

Multiple Choice Questions

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Science - II

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1.

Hereditiy and Evolution

- (1) The causality behind the sudden changes was understood due to.....principle of Hugo de Vries.
- (A) Gene (B) Mutation
(C) Transcription (D)Appendix
- (2) The proof for the fact that protein synthesis occurs throughwas given by George Beadle and Edward Tatum.
- (A)Appendix (B)Gradual Development
(C)Gene (D) Mutation
- (3) Transfer of information from molecule of DNA to mRNA is called as process.
- (A) Transcription (B) Gene
(C) Appendix (D) Mutation
- (4) Evolution means
- (A)Mutation (B)Gradual Development
(C)Transcription (D)Appendix
- (5) Vestigial organ present in human body is the proof of evolution.
- (A)Gene (B)Appendix
(C)Mutation (D)Gradual Development
- (6) proved that except viruses, all living organisms have DNA as their Genetic material.
- (A) Ostwald Avery (B) Mclyn McCarthy
(C) Colin MacLeod (D) All of these
- (7) proposed a model for protein synthesis with the help of DNA in bacterial cells.
- (A) Johann Gregor Mendel (B) Walter and Sutton
(C) Francois Jacob and Jack Monad (D) Hugo de Vries

- (8) Information about protein synthesis is stored in the..... .
(A) mitochondria (B) DNA
(C) RNA (D) ribosomes
- (9) brings in the coded message from the DNA.
(A) mRNA (B) tRNA (C) rRNA (D) ribosomes
- (10) As per the message on mRNA, amino acids are supplied by tRNA. This is called as
(A) transcription (B) translation
(C) translocation (D) transportation
- (11) is a gradual change occurring in living organisms over a long duration.
(A) Evolution (B) Mutation
(C) Variation (D) Heredity
- (12) The theory of natural selection was proposed by..... .
(A) Mendel (B) Lamarck
(C) Charles Darwin (D) Hugo de Vries
- (13) Carbon dating method measures the radioactivity of C-14 and the ratio of present in the organism's body.
(A) C-12 to C-14 (B) C-6 to C-7
(C) C-14 to C-12 (D) C-14 to O-16
- (14) Mammals have evolved from
(A) aves (B) reptiles
(C) amphibians (D) fishes
- (15) is not a vestigial organ in man.
(A) Appendix (B) Wisdom tooth
(C) Body hair (D) Duodenum
- (16) is pioneer of the modern genetics.
(A) Johann Gregor Mendel (B) Francis Crick
(C) Thomas Hunt Morgan (D) James D. Watson
- (17) is the transfer of biological characters from one generation to another via genes.
(A) Evolution (B) Heredity
(C) Gene (D) Peripatus
- (18) Each mRNA is made up of thousands of
(A) Reptiles (B) Transcription
(C) Triplet Codons (D) Duodenum

- (19) Vertebrates have slowly originated from
(A)Appendix (B)triplet codons
(C) Mutation (D) invertebrates
- (20) is the connecting link between annelida and arthropoda.
(A)Peripatus (B)Duodenum
(C)Hereditiy (D) Gene

ANSWERS:

- (1) Mutation (2) gene (3) Transcription
(4) Gradual development (5) Appendix
(6) All of these (7) Francois Jacob and Jack Monad
(8) D N A (9) m R N A (10) translation
(11) Evolution (12) Charles Darwin
(13) C-14 to C-12 (14) reptiles (15) Duodenum
(16) Johann Gregor Mendel (17) Hereditiy
(18) triplet codons (19)invertebrates (20) Peripatus

2.

Life Processes In Living Organisms Part - I

- (1) After complete oxidation of a glucose molecule, number of ATP molecules are formed.
(A) 24 (B) 34 (C) 38 (D) 32
- (2) At the end of glycolysis, molecule are obtained.
(A) one molecule (B) two molecule
(C) three molecule (D) four molecule
- (3) Genetic recombination occurs in phase of prophase of meiosis
(A) First phase (B) Second phase
(C) Third phase (D) Fourth phase
- (4) All chromosomes are arranged parallel to equatorial plane of cell in phase of mitosis.
(A) Metaphase (B) Prophase (C) Anaphase (D) Telophase
- (5) For formation of plasma membrane, molecules are necessary.
(A) Lipid Molecules (B) Cholesterol
(C) Phospholipids (D) Glycolipids
- (6) Our muscles cells perform type of respiration during exercise.
(A) Aerobic (B) Anaerobic (C) Telophase (D) Meiosis
- (7) Which of the following protein is present in skin?
(A) Haemoglobin (B) Insulin (C) Keratin (D) Ossein
- (8) Which one of the following vitamin is not fat soluble?
(A) D (B) K (C) A (D) C
- (9) Water content of Blood Plasma is
(A) 70% (B) 90% (C) 65% (D) 50%

- (10) In which stage the nuclear membrane completely disappears during nuclear division?
 (A) Prophase (B) Metaphase
 (C) Anaphase (D) Telophase
- (11) Number of chromosomes in diploid cell
 (A) n (B) 3n (C) $\frac{n}{2}$ (D) 2n
- (12) In which type of cells meiosis occurs?
 (A) germ cells (B) stem cells
 (C) somatic cells (D) epithelial cell
- (13) Which vitamin is called riboflavin?
 (A) A (B) B₅ (C) B₂ (D) C
- (14) In which part of cell, electron transfer chain reaction occurs?
 (A) cytoplasm (B) mitochondria
 (C) nucleus (D) Golgi body
- (15) Which of the following vitamins are required for the production of FADH₂ and NADH₂.
 (A) vitamin E (B) nicotinamide
 (C) vitamin C (D) vitamin D
- (16) The protein ossein is produced in
 (A) blood (B) muscles (C) bone (D) pancreas
- (17) Energy from food is obtained in the form of
 (A) ATP (B) mRNA (C) tRNA (D) rRNA
- (18) Process of glycolysis occurs in
 (A) Mitochondria (B) Cytoplasm
 (C) Anaerobic (D) Metaphase
- (19) Pyruvic acid formed in glycolysis is converted into two molecules of
 (A) Chromosomes (B) Electron
 (C) Acetyl - coenzyme A (D) Keratin
- (20) Tricarboxylic acid cycle (Kreb's cycle) takes place in.....
 (A) Metaphase (B) Plasma memberane
 (C) Cytoplasm (D) Mitochondria

ANSWERS:

- (1) 38 (2) two molecules (3) third phase
 (4) Metaphase (5) Phospholipids (6) anaerobic
 (7) keratin (8) C (9) 90% (10) Metaphase
 (11) 2n (12) germ cells (13) B₂ (14) mitochondria
 (15) nicotinamide (16) bone (17) ATP
 (18) cytoplasm (19) Acetyl - coenzyme A (20) Mitochondria

3.

Life Processes In Living Organisms Part - II

- (1) divides by simple binary fission.
(A) Paramecium (B) Amoeba (C) Euglena (D) Hydra
- (2) reproduces by longitudinal binary fission.
(A) Paramecium (B) Amoeba (C) Euglena (D) Hydra
- (3) Hydra reproduces by
(A) binary fission (B) budding
(C) fragmentation (D) multiple fission
- (4) Which of the following is a mode of asexual reproduction?
(A) Multiple fission (B) Spore formation
(C) Budding (D) All of these
- (5) For binary fission, amoeba requires parent cells.
(A) three (B) two (C) one (D) zero
- (6) Yeast reproduces by
(A) budding (B) binary fission
(C) spore formation (D) multiple fission
- (7) reproduces from the buds on the leaf margin.
(A) Lotus (B) Hibiscus (C) Bryophyllum (D) Papaya
- (8) is present at the tip of the style.
(A) Stigma (B) Anther (C) Ovary (D) Ovule
- (9) is formed in each ovule by meiosis.
(A) Pollen grains (B) Seeds (C) Embryo sac (D) Fruit
- (10) Zygote develops at the cost of the food stored in
(A) endosperm (B) pollen grain (C) fruit (D) ovary
- (11) Testes secrete the hormone
(A) progesterone (B) FSH
(C) estrogen (D) testosterone

- (12) At the time of birth, there are immature..... . oocytes in the ovary of female foetus.
 (A) 2 - 4 hundred (B) 5 - 6 hundred
 (C) 2 - 4 million (D) 8 - 10 million
- (13) Menopause occurs at the age of
 (A) 18 - 20 years (B) 45 - 50 years
 (C) 20 - 30 years (D) 18 years
- (14) Menstrual cycle occurs at an interval of every
 (A) 8 - 10 days (B) 15 - 20 days
 (C) 28 - 30 days (D) 6 - 7 days
- (15) In humans, sperm production occurs in the organ.....
 (A) tests (B)uterus (C)Euglena (D)Stigma
- (16) In humans, chromosome is responsible for maleness.
 (A) X-chromosome (B) Y- chromosome
 (C) Z- chromosome (D) W- chromosome
- (17) In male and female reproductive system of human, gland is same.
 (A) Sebaceous (B) accessory
 (C) Sublingual (D) Rivini's
- (18) type of reproduction occurs without fusion of gametes.
 (A) sexual (B) Asexual (C) Both (D)Can't Say

ANSWERS:

- (1) Amoeba (2) Euglena (3) budding
 (4) all of these (5) one (6) budding
 (7) Bryophyllum (8) Stigma (9) Embryo sac
 (10) endosperm (11) testosterone (12) 2 - 4 million
 (13) 45 - 50 years (14) 28 - 30 days (15) testes
 (16) Y-chromosome (17) accessory (18) Asexual

4.

Environmental Management

- (1) How many biodiversity spots are reported all over the World?
(a) 30 (b) 34 (c) 35 (d) 40
- (2) Which of the following belongs to Rare species?
(a) Tiger (b) Lion
(c) Red panda (d) Lion tailed monkey
- (3) World Biodiversity day is celebrated on
(a) 22nd May (b) 5th June
(c) 21st March (d) 22nd April
- (4) Which of the following is not an organic component of ecosystem?
(a) Proteins (b) Oxygen
(c) Carbohydrates (d) fats
- (5) The Forest Conservation Act was enacted in
(a) 1980 (b) 1986 (c) 1972 (d) 1963
- (6) has been established in 2010 for effective implementation of environment related laws.
(a) Forest Conservation Act
(b) Wild life protection Act
(c) Environmental conservation Act
(d) Indian Forest Act

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ANSWERS:

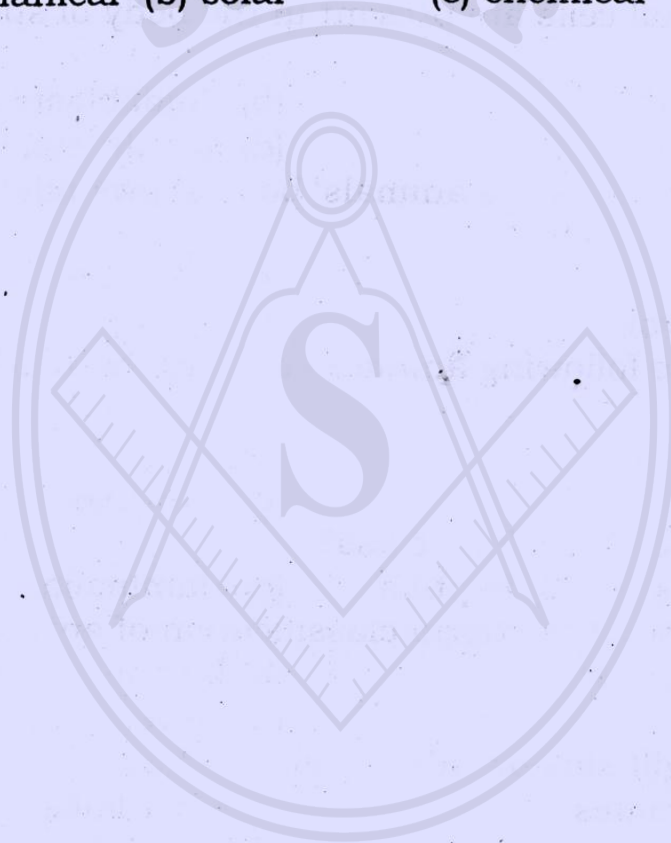
- (1) 34 (2) Red Panda (3) 22nd May (4) oxygen
(5) 1980 (6) Environmental conservation Act.

5.

Towards Green Energy

- (1) Electro magnetic induction was discovered by.....
(a) Edison (b) Newton
(c) Michael Faraday (d) Archimedes
- (2) There are..... towers in the thermal power station.
(a) One (b) Two (c) Three (d) Four
- (3) In combustion of coal gas is released
(a) H₂ (b) O₂ (c) NH₃ (d) CO₂
- (4) Each nuclear fission of uranium nucleus releaseneutrons.
(a) One (b) Two (c) Three (d) Four
- (5) Water stored in the dam posses energy.
(a) chemical (b) potential (c) kinetic (d) electric
- (6) The electric energy obtained from solar photovoltaic cell is of type.
(a) DC (b) AC (c) static (d) magnetic
- (7) Solar cell can work during only.
(a) night (b) morning (c) day time (d) evening
- (8) Each nuclear fission of uranium nucleus release..... energy.
(a) 20 MeV (b) 236 MeV (c) 237 MeV (d) 200 MeV
- (9) Wind turbines with capacity right from less than to about are commercially available.
(a) 1 kW, 7000 kW (b) 10 kW, 700 kW
(c) 1 MW, 700MW (d) 1 kW, 10kW
- (10) A good solar cell can have an efficiency of around
(a) 50% (b) 10% (c) 15% (d) 51%
- (11) Koyana hydro -electric power plant produces MW energy.
(a) 1990 (b) 1900 (c) 1600 (d) 1960

- (12) The natural gas based power plant in Maharashtra is at
.....
(a) Koyana (b) Chandrapur (c) Anjanvel (d) Tarapur
- (13) It took millions of years for the formation of fuels.
(a) chemical (b) solid (c) gaseous (d) fossil.
- (14) The photovoltaic cells convert energy into
electrical energy.
(a) mechanical (b) solar (c) chemical (d) sound



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ANSWERS:

- | | | | |
|---------------------|-------------|---------------------|---------------|
| (1) Michael faraday | (2) Two | (3) CO ₂ | (4) Three |
| (5) potential | (6) DC | (7) daytime | (8) 200 MeV |
| (9) 1kW, 7000Kw | (10) 15% | (11) 1960 | (12) Anjanvel |
| (13) fossil | (14) solar. | | |

6.

Animal Classification

- * (1) Which special cells are present in the body of sponges (Porifera)?
(a) Collar cells (b) Cnidoblasts
(c) Germ cells (d) Ectodermal cells
- * (2) Which of the following animals' body shows bilateral symmetry?
(a) Star fish (b) Jelly fish
(c) Earthworm (d) Sponge
- * (3) Which of the following animals can regenerate its broken body part?
(a) Cockroach (b) Frog
(c) Sparrow (d) Star fish
- * (4) Bat is included in which class?
(a) Amphibia (b) Reptilia (c) Mammalia (d) Aves
- (5) The first person to perform classification of animals was.....
(a) Theophrastus (b) Linnaeus
(c) Aristotle (d) Meyer
- (6) Pharyngeal gill-slits are absent in
(a) Non-chordates (b) Chordates
(c) Vertebrates (d) Craniates.
- (7) In multicellular organisms, the body organization is called organization.
(a) Protoplasmic (b) Cellular grade
(c) Tissue grade (d) Organ system
- (8) Amoeba is a animal.
(a) Symmetrical (b) Bilaterally symmetrical
(c) Radially symmetrical (d) Asymmetrical
- (9) Radial symmetry is observed in .
(a) Amoeba (b) Octopus (c) Starfish (d) Fish

- (10) The animals with three germ layers are called
 (a) Diploblastic (b) Monoblastic
 (c) Triplet (d) Triploblastic
- (11) The mammal which lays eggs is
 (a) Platypus (b) Bat (c) Whale (d) Bear
- (12) shows bilateral symmetry.
 (a) Amoeba (b) Starfish (c) Fish (d) Jellyfish
- (13) In annelida , help in locomotion.
 (a) Pseudopodia (b) Cilia (c) Flagella (d) Setae
- (14) The warm blooded animals are called
 (a) Poikilotherms (b) Homeotherms
 (c) Ambitherms (d) Parasitic
- (15) In , the exoskeleton is absent.
 (a) Amphibia (b) Aves
 (c) Reptilia (d) Mammalia
- (16) The animals which do not possess body cavity are called
 (a) Acoelomate (b) Coelomate
 (c) Pseudocoelomate (d) Eucoelomate
- (17) The are exclusively marine.
 (a) Molluscs (b) Coelenterates
 (c) Annelids (d) Echinoderms
- (18) In , the fertilization is external.
 (a) Frog (b) Bat
 (c) Snake (d) Parrot
- (19) There are approximately millions species of animals found on earth.
 (a) Six (b) Seven
 (c) Sixteen (d) Seventeen

ANSWERS:

- | | | |
|--------------------|------------------|-------------------|
| (1) Collar cells | (2) Earthworm | (3) Starfish |
| (4) Mammalia | (5) Aristotle | (6) Non-chordates |
| (7) Cellular grade | (8) Asymmetrical | (9) Starfish |
| (10) Triploblastic | (11) Platypus | (12) Fish |
| (13) Setae | (14) homeotherms | (15) Amphibia |
| (16) Acoelomate | (17) Echinoderms | (18) Frog |
| (19) Seven | | |

7.

Introduction to Microbiology

- (1) Milk is at the beginning to destroy unwanted microbes.
(a) heated (b) cooled
(c) pasteurized (d) powdered
- (2) Very hard cheese is formed after ripening for 12 - 18 months.
(a) mozzarella (b) cheddar
(c) parmesan (d) cottage
- (3) Most appropriate method of disposal of dry waste is
(a) sanitary landfill (b) composting
(c) incineration (d) recycling
- (4) bacteria present in Root nodules of leguminous plants help in nitrogen fixation.
(a) Rhizobium (b) Azotobacter
(c) Geobacter (d) Pseudomonas
- (5) Substance prepared by using yeast is
(a) bread (b) honey (c) butter (d) yoghurt
- (6) Yeast reproduces by method of asexual reproduction.
(a) spores (b) budding
(c) binary fission (d) vegetative reproduction

ANSWERS:

- (1) pasteurized (2) parmesan (3) recycling
(4) Rhizobium (5) bread (6) budding

8.

Cell Biology and Biotechnology

- (1) Stem cell preserved in sterile vials are kept in liquid nitrogen at to
(a) -135°C to -190°C (b) -125°C to -150°C
(c) 135°C to 190°C (d) 133°C to 187°C
- (2) Transplantation human organ act came into force in the year
(a) 2014 (b) 2011 (c) 2009 (d) 1994
- (3) Government of India had established the National Biotechnology Board in
(a) 1986 (b) 1982 (c) 1947 (d) 1999
- (4) Indian Agriculture Research institute is at
(a) Solapur (b) Bengaluru (c) Delhi (d) Pune
- (5) In Nil-Kranti Mission - 2016 program, government is offering subsidies of
(a) 15% - 20% (b) 50% - 100%
(c) 75% - 77% (d) 35% - 50%
- (6) Adulsa is taken is cure
(a) cough (b) fever (c) dysentery (d) vomiting
- (7) Pesticides are infact a type of
(a) fertilizer (b) poison
(c) manner (d) organic product
- (8) In soil-less farming i.e. hydroponics chemical fertilizer are used.
(a) solid (b) liquid (c) gaseous (d) plasma

- (9) National pomegranate Research Institute is located at
(a) Solapur (b) Pune
(c) Nagpur (d) New Delhi
- (10) DNA fingerprinting is mainly useful in science.
(a) formal science (b) natural science
(c) social science (d) forensic science
- (11) Interferon is a group of small sized protein molecule used in treatment of disease.
(a) cancer (b) diabetes (c) anemia (d) viral
- (12) Cattle feeding on transgenic does not contract a viral disease-rinderpest.
(a) potato (b) onion (c) tobacco (d) tomato
- (13) Human Insulin gene now is been inserted into the genome of
(a) horse (b) cat (c) bacteria (d) virus

ANWERS:

- (1) -135°C to -190°C , (2) 1994 (3) 1982,
(4) Delhi (5) 50% - 100% (6) cough
(7) poison (8) liquid (9) Solapur (10) forensic science
(11) viral (12) tomato (13) bacteria

9.

Social Health

- (1) Which of following mentioned factors are important for good social health?
- (a) strong personality
 - (b) having large number of friends
 - (c) trust in others
 - (d) all of the above
- (2) All of the following are accepted stress management techniques except
- (a) avoiding problem
 - (b) effective time management
 - (c) relaxation
 - (d) exercise

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ANSWERS:

(1) all of the above

(2) avoiding problem

10.

Disaster Management

- (1) Wild animal attack is type of disaster.
(a) Atmosphere (b) Migration
(c) Geological (d) Biological
- (2) The chairman of village level committee is
(a) Sarpanch (b) Chief Minister
(c) Collector (d) Prime Minister
- (3) Tsunami is a type of disaster.
(a) Biological (b) Man-made (c) Geological (d) Plants
- (4) The important link between measures after disaster and national development comes under
(a) Preparation (b) Restoration
(c) Resurgence (d) Impact of disaster
- (5) The disaster management act passed in our country in
(a) 2004 (b) 2007 (c) 1998 (d) 2005
- (6) In 2014 there had been a huge in the village Malin.
(a) Cyclone (b) Volcano eruption
(c) Landslide (d) Bomb blast
- (7) Disasters definitely affect the of the nation.
(a) Economy (b) Geography
(c) Health (d) Pollution
- (8) The disaster management schemes should be changed with respect to of the disaster.
(a) Nature (b) Culture (c) Depth (d) Day
- (9) In Maharashtra is in action through State Reserve Force.
(a) WHO (b) NDRF (c) NCC (d) MCC

(10) Radiation leakage occurred after a blast in atomic energy plant of.....in Russia.

(a) Moscow

(b) Hiroshima

(c) Syberia

(d) Chernobyl

Sai Sir



ANSWERS:

(1) biological

(2) Sarpanch

(3) geological

(4) restoration

(5) 2005

(6) landslide

(7) economy

(8) nature

(9) NDRF

(10) Chernobyl.

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