. N. Jha**

### Laws/Principles of Heredity :

- I. Law of Continuity of Germplasm—As a result of sexual reproduction the zygote forms. It occurs by the combination of a sperm with an egg. This zygote carries the cytoplasm of the sperm and the egg partially. This is the germplasm with the genetic material (DNA) of the germ cells that is sperm and the egg. This is continuously carried on from one generation to next generation.
- II. Law of Resemblance—The offspring resembles its parents and has similar traits. It advocates the philosophy that ‘like begets like’.
- III. Law of Variation—A controversy to the above law, stating that the offspring does not absolutely resemble its parents. However, each individual is unique in its makeup. Differences are common among the parents and the children.
- IV. Law of Regression—It states that sometimes altogether different traits may occur in the offspring. A dull couple may give birth to a very intelligent child.
- V. Law of Transmission of Acquired Traits—Other than the inborn traits, sometimes the acquired traits are transmitted from parents to the offspring.
- VI. Mendel’s Laws—Gregor Johann Mendel (1866) contributed significantly in developing the laws of heredity. These are the law of segregation; law of dominance; and the law of independent assortment.
  - Law of segregation states that a gene pair determines each of the inherited traits. The genes of the parent sex cells comprise of only one of such gene (allele) of the pair that is separate and is exhibited in the gene pool of the offspring. The two genes may be similar (homozygous) or dissimilar (heterozygous) in nature.
  - Law of dominance states that the hidden traits of a generation survive and may dominate in future generations. Certain genetic diseases may show their symptoms in alternate generations. Its traits are hidden or remain recessive only to dominate in future.
  - Law of independent assortment states that distinct genes separate from one another independently when reproductive cells are formed. The parent features do not always match with that of their offspring. Tall parents may not always have tall children.

### Influence of Heredity on Child :

- (1) **On physical symptoms** - Physical features like height, weight, body frame and structure of body organs are inherited from parents. Similarly sensorimotor development is probably determined genetically.
- (2) **On behaviour and original power** - According Thorndike child’s inherent power is governed by his heredity. Individual behaviour is governed by motivating elements and emotions, and these original powers are transmitted from parents.

- (3) **On Character** - Most of the attributes related to character of an individual are well decided and guided by his parents.
- (4) **On social development** - Heredity influences child’s social feelings and guides process, speed of social development.
- (5) **On mental development** - The evidence indicates that for children born with very wide range of general mental potential and with different potentialities for music, paintings, the other arts and skills, public speaking and so on, limits are set genetically.
- (6) **On emotions, health and personality** - The circumstances of life have a dominant influence on emotions, health and personality. The emotional stability depends upon physical structures – nervous system, glands and organs. However, people also differ in their potential stability and as a result; more people are disposed by heredity to mental instability than others.

### Concept of Environment

In the ordinary sense of the term, environment means all that is found around the individual. Douglas and Holland, in their book, *Educational Psychology*, define the term, ‘Environment’ as “a word which describes, in the aggregate, all of the extrinsic (external) forces, influences and conditions, which affect the life, nature, behaviour and the growth, development and maturation of living organisms.” In fact, environment constitutes all which is found in the child’s, mental moral and spiritual universe.

- “Environment is an external force which influences us.” —**J. S. Ross**
- “Environment is everything immediately surrounding an object and exerting a direct influence on it.” —**P. Gisbert**
- “The environment is everything that affects the individual except his genes.” —**Anne Anastasi**
- “A person’s environment consists of the sum total of stimulation which he receives from his conception until his death.” —**Boring, Langfield and Weld**
- “The term environment is used to describe, in aggregate all the external forces, influences and conditions, which affect the life, nature, behaviour and the growth, development and maturation of living organisms.” —**Douglas and Holland**
- “Environment covers all the outside factors that have acted on the individual since he begins life.” —**R. S. Woodworth and D. G. Marques**
- “Environment is the totality of conditions that serve to stimulate behaviour or act to bring about modification to behaviour.” —**Ruch**
- “The organism itself, the life structure is the product of past life and past environment. Environment is the present from the very beginning of life, even in the germ cells.”

### Types of Environment

- **Natural Environment** includes a set of natural resources that human beings are surrounded by, like air, water, rocks, minerals, and plants and animals. Natural resources affect the development of the child.

- **Intellectual or Mental Environment** refers to the forces that affect the thought processes in children.
- **Emotional Environment** is that environment that a child receives from its family, friends and immediate environment. Love / care / support and fear / anger have an impact on the development of a child.
- **Social or Cultural Environment** is the set of behaviors, principles, ethics, customs and social practices play a vital role on child's development.

## Environmental factors that influence the Child's growth and Development

The environmental conditions that have an influence that have an influence on growth and development of a child are given below :

- Individual's physical growth
- Individual's psychological growth
- Children's behaviour pattern
- Intellectual development
- Personality development
- Learning habits

In addition to the above the following also have an impact on child's growth

- The **nurture** factor refers to how a child is being brought up by its parents. Which kind of emotional and moral values are being inculcated in making the child understand its role in future?
- **Stimulation** is motivating or inspiring environment that a child is exposed to. The cognitive development mainly rests on such stimulating learning experiences.
- **Nutrition** that is healthy and balanced and timely is most essential to a growing child. Lack of proper nutrition interferes with appropriate maturation of child's body and brain.
- **Socioeconomic status** is directly related to the growth of the child. Children from well to do families have multiple opportunities and sources to learn, whereas a child from a poor socioeconomic status cannot receive enough nutrition, nor support nor exposure nor opportunities to learn.

## Relative Importance of Heredity and Environment

- Man is a product of the interaction of environment and heredity. The inborn traits give a distinctive mark to an individual, but it is for the environment to shape him in a proper form.
- All traits depend both on genetic and environmental factors. Heredity and environment interact to produce their effect.
- Children inherit genetic tendencies from their parents and parents also provide an environment that matches their own genetics tendencies. The child's genetic tendencies elicit stimulation from the environment that supports a particular trait. Thus genes evoke through environmental support.

## Importance of Heredity and Environment for Teachers

From the educational point of view heredity and environment are very important. It is true that heredity cannot be changed, but keeping it in the mind, proper environment can be given to the child for the development. Modern education is conceived as 'child centered education.' Even though the extent of heredity's and environment's influences cannot be undetermined, but play very important role in child's education, which can be presented in following points :

- The teacher should not be in a hurry to form their notions about the capabilities of the children by merely noticing their heredity or environment. Due to heredity varied individual differences are found in children's physical development. Physical development affects the education of a child. So, teachers should help him to achieve proper physical growth/physique by preparing educational plans and teaching plans according the need of the child.
- Many people have advanced strong arguments on both sides, but the issue as to which : heredity or environment : is more important in human development is far from having been settled. Many investigations and experiments have been carried out from *Galton's* time to the present time on the issue without an adequate answer. This is because it is not easy for psychologists to study the influence of heredity on human beings due to moral and social reasons. It would be morally wrong and socially unacceptable for a psychologist to ask a man with a 140 I.Q. to mate with a woman who has 30 I.Q., so that he can study the effect of heredity on their child.

Teachers are, however, more interested in the influence of environment on a child's development, as they make attempts to change the child's environment in order to effect normal mental development.

- Through the study of heredity and development teacher can know the abilities, capacities, interests, aptitudes and other personality traits of individual pupils. Considering the individual difference teachers plan their teaching strategies.
- Making appropriate adjustments with respect to varying individual differences, the adapted teaching methods would be very effective.
- Mental health is the product of combination of heredity and environment. So teachers should make school and classroom environment very creative, healthy and civilized. Cocurricular activities should be planned accordingly.
- Due to their heredity and environment many children are gifted, much more able than the average children. They can perform those activities which are given to them earlier than the normal children. Gifted children should be encouraged to take up individual study projects.
- Teacher can know the social, psychological and educational needs of his students by knowing their heredity and environment. Teacher can help them to fulfil their needs according their perspectives.

- (viii) Along with inherent factors, environmental factors are also responsible for backwardness in children. Knowing these factors the teacher help the child to get rid of his backwardness. The remedy of backwardness lies in the efforts of teachers to a great extent.
- (ix) Occupational training guidance can be given according to their heredity and environment.

- (x) Teacher can use heredity characteristics in moral problems, as well as in adjustment problems. Classroom environment should be very creative for the overall development of the child.
- It is evident from the foregoing account that the study of heredity and environment is very important for educational purposes.

## Practice Questions

- The qualities which children get from their parents are called—  
(A) Clan (B) Heredity  
(C) Atmosphere (D) None of these
- Human development in the product of joint contribution of both— (RTET, 2011)  
(A) Parents and teachers  
(B) Sociological and cultural factors  
(C) Heredity and environment  
(D) None of these
- The transmission of traits from parents to off springs is called— (PTET, 2011)  
(A) Environment (B) Genes  
(C) Heredity (D) Homeostasis
- Development of child is the result of—  
(A) Heredity  
(B) Environment  
(C) Interaction of heredity and environment  
(D) Economic factors
- Heredity is considered as a ..... social structure. (CTET, 2011)  
(A) Secondary  
(B) Dynamic  
(C) Static  
(D) Primary
- Many of our physical characteristics, like, height, bone structure, hair and eye colours are—  
(A) Inherited  
(B) Non-inherited  
(C) Secondary qualities  
(D) None of these
- Human personality is the result of— (CTET, 2012)  
(A) Only heredity  
(B) Upbringing and education  
(C) Interaction between heredity and environment  
(D) Only environment
- Which one of the followings is true about the role of heredity and environment in the development of a child ? (CTET, 2013)  
(A) Both heredity and environment are contributed 50% - 50% in the development of a child  
(B) The relative contributions of peers and genes are not additive  
(C) Heredity and environment do not operated together  
(D) Propensity is related to environment while actual development requires heredity
- The effect of relation of heredity and environment on the individual's growth, occurs in one of the following way— (HTET, 2013)  
(A) Heredity affects the individual  
(B) Environment affects the individual  
(C) Heredity Environment affects the individual  
(D) None of the above
- The determinants of individual differences in humans relate to—  
(A) Differences in their environment  
(B) Differences in their heredity  
(C) Differences in both heredity and environment  
(D) An interaction between the factors of heredity and factors of environment
- Which one of the following statements is not true ? (UPTET, 2014)  
(A) Heredity is the transmission of traits from parents of offspring  
(B) Development is the product of the interaction of the organism and its environment  
(C) Heredity is the sublimation of inborn individual traits  
(D) Heredity is the transmission from parents to offsprings of physical and mental characteristics
- In the context of 'nature- nature' debate, which one of the following statements seems appropriate to you ? (CTET, 2015)  
(A) A child is like a blank state whose character can be molded by the environment into any shape  
(B) Children are genetically predisposed to what they would be irrespective of whatever environment they grow up in  
(C) Environmental influences only have a little value in shaping up a child's behaviour which is primarily genetically determined  
(D) Heredity and environment are inseparably interwoven and both influence development
- The nature - nature debate refers to— (CTET, 2014)  
(A) Genetics and environment  
(B) Behaviour and environment  
(C) Environment and biology  
(D) Environment and upbringing
- ..... is the sum total of innate personality characteristics. (UPTET, 2016)  
(A) Similarity  
(B) Continuity  
(C) Heredity  
(D) Pugnacity
- According to ..... 'Development of the child is the product of heredity and environment ?' (UPTET, 2016)  
(A) Woodworth  
(B) Garret  
(C) Holland  
(D) Thorndike
- 'Environmental factors do not play any role in shaping an individual, since growth of each individual is determined by this genetic makeup.' This state is— (CTET, 2016)  
(A) Correct, since there have been several researches to prove that genetic material alone predicts an individual's development  
(B) Incorrect, since environmental factors contribute little in an individual's growth and development

- (C) Incorrect, since there have been several researches to prove that environment can have a major influence on development
- (D) Correct, since genetic makeup of an individual is very strong
17. Which of the following statements is true regarding the role of heredity and environment in human development?  
(CTET February 2014 Paper-2)
- (A) The role of environment is almost fixed, whereas the impact heredity can be altered
- (B) The theories based on the behaviorism are largely based on the role of nature in human development
- (C) The relative effects of heredity and environment vary in different areas of development
- (D) The policy of compensatory discrimination of the government of India is based on the role of nature in human development
18. Primary school children will learn most effectively in an atmosphere—  
(CTET September 2016 paper-1)
- (A) Where the focus and stress are only on mastering primary cognitive skills of reading, writing and mathematics
- (B) Where the teacher leads all the learning and accepts students to play a passive role
- (C) Where their emotional needs are met and they feel that they are valued
- (D) Where the teacher is authoritative and clearly dictates what should be done
19. Which of the following statements is true about the role of heredity and environment?  
(CTET December 2018 Paper-1)
- (A) Certain aspects of development are influenced more by heredity and others more by environment
- (B) A child's ability to learn and perform is completely decided by the genes
- (C) Good care and a nutritious diet can fight off any disorder a child is born with
- (D) Environment plays a significant role only in the child's language development
20. "Environment is an external force which influences us". Who said this?
- (A) Woodworth
- (B) E J Ross
- (C) Anastasi
- (D) None of the above
21. Which of the following is correctly matched?
- (A) Physical attributes: environment
- (B) Development of personality: heredity
- (C) Intellectual superiority: environment
- (D) Mental growth of children: environment of a particular race
22. Which of the following is not the law of heredity?
- (A) Similarity
- (B) Variation
- (C) Regression
- (D) Motivation
23. Which of the following traits can be related to heredity?
- (A) Insight
- (B) Appearance
- (C) Knowledge
- (D) Hard work
24. Which thinker defined environment as "anything immediately surrounding an object and exerting a direct influence on it"?
- (A) Ann Nastase
- (B) Holand and Douglas
- (C) P Gisbert
- (D) E J Ross
25. Which among the following forms of development is influenced by heredity and environment?
- (1) Social development
- (2) Emotional development
- (3) Mental development
- (4) Physical development
- (A) Only (1) (B) Only (1) and (2)
- (C) (1), (2) and (3) (D) All of the above
26. Which of the following is an environmental factor?
- (A) Family
- (B) Pre-disposition to certain diseases like diabetes
- (C) Color of the eyes
- (D) Blood group type
27. Which of the following is predominantly a heredity related factor?
- (A) Participation in social activities
- (B) Attitude towards peer group
- (C) Thinking pattern
- (D) Color of the eyes
28. The physical characteristics of a child is influenced by—
- (A) Father's DNA
- (B) Mother's DNA
- (C) DNA of both mother and father
- (D) Environment
29. Environmental factors that shape development include all of the following except
- (A) Culture
- (B) Quality of education
- (C) Physique
- (D) Quality of nutrition
30. Heredity and environment are ..... to each other.
- (A) Dependent
- (B) Complementary
- (C) Cooperative
- (D) All of the above
31. Do children acquire language because they are genetically predisposed to do so or because parents intensively teach them from an early age? This question essentially highlights—
- (A) Whether development is a continuous process or discontinuous one
- (B) The influence of cognition on development of language
- (C) The nature-nurture debate
- (D) The discussion on development is a multi-factor ability

## EXPLANATIONS

1. (B) Heredity – it is also called as inheritance or biological inheritance. It is the passing on of traits from parents to their offspring, either through asexual reproduction or sexual reproduction, the offspring cells or organisms acquire the genetic information of their parents.
2. (C) Heredity and environment jointly contribute in human development.
3. (C) Heredity – the transmission of characteristics from parents to offspring is called heredity and such characteristics can be predicted by studying the composition of genes.
4. (C) Both heredity and environment have their share in molding the life and personality of an individual. Heredity is responsible for all the inborn traits,

the instincts, emotions, I Q, reflex action and physical traits. Environment is responsible for the growth and development of physical, mental and social traits.

5. (C) Heredity is considered as a static social structure, as once we inherit certain genes they cannot be modified or changed. They remain the same throughout our life.
6. (A) The transfer of physical or mental characteristics from parents to child through genes is called inheritance. For height, weight, and structure of the body, colour of hair and eye, intelligence, interests and certain behaviour are inherited from the parents to the offspring.
7. (C) Human personality is the result of an interaction between the individual and the environment. The word personality stems from the Latin word *persona*, which refers to a theatrical mask worn by performers in order to disguise their identity. Along with the genetic makeup, environment and experiences play a major role in shaping an individual's personality.
8. (D) Propensity is the habit of behaving in a particular way. Both heredity and environment have their share in molding the life and personality of an individual. Heredity is responsible for all the inborn traits, the instincts, emotions, etc. Environment is responsible for the growth and development of the physical, mental and social traits.
9. (C) Heredity as well as environment affects the personality of an individual.
10. (D) An interaction of heredity and environmental factors determine the nature of individual differences among children. Intelligence, personality traits and values are the most important kinds of individual differences.
11. (C) Heredity explains how physical traits and instincts are passed from parents to offsprings. Inherited traits and the behaviours living things are affected by the environment in which they live. Hence, heredity is not the sublimation of inborn individual traits.
12. (D) The nature and nurture have the collaborative effect on the individual; both are inseparable, like intelligent parents are likely to have an intelligent child who can flourish under good opportunities and support. Otherwise his intelligence may suffer.
13. (A) Genetics and environment represent the nature and nurture debate. It involves the extent to which particular aspects of behavior are a product of either inherited (i.e., genetic) or acquired (i.e., learned) influences. Nature is what we think of as pre-wiring and is influenced by genetic inheritance and other biological factors. Nurture is generally taken as the influence of external factors after conception, eg., the product of exposure, life experiences and learning of an individual.
14. (C) Heredity – we include all the factors that were present in the organism at birth. It is the sum total of inborn individual traits that are present in the fertilized ovum. According to Brooks, heredity is the sum total of innate personality characteristics.
15. (A) Woodworth – according to Woodworth, heredity covers all the factors that were present in the individual when he began life not at birth but at the time of conception about nine months before birth. Environment covers all the outside factors that acted on the individual since he began life.
16. (C) Incorrect, since there have been several researches to prove that environment can have major influence on development.
17. (C) The relative effect of heredity and environment vary in different areas of development. Both heredity and environment have a collaborative effect on the development of the individual. In some of the areas the heredity is more effective and in other domains, the environment has a significant role.
18. (C) Where their emotional needs are met and they feel that they are valued.
19. (A) Certain aspects of development are influenced more by heredity.
20. (B) According to E J Ross, environment is an external force which influences us. It has a great impact on shaping our personality and deciding our plan of actions.
21. (C) Environment has a close relationship in development and management of our mental processes. Environmental opportunities and facilities decide upon which kind of logical and scholarly actions can be taken.
22. (D) Laws of resemblance, variation and regression are related to heredity, whereas motivation deals with the process that initiates, guides and maintains goal-oriented behaviors. It involves biological, emotional, social and cognitive forces that activate behavior.
23. (B) Physical features like appearance, eye color, height and weight are related to heredity. The body makeup is decided by the genetic traits.
24. (C) According to P Gisbert environment is anything immediately surrounding an object and exerting a direct influence on it. Our environment refers to those things or agencies which though distinct from us, affect our life or activity. The factors may be natural or artificial, or social or biological or psychological.
25. (D) All areas of development are influenced by heredity and environment like social, emotional, mental and physical.
26. (A) Family is one of the environmental factors to impact personality of an individual through its values, traditions and customs. It is also the first socializing agency.
27. (D) Color of the eyes is genetically decided traits. However the other options are environment dependent.
28. (C) DNA is the deoxy ribonucleic acid, the genetic material that decides the hereditary characteristics. The DNA of germ cells of mother and father (sperm and ovum) combine and reflect on physical appearance of a child.
29. (C) Family, society, school, peer groups, culture, traditions, educational opportunities and quality of nutrition help in shaping the personality of an individual. However, physique is related to heredity.
30. (D) Heredity and environment are closely interwoven with each other. They depend on each other and show a combined effect on development of an individual.
31. (C) Nature is those things that are acquired by genetic or hereditary influences. Nurture on the other hand is those things that are influenced by environment we live in. Nature is something that is given by birth whereas nurture is something that is learned or acquired.

