

1. The human body is under neuroendocrine control. The endocrine regulation is not characterized by:
 1. hormones reach targets through the blood
 2. effects are slow and cyclic
 3. rapid acting effects
 4. effects caused by chemicals
2. Some hormones act through a second messenger. In such a case, the first messenger would be:
 1. Diacyl glycerol
 2. hormone
 3. source cell
 4. receptor
3. Injury to adrenal cortex is not likely to affect the secretion of which one of the following ?
 1. Aldosterone
 2. Both androstenedione and dehydroepiandrosterone
 3. Adrenalin
 4. Cortisol
4. The aortic semilunar valve prevents blood from returning to the _____.
 1. left ventricle
 2. aorta
 3. right ventricle
 4. left atrium
5. In the nodal tissue of the human heart the last to get activated is/are:
 1. SA node
 2. AV node
 3. AV bundle
 4. Purkinje fibers
6. The central cardiac control region is in the _____ of the brain.
 1. hypothalamus
 2. medulla oblongata
 3. cerebellum
 4. pons
7. The respiratory system does not:
 1. allow oxygen from the air to enter the blood and carbon dioxide to leave the blood and enter the air.
 2. alter the pH by changing oxygen levels.
 3. provide protection against some microorganisms by preventing their entry into the body and by removing them from respiratory surfaces.
 4. allow for speech and sound generation.
8. Name the cavities in which the lungs are located:
 1. pleural and abdominal cavities.
 2. pericardial and thoracic cavities.
 3. pleural and thoracic cavities.
 4. pleural and pericardial cavities
9. What is the term and value for the maximum amount of air a person can expel from the lungs after a maximum inhalation?
 1. vital capacity, 4600
 2. total lung capacity, 5800
 3. inspiratory reserve volume, 3000
 4. inspiratory capacity, 3500
10. The most likely consequence of an increase in the sodium levels in extracellular fluid would be:
 1. Potassium moves into the cells.
 2. Na⁺ to shift out of the ICF and into the ECF.
 3. water to shift out of the ICF and into the ECF.
 4. the blood volume would decrease.
11. The pH of blood under normal physiological conditions is:
 1. 6.44 and 7.14.
 2. 7.44 and 7.77.
 3. 7.0 and 7.22.
 4. 7.35 and 7.45.
12. Recessed central fissure on the medial surface of the kidney where its vessels, nerves and ureter pass is called as:
 1. hilum
 2. renal sinus
 3. renal calyces
 4. adrenal glands
13. When kidney of a person is damaged, he/she invariably suffers from anaemia because
 1. RBCs pass through the glomerulus
 2. Sufficient erythropoietin is not produced
 3. haemoglobin is not synthesized sufficiently
 4. Iron and vitamin B-12 are not able to bind to haemoglobin
14. The four major lobes of the cerebrum are called as:
 1. dorsal, ventral, lateral and medial
 2. parietal, frontal, dorsal, occipital
 3. motor, sensory, associative and integrative
 4. frontal, parietal, temporal and occipital
15. Corpus callosum:
 1. is a part of the ventricular system.
 2. divides the frontal lobe from the parietal lobe.
 3. connects the right and left cerebral hemispheres.
 4. is an extension of the diencephalon.
16. Alzheimer disease in humans is associated with the deficiency of
 1. dopamine
 2. glutamic acid
 3. acetylcholine

4. Gamma Amino Butyric Acid (GABA)
- 17.
- Enterokinase:
- stimulates bicarbonate secretion by the pancreas
 - stimulates secretion of gastrin by the stomach
 - converts trypsinogen into trypsin
 - converts pepsinogen into pepsin
- 18.
- The large intestine functions in:
- Bicarbonate secretion and bacterial action
 - Acid secretion and bacterial action
 - Water reabsorption and mass movements
 - Mixing action and intestinal hormone production
- 19.
- In the gastrointestinal tract, the layer of dense, irregular connective tissue or loose connective tissue that supports the mucosa, as well as joins the mucosa to the bulk of underlying smooth muscle and also contains blood vessels and a plexus is:
- mucosa layer
 - submucosa layer
 - muscularis layer
 - serosa (adventitia layer)
- 20.
- Which of the following is connected to the floor of the oral cavity by the frenulum?
- esophagus
 - muscles of mastication
 - lips
 - tongue
- 21.
- Human lungs develop from embryonic:
- ectoderm
 - endoderm
 - epiderm
 - mesoderm
- 22.
- During cleavage divisions, successive blastomeres:
- have a decreasing nuclear/cytoplasmic ratio
 - become smaller and smaller
 - grow larger and larger
 - undergo meiotic divisions.
- 23.
- Human nervous system is derived from embryonic:
- ectoderm
 - endoderm
 - epiderm
 - mesoderm
- 24.
- What will happen if the secretion of parietal cells of gastric glands is blocked with an inhibitor?
- Gastric juice will be deficient in chymosin
 - Gastric juice will be deficient in pepsinogen
 - In the absence of HCl secretion, inactive pepsinogen is not converted into the active enzyme pepsin
 - Enterokinase will not be released from the duodenal mucosa and so trypsinogen is not converted to trypsin
- 25.
- A motor unit is
- all the muscle fibers innervated by all the motor neurons in a muscle.
 - all the fibers in one fasciculus.
 - all the muscle fibers innervated by a single motor neuron in a muscle.
 - all the motor neurons that innervate one muscle fiber in a muscle.
- 26.
- With respect to slow twitch [Type I] fibers the fast-twitch [Type II] muscle fibers are:
- More resistant to fatigue.
 - Supplied by more blood vessels.
 - Having Larger amount of stored glycogen.
 - Having more mitochondria.
- 27.
- The joint between skull bones is classified as:
- cartilage
 - fibrous
 - epithelial
 - synovial
- 28.
- Menstrual flow occurs due to lack of
- progesterone
 - FSH
 - oxytocin
 - vasopressin
- 29.
- Which one of the following is not the function of placenta? It
- facilitates supply of oxygen and nutrients to embryo
 - secretes oestrogen
 - facilitates removal of carbon dioxide and waste material from embryo
 - secretes oxytocin during parturition
- 30.
- Which accessory sex duct is cut and ligated during vasectomy procedure?
- | | |
|--------------------|----------------------|
| 1. Vasa efferentia | 2. Vas deferens |
| 3. Epididymis | 4. Prostatic urethra |
- 31.
- Arteries are best defined as the vessels which
- carry blood away from the heart to different organs
 - break up into capillaries which reunite to form a vein
 - carry blood from one visceral organ to another visceral organ
 - supply oxygenated blood to the different organs
- 32.
- Name the pulmonary disease in which alveolar surface

area involved in gas exchange is drastically reduced due to damage in the alveolar walls.

1. Pleurisy
2. Pneumonia
3. Emphysema
4. Asthma

33.

The translocation of organic solutes in sieve tube members is supported by

1. Root pressure and transpiration pull
2. P-proteins
3. Mass flow involving a carrier and ATP
4. Cytoplasmic streaming

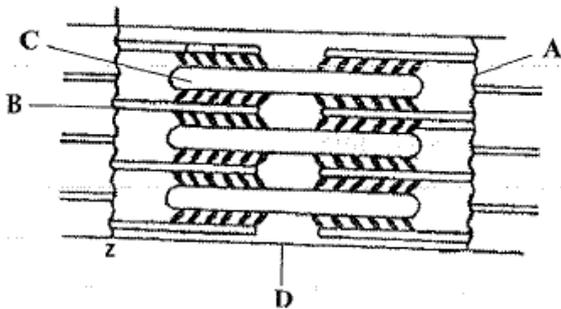
34.

In vitro fertilization is a technique that involves transfer of which one of the following into the fallopian tube?

1. Embryo only, up to 8 cell stage
2. Either zygote or early embryo upto 8 cell stage
3. Embryo of 32 cell stage
4. Zygote only

35.

Which of the following is true for the labelled parts in the figure below?



1. A - Z-line - located at centre of I - band
2. B - Thin filament - occurs in A-band only
3. C - Thick filament - confined to I-band
4. D - H-zone - located at centre of M-line

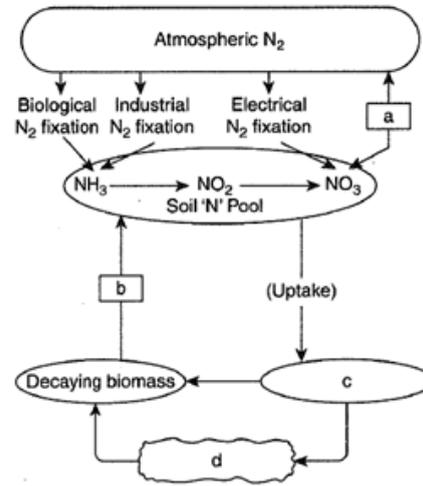
36.

In sec 11.4, NCERT, it is mentioned that transpiration is affected by the canopy structure. This means that transpirational loss are lower in shaded leaves compared to sun exposed leaves higher in canopy. What would not be a reason for this?

1. Lower stomatal conductance
2. Lower leaf temperature
3. Lower air humidity
4. Lower air turbulence

37.

Study the cycle shown in below and select the option which gives correct words for all the four blanks a, b, c and d:



- | | | | |
|-----|-----|-----|-----|
| (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|

- | | | | | |
|----|-----------------|-----------------|---------|---------|
| 1. | Denitrification | Ammonification | Plants | Animals |
| 2. | Nitrification | Denitrification | Animals | Plants |
| 3. | Denitrification | Nitrification | Plants | Animals |
| 4. | nitrification | ammonification | animals | Plants |

38.

Reaction carried out by N₂ fixing microbes include

- a. $2\text{NH}_3 + 3\text{O}_2 \rightarrow 2\text{NO}_2^- + 2\text{H}^+ + 2\text{H}_2\text{O}$ (i) b. $2\text{NO}_2^- + \text{O}_2 \rightarrow$
a. $2\text{NH}_3 + 3\text{O}_2 \rightarrow 2\text{NO}_2^- + 2\text{H}^+ + 2\text{H}_2\text{O}$ (i)
b. $2\text{NO}_2^- + \text{O}_2 \rightarrow 2\text{NO}_3^-$ (ii)

Which of the following statements about these equations is not true

1. Step (i) is carried out by Nitrosomonas or Nitrococcus
2. step (ii) is carried out by Nitrobacter
3. both steps (i) and (ii) can be called nitrification
4. bacteria carrying out these steps are usually photoautotrophs

39.

In photosystem-I, the first electron acceptor is :

1. ferredoxin
2. cytochrome
3. plastocyanin
4. an iron-sulphur protein

40.

The correct sequence of flow of electrons in the light reaction is

1. PSII, plastoquinone, cytochromes, PSI, ferredoxin
2. PSI, plastoquinone, cytochromes, PSII, ferredoxin
3. PSI, ferredoxin, PSII,
4. PSI, plastoquinone, cytochromes, PSII, ferredoxin

41.

The enzyme decarboxylase catalyses the following step

1. conversion of citric acid to cis aconitic acid
2. fumaric acid to malic acid
3. oxalosuccinic acid to α -ketoglutaric acid
4. malic acid to oxaloacetic acid.

42.

Pyruvic acid, the key product of glycolysis can have many metabolic fates. Under aerobic condition it forms

1. Lactic acid
2. $\text{CO}_2 + \text{H}_2\text{O}$
3. Acetyl CoA + CO_2
4. Ethanol + CO_2

43.

Which one of the following pairs, is not correctly matched?

1. Abscisic acid - Stomatal closure
2. Gibberellic acid - Leaf fall
3. Cytokinin - Cell division
4. IAA - Cell wall elongation

44.

Which PGR is used to initiate flowering and for synchronizing fruit set in pineapple?

1. Cytokinin
2. ABA
3. Ethylene
4. GA

45.

Darwinian fitness is represented by:

1. Low r value
2. High r value
3. High K value
4. Low K value

46.

Which of the following organisms does not breed only once in their life time?

1. Pacific salmon
2. Marsupial mice
3. Birds
4. Bamboo

47.

As a part of their reproductive strategy, pelagic fishes:

1. Produce a large number of small-sized offspring
2. Produce a small number of small-sized offspring
3. Produce a large number of large-sized offspring
4. Produce a small number of large-sized offspring

48.

Both, hydrarch and xerarch successions lead to: (AIPMT mains-2011)

1. Medium water conditions
2. Xeric conditions
3. Highly dry conditions
4. Excessive wet conditions

49.

The reservoir is located in the Earth's crust for:

- I. Gaseous type of nutrient cycle
 - II. Sedimentary nutrient cycle
1. Only I
 2. Only II
 3. Both I and II
 4. Neither I nor II

50.

The function of a reservoir of nutrient cycle is to:

1. synthesize minerals
2. transfer minerals to other ecosystems
3. meet any deficit
4. destroy the unwanted minerals

51.

Select the correct statement about biodiversity: (AIPMT Mains-2012)

1. The desert areas of Rajasthan and Gujarat have a very high level of desert animal species as well as numerous rare animals.
2. Large scale planting of Bt cotton has no adverse effect on biodiversity.
3. Western Ghats have a very high degree of species richness and endemism.
4. Conservation of biodiversity is just a fad pursued by the developed countries.

52.

The first National Park established in India, the place where project tiger was started in 1972, is in:

1. Madhya Pradesh
2. Kerala
3. West Bengal
4. Uttarakhand

53.

The last natural refuge of the Manipur brow antlered deer (*Cervus eldi eldi*), locally called sangai - the dancing deer of Manipur is the floating national park called:

1. Keoladeo national park
2. Keibul Lamjao National Park
3. Khangchendzonga National Park
4. Campbell Bay National Park

54.

Montreal Protocol aims at (AIPMT 2009)

1. Control of CO_2 emission
2. Reduction of ozone depleting substances
3. Biodiversity conservation
4. Control of water pollution

55.

Radiatively active gases do not include:

1. Methane
2. Ammonia
3. Nitrous oxide
4. Chloroflouro carbons

56.

Identify the incorrect statement regarding CFCs:

1. They are synthetic gaseous compounds of carbon and halogens

2. Major sources are refrigeration industry and industrial solvents
 3. They have been only recently added to the atmosphere - synthesized during 20th century
 4. They have a short life in atmosphere - 5 to 12 years

2. 9 + 1
 3. 9 + 2
 4. 9 + 9

57.

An organic substance bound to an enzyme and essential for its activity is called

(AIPMT 2006)

- (1) holoenzyme
 (2) apoenzyme
 (3) isoenzyme
 (4) coenzyme

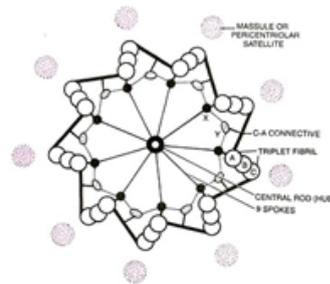
64.

Both cilium and flagellum emerge from centriole-like structure called the:

1. Centrosome
 2. Centromere
 3. Blepharoplast
 4. Basal body

65.

The given diagram shows the ultra-structure of:



58.

Most of the coenzymes contain:

1. Metal ions
 2. FMN and FAD
 3. Ribonucleoproteins
 4. Vitamins

1. Centriole
 2. Cilium
 3. Flagellum
 4. Centrosome

59.

Most common element present in human body is:

1. Oxygen
 2. Carbon
 3. Hydrogen
 4. Sulfur

66.

Nomenclature is governed by certain universal rules. Which one of the following is contrary to the rules of nomenclature. (NEET-1- 2016)

1. When written by hand, the names are to be underlined
 2. Biological names can be written in any language
 3. The first word in a biological name represents the genus name, and the second is a specific epithet
 4. The names are written in Latin and are italicized

60.

Which of the following is not an aromatic amino acid?

1. Phenylalanine
 2. Threonine
 3. Tyrosine
 4. Tryptophan

67.

Excretory pore of Ascaris is present – (AIPMT-Mains 2010)

1. Behind the mouth
 2. On the posterior end
 3. On the dorsal side
 4. In the middle of body

61.

The protein GLUT 4 is a/an:

1. Receptor protein
 2. Transport protein
 3. Antibody molecule
 4. Enzyme

68.

A sort of alternation and generation seen in Cnidarians is termed:

1. Metamorphosis
 2. Epiboly
 3. Metagenesis
 4. Anagenesis

62.

In germinating seeds fatty acids are degraded exclusively in the (AIPMT-2008)

1. Peroxisomes
 2. Glyoxysomes
 3. Mitochondria
 4. Proplastids

63.

The arrangement of axonemal microtubules in cilia and flagella is regarded as:

1. 9 + 0

69.

Pinworm, Hookworm and Filaria worm belong to:

1. Annelida
 2. Platyhelminthes

3. Ashelminthes
4. Arthropoda
70. Choose the correctly matched pair [AIPMT - 2014]
1. Tendon-Specialized connective tissue
 2. Adipose tissue-Dense connective tissue
 3. Areolar tissue- Loose connective tissue
 4. Cartilage-Loose connective tissue
71. Cockroach is uricotelic. Which of the following is not an excretory structure in cockroach?
1. Flame cells
 2. Urecoase glands
 3. Fat body
 4. Malpighian tubules
72. If the head of the cockroach is cut off, it will:
1. still live as long as one week
 2. still live as long as one month
 3. regenerate its head completely
 4. regenerate its head but not eyes
73. The length of different internodes in a culm of sugarcane is variable because of (AIPMT-2008)
1. Size of leaf lamina at the node below each internode
 2. Intercalary meristem
 3. Shoot apical meristem
 4. Position of axillary buds.
74. Leaves become modified into spines in (AIPMT-2014)
1. Cactus
 2. Rose
 3. Citrus
 4. Pistia
75. Thermococcus, Methanococcus and Methanobacterium exemplify (AIPMT-2008)
1. Bacteria whose DNA is relaxed or positively supercoiled but which have a cytoskeleton as well as mitochondria
 2. Bacteria that contain a cytoskeleton and ribosomes
 3. Archaeobacteria that contain protein homologous to eukaryotic core histones
 4. Archaeobacteria that lack any histones resembling those found in eukaryotes but whose DNA is negatively supercoiled.
76. In a moss, the sporophyte (AIPMT-2006)
1. Manufactures food for itself as well as for the gametophyte
 2. Arises from a spore produced from gametophyte
 3. Is partially parasite on the gametophyte
 4. Produces gametes that give rise to gametophyte.
77. During which phase(s) of cell cycle, amount of DNA in a cell remains at 4C level if the initial amount is denoted as 2C ? (AIPMT 2014)
1. G₀ and G₁
 2. G₁ and S
 3. Only G₂
 4. G₂ and M
78. Beginning from the root cap, the correct chronological sequence of the various region of a root tip is:
1. Region of meristematic activity → Region of elongation → Region of maturation
 2. Region of maturation → Region of elongation → Region of meristematic activity
 3. Region of meristematic activity → Region of maturation → Region of elongation
 4. Region of elongation → Region of maturation → Region of meristematic activity
79. A sterile stamen is called as:
1. Staminate
 2. Pistillate
 3. Staminode
 4. Carpelode
80. The meristem that helps grasses regenerate parts removed by the grazing herbivores is the:
1. Shoot apical meristem
 2. Root apical meristem
 3. Intercalry meristem
 4. Lateral meristem
81. All the following are true for trichomes except:
1. they are usually unicellular
 2. they may be branched
 3. they may be secretory
 4. they help in prevention of water loss due to transpiration
82. Match each item in Column I with one in Column II and select the correct answer from the codes given below:
- | COLUMN I | | COLUMN II | |
|----------|------------|-----------|-----------------------------------|
| A | Zygotene | a | Pairing of homologous chromosomes |
| B | Pachytene | b | Appearance of chiasma |
| C | Diplotene | c | Terminalization of chiasma |
| D | Diakinesis | d | Crossing over |

Codes

A B C D

1. a c b d

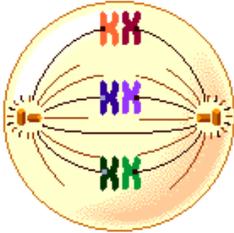
2. a d b c

3. a b c d

4. b c d a

83.

The cell shown in the given diagram is in:



1. Metaphase I

2. Metaphase II

3. Anaphase I

4. Anaphase II

84.

Identify the incorrect statement:

1. The nuclear membrane and nucleolus reappear during Telophase I

2. The nuclear membrane disappears by the end of Prophase II

3. DNA replicates during interkinesis between meiosis I and meiosis II

4. Chromosomes do not reach the extremely extended state of interphase nucleus

85.

The correct chronology of the steps seen in the sexual cycle in fungi will be:

1. Plasmogamy – Karyogamy – Meiosis in zygote

2. Karyogamy – Plasmogamy – Meiosis in zygote

3. Plasmogamy – Meiosis in zygote – Karyogamy

4. Karyogamy – Meiosis in zygote – Plasmogamy

86.

Deuteromycetes are also called as Fungi imperfecti because:

1. They do not have a thalloid body

2. They can contain chlorophyll

3. There are no parasitic members

4. Sexual phases are not known

87.

The bryophytes liverworts are so named that they are an example of:

1. a plant that causes warts

2. a plant that cures liver diseases

3. the Doctrine of Signatures

4. a plant that causes warts, cures liver diseases and is an example of Doctrine of Signatures

88.

The classification system given by Bentham and Hooker is a/an:

1. Artificial system

2. Natural system

3. Phylogenetic system

4. Useless system

89.

The book Systema Naturae was authored by:

1. Linnaeus

2. Theophrastus

3. Aristotle

4. Bentham and Hooker

90.

Identify the correct chronological order of the taxonomic hierarchy from lowest to highest:

1. Family – Order – Class – Phylum

2. Family – Class – Order – Phylum

3. Order – Family – Class – Phylum

4. Order – class – Phylum – Family

Fill OMR Sheet