

1. Which of the following statements is not true about Nematodes?
  1. They are bilaterally symmetrical, un-segmented worms
  2. They are covered with a flexible, thick cuticle that is molted four times as they grow
  3. They possess cilia or flagella on their reproductive cells
  4. They possess a hydrostatic skeleton
2. A danger of genetic engineering is that the genetically modified bacterium can escape the lab and infect humans. This possibility can best be prevented by:
  1. selecting a mutant form of the bacteria
  2. selecting a live attenuated bacterium
  3. application of stringent asepsis in the lab
  4. prophylactically immunising the persons working in the lab
3. If you are using a vector with lacZ as a screenable marker, which of the following bacterial strains would you want to use as host cells?
  1. lacO<sup>-</sup>
  2. lacI<sup>-</sup>
  3. lacZ<sup>-</sup>
  4. Any of these would work.
4. Which of the enzymes whose recognition sites are shown here would produce sticky ends compatible with BstAUI (5'-G|GTACC-3')?
  1. Bcl I (5'-T|GATCA-3')
  2. Sma I (5'-C|GTACG-3')
  3. Hind III (5'-A|AGCTT-3')
  4. Kpn I (5'-GGTAC|C-3')
5. Which one of the following four glands is correctly matched with the accompanying description?
  1. Thyroid - hyperactivity in young children causes cretinism
  2. Thymus - starts undergoing atrophy after puberty
  3. Parathyroid - secretes parathormone which promotes movement of calcium ions from blood into bones during calcification
  4. Pancreas - Delta cells of the Islets of Langerhans secrete a hormone which stimulates glycolysis
6. If the atrioventricular node is damaged:
  1. SA node would not develop action potential
  2. atria will fail to contract
  3. the impulse will not reach AV node
  4. the impulse will not reach ventricles
7. The urinary system in humans is not involved in:
  1. gluconeogenesis
  2. activation of vitamin D
  3. regulation of leukocyte and platelet production
  4. regulation of blood volume and, indirectly, blood pressure
8. Reissner's membrane is a thin membrane that separates the scala media from the:
  1. oval window
  2. scalavestibuli
  3. scala tympani
  4. round window
9. The number of lobes in the human liver is:
  1. 2
  2. 3
  3. 4
  4. 5
10. The largest foramen in the human body is:
  1. foramen magnum
  2. foramen of Monro
  3. obturator foramen
  4. iter
11. Identify the incorrect statement:
  1. Granulosa cells produce estrogen
  2. LH surge is due to peak secretion of progesterone
  3. The corpus luteum secretes both progesterone and estrogen along with inhibin
  4. FSH acts directly on granulosa cells
12. Fructose and prostaglandins are contributed to the seminal plasma by:
  1. epididymis
  2. seminal vesicles
  3. vas deferens
  4. prostate gland
- 13.

Which one of the following is the correct matching of the events occurring during menstrual cycle?

Options	Column I	Column II
1.	Ovulation	LH and FSH attain peak level and sharp fall in the secretion of progesterone
2.	Proliferative phase	Rapid regeneration of myometrium and maturation of Graafian follicle
3.	Development of corpus luteum	Secretory phase and increased secretion of progesterone
4.	Menstruation	Breakdown of myometrium and ovum not fertilized

The mass of living material at a trophic level at a particular time is called: (AIPMT-2015)

1. Standing state
2. Net primary productivity
3. Standing crop
4. Gross primary productivity

18.

How much of the net primary productivity of a terrestrial ecosystem is eaten and digested by herbivores? (NCERT Exemplar)

1. 1%
2. 10%
3. 40%
4. 90%

19.

All of the following are included in 'Ex-situ conservation' except (NEET-2018)

1. Wildlife safari parks
2. Seed banks
3. Botanical gardens
4. Sacred groves

20.

The extinction of passenger pigeon was due to: (NCERT Exemplar)

1. Increased number of predatory birds
2. Over exploitation by humans
3. Non-availability of the food.
4. Bird flu virus infection

21.

Which of the following is not one of the prime health risks associated with greater UV radiation through the atmosphere due to depletion of stratospheric ozone? (AIPMT-2015)

1. Reduced Immune System
2. Damage to eyes
3. Increased liver cancer
4. Increased skin cancer

22.

Match the following and choose the correct option (NCERT Exemplar)

14.

Consider the following two statements:

I. The lungs are situated in the thoracic chamber which is anatomically an air-tight chamber.

II. This arrangement is essential as we cannot directly alter the thoracic volume.

1. Both I and II are correct and II correctly explains I
2. Both I and II are correct but II does not explain I
3. I is correct and II is incorrect
4. Both I and II are incorrect

15.

Natality refers to

1. Number of individuals leaving the habitat
2. Birth rate
3. Death rate
4. Number of individuals entering a habitat

16.

Cuckoos laying their eggs in the nests of crow is an example of:

1. Ectoparasitism
2. Endoparasitism
3. Hyperparasitism
4. Brood parasitism

17.

Column I

DNA is **not** present in (AIPMT 2015)  
Column II

(1) Ribosomes

(2) Nucleus

(3) Mitochondria i. 1974

(4) Chloroplast

A. Environment protection Act

B. Air prevention & Control of pollution Act

C. Water act

D. Amendment of Air Act to include noise as an air pollutant

27. ii. 1987

Which one of the following organelle in the figure correctly matches with its function? (NEET - 2013)

iii. 1986



1981

1. Golgi apparatus, protein synthesis
2. Golgi apparatus, formation of glycolipids
3. Rough endoplasmic reticulum, protein synthesis
4. Rough endoplasmic reticulum, formation of glycoproteins

The correct matches is :

1. A-iii, B-iv, C-I, D-ii
2. A-I, B-iii, C-ii, D-iv
3. A-iv, B-I, C-ii, D-iii
4. A-iii, B-iv, C-ii, D-i

23.

Hargobind Khorana was awarded noble prize for:

1. discovering DNA
2. discovering RNA
3. discovering DNA polymerase
4. chemical synthesis of a gene

24.

Deficiency of human growth hormone was initially treated with growth hormone derived from:

1. chemicals
2. mutant mice
3. human cadavers
4. pigs

25.

Clearing up oil spills has been possible due to the use of genetically engineered:

1. E.coli
2. Agrobacterium
3. Saccharomyces
4. Pseudomonas

26.

28.

The stain used to visualise mitochondria is

1. Fast green
2. Safranin
3. Acetocarmne
4. Janus green

29.

Which of the following diseases is caused by a protozoan? (Re-AIPMT 2015)

1. Influenza
2. Babesiosis
3. Blastomycosis
4. Syphilis

30.

The clitellum is a distinct part in body of earthworm, it is found in?

1. Segment 13- 14- 15
2. Segment 14- 15- 16
3. Segment 12- 13- 14
4. Segment 15- 16- 17

31.

As compared to a dicot root, a monocot root has (AIPMT Mains-2012)

1. More abundant secondary xylem
2. Many xylem bundles

3. Inconspicuous annual rings  
4. Relatively thicker periderm

32.

Placentation in tomato and lemon is (AIPMT Pre. 2012)

1. Parietal
2. Free central
3. Marginal
4. Axile

33.

Archaeobacteria differ from eubacteria in: (AIPMT-2014)

1. Cell membrane structure
2. Mode of nutrition
3. Cell shape
4. Mode of reproduction

34.

An alga which can be employed as food for human beings : (AIPMT 2014)

1. Ulothrix
2. Chlorella
3. Spirogyra
4. Polysiphonia

35.

Epipetalous androecium is not seen in:

1. Petunia
2. Belladonna
3. Tobacco
4. Indigofera

36.

The apical meristems in the plants:

1. occur at the tips of both roots and shoots and produce primary tissues
2. occur at the tip of root and base of the stem and produce secondary tissues
3. occur at the base of root and tip of the stem and produce primary tissues
4. occur at the tips of both roots and shoots and produce secondary tissues

37.

Which of the following will fit in the description of a competitive enzyme inhibitor?

1. a highly reactive compound.
2. a metal ion such as  $Hg^{2+}$  or  $Pb^{2+}$ .
3. structurally similar to the substrate.
4. water insoluble.

38.

Which of the events listed below is not observed during mitosis?

1. Chromatin condensation
2. Movement of centrioles to opposite poles
3. Appearance of chromosomes with two chromatids joined together at the centromere.
4. Crossing over

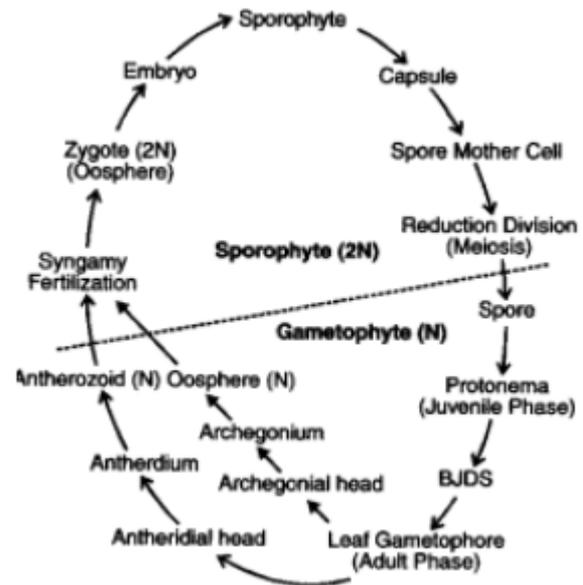
39.

The saprophytic protists are the:

1. Slime moulds
2. Protozoans
3. Desmids
4. Dinoflagellates

40.

The given life cycle represents a/an:



1. Bryophyte
2. Pteridophyte
3. Gymnosperm
4. Angiosperm

41.

Identify the incorrect statement.

1. In asexual reproduction, the offspring produced are morphologically and genetically identical to the parent
2. Zoospores are sexual reproductive structures
3. In asexual reproduction, a single parent produces offspring with or without the formation of gametes
4. Conidia are asexual structures in Penicillium

42.

Which of the following is a post-fertilisation event in flowering plants?

1. Transfer of pollen grains
  2. Embryo development
  3. Formation of flower
  4. Formation of pollen grains
43. Which one of the following shows isogamy with nonflagellated gametes? [AIPMT 2014]
1. Ectocarpus
  2. Ulothrix
  3. Spirogyra
  4. Sargassum
44. The common nitrogen fixer in paddy fields is (AIPMT PRE 2010)
1. Frankia
  2. Rhizobium
  3. Azospirillum
  4. Oscillatoria
45. The world's highly prized wool yielding Pashmina breed is (AIPMT 2005)
1. Kashmir sheep - Afgan sheep cross.
  2. Goat
  3. Sheep
  4. Goat - sheep cross
46. Which one is not a hereditary disease (AIPMT- 2005)
1. Cystic fibrosis
  2. Cretinism
  3. Thalassaemia
  4. Haemophilia
47. Common cold is not cured by antibiotics because it is (AIPMT 2011)
1. caused by a virus
  2. caused by a Gram-positive bacterium
  3. caused by a Gram-negative bacterium
  4. not an infectious disease
48. Maximum number of existing transgenic animals is of (AIPMT Pre. - 2011)
1. Fish
  2. Mice
  3. Cow
  4. Pig
49. Wind pollinated flowers are (AIPMT - 2010)
1. Small, producing large number of dry pollen grains
  2. large producing abundant nectar and pollen
  3. Small, producing nectar and dry pollen
  4. Small, brightly coloured, producing large number of pollen grains
50. Antiparallel strands of DNA molecules means (AIPMT-2006)
1. One strand turns clockwise
  2. One strand turns anticlockwise
  3. Phosphate groups of the two strands share the same position their ends
  4. Phosphate groups at the start of the DNA strands are in opposite position
51. Which one of the following represents a palindromic sequence in DNA ? (AIPMT Mains.- 2012)
1. 5' - GAATTC - 3' 2. 5' - CCAATG - 3' 3' - CTTAAG - 5' 3' - GAATCC - 5'
  3. 5' - CATTAG - 3' 4. 5' - GATACC - 3' 3' - GATAAC - 5' 3' - CCTAAG - 5'
52. What kind of evidence suggested that man is more closely related with a chimpanzee than with other hominoid apes? (AIPMT 2004)
1. Comparison of chromosomes morphology only.
  2. Evidence from fossil remains, and the fossil mitochondrial DNA alone.
  3. Evidence from DNA extracted from sex chromosomes, autosomes and mitochondria.
  4. Evidence from DNA from sex chromosomes only.
53. What proportion of progeny in F<sub>2</sub> generation in a Mendel monohybrid cross resembled the parent [of P generation] that expressed the recessive trait?
1.  $\frac{1}{4}$
  2.  $\frac{1}{2}$
  3.  $\frac{3}{4}$
  4.  $\frac{2}{3}$
54. On self-pollinated a tall F<sub>2</sub> plant, the progeny can be:
1. Tall only
  2. Dwarf only
  3. Intermediate in height
  4. Tall and Dwarf

55. The F<sub>2</sub> genotypic ratio of a monohybrid cross is:
- 1 : 1
  - 3 : 1
  - 1 : 2 : 1
  - 9 : 7
56. Which of the following is a pyrimidine base found in DNA?
- Adenine
  - Guanine
  - Uracil
  - Cytosine
57. To form a nucleoside, a nitrogenous base is linked to a pentose sugar:
- Through a P-Glycosidic linkage at carbon atom number 1
  - Through a P-Glycosidic linkage at carbon atom number 5
  - Through a N-Glycosidic linkage at carbon atom number 1
  - Through a N-Glycosidic linkage at carbon atom number 5
58. Which of the following would be nucleoside found only in RNA?
- Thymidine
  - Cytidine
  - Uridine
  - Adenosine
59. Consider the following two statements:
- I. Most parasites are pathogens
- II. Pathogens have to adapt to life within the environment of the host.
- Both I and II are correct and II explains I
  - Both I and II are correct but II does not explain I
  - Only I is correct
  - Only II is correct
60. Identify the correct statement regarding typhoid fever in human beings:
- It is caused by a pathogenic protozoan *Salmonella typhi*
  - The pathogen remains confined to the small intestine
  - Widal test can confirm the infection very early in the disease
  - Intestinal perforation and death may occur in severe cases
61. A common cause of pneumonia in humans is:
- Streptococcus pyogenes*
  - Hemophilus influenzae*
  - Staphylococcus aureus*
  - Rotavirus
62. What is true about the vegetative cell in the pollen tube?
- It is smaller than the generative cell
  - It has an irregular shaped nucleus
  - It floats in the cytoplasm of the generative cell
  - It has a dense cytoplasm lacking food reserves
63. In a multicarpellary, syncarpous ovary:
- There are more than one pistil that are fused with each other
  - There are more than one pistil that are free from each other
  - There is one pistil that is fused with stamen
  - There are more than one pistil that are fused with stamen
64. Hidden hunger is accurately described as:
- protein undernutrition
  - calorie undernutrition
  - vitamins and minerals undernutrition
  - PEM
65. Plant tissue culture is based on:
- cellular totipotency
  - indeterminate growth
  - phenotypic plasticity
  - secondary growth
66. The type of natural selection that operates to eliminate intermediate phenotypes in a population is known as:
- Directional selection
  - Disruptive selection
  - Stabilizing selection
  - Reverse selection
67. Both Charles Darwin and A.R. Wallace were influenced by the:

1. writings of J.B.S.Haldane on the origin of life
  2. findings of Urey and Miller experiments
  3. findings on the Galapagos Islands
  4. essay on human population by T.R.Malthus
- 68.
- $U^{238}$ , the radioactive isotope of uranium, is very useful in absolute dating of rocks. It's half life is about:
1. 4500 years
  2. 4.5 million years
  3. 45 million years
  4. 4.6 billion years
- 69.
- Consider the two statements:
- I. Indirectly, BOD is a measure of the organic matter present in the water
- II. The greater the BOD of waste water, more is its polluting potential
1. Both I and II are correct
  2. Only I is correct
  3. Only II is correct
  4. Both I and II are incorrect
- 70.
- What is true regarding the activated sludge generated during secondary treatment of sewage water?
- I. It is made up of aerobic bacteria that sediment down
- II. A large part of the activated sludge is pumped back into the aeration tank to serve as the inoculum.
- III. A minor part of the sludge is pumped into large tanks called anaerobic sludge digesters.
1. Only I
  2. Only II and III
  3. Only I and III
  4. I, II and III
- 71.
- The richest source of vitamin  $B_{12}$  are
1. Chocolate and green gram.
  2. Rice and hen's egg
  3. Carrot and chicken's breast.
  4. Goat's liver and Spirulina
- 72.
- Bartholin's glands are situated
- (1) On the sides of the head of some amphibians.
  - (2) At the reduced tail end of birds.
  - (3) On either side of vagina in humans.
  - (4) On either side of vas deferens in humans.
- 73.
- Test tube baby means a baby born when
- (1) It is developed in a test tube.
  - (2) It is developed through tissue culture method.
  - (3) The ovum is fertilized externally and thereafter implanted in the uterus.
  - (4) It develops from a non-fertilized egg.
- 74.
- Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?
- (1) Relaxin-Gigantism
  - (2) Prolactin-Cretinism
  - (3) Parathyroid hormone-Tetany
  - (4) Insulin-Diabetes insipidus
- 75.
- Systemic heart refers to
- (1) The heart that contracts under stimulation from the nervous system.
  - (2) Left auricle and left ventricle in higher vertebrates.
  - (3) Entire heart in lower vertebrates.
  - (4) The two ventricles together in humans.
- 76.
- In the resting state of the neural membrane, diffusion due to concentration gradients, if allowed would drive
1.  $K^+$  and  $Na^+$  and out of the cell.
  2.  $Na^+$  into the cell.
  3.  $Na^+$  out of the cell.
  4.  $K^+$  into the cell.
- 77.
- The majority of carbon dioxide produced by our body cells is transported to the lungs
1. Dissolved in the blood.
  2. As bicarbonates.
  3. As carbonates
  4. Attached to haemoglobin
- 78.
- ATPase enzyme needed for muscle contraction is located in
1. Troponin
  2. Myosin
  3. Actin
  4. Actinin
- 79.
- Uricotelism is found in (AIPMT 2004)
1. Fishes, and fresh protozoans.
  2. Birds, reptiles and insects
  3. Frogs, and toads
  4. Mammals, and birds
- 80.

- The hormone angiotensinogen is produced by:
1. Liver
  2. Kidney
  3. Heart
  4. Pituitary
81. The definition of hormone describes them as having all the following features except:
1. non-nutrient chemicals
  2. intra-cellular messengers
  3. produced in trace amounts
  4. act on distant target organs
82. The process of conversion of complex food substances to simple absorbable forms is called:
1. Mastication
  2. Deglutition
  3. Digestion
  4. Assimilation
83. The human dentition is described as:
1. Diphyodont, Heterodont and Acrodont
  2. Monphyodont, Heterodont and Acrodont
  3. Diphyodont, Homodont and Thecodont
  4. Diphyodont, Heterodont and Thecodont
84. Transfer of sperms into the female genital tract is called as:
1. Insemination
  2. Emission
  3. Ejaculation
  4. Spermiation
85. The testes are situated outside the abdominal cavity within a pouch called scrotum. This is necessary as:
1. The scrotum can contain lengthy ducts for the transfer of sperms
  2. Scrotum helps in maintaining the low temperature of the testes necessary for spermatogenesis
  3. Scrotum reduces the pressure around testes necessary for spermatogenesis
  4. Scrotum can store huge amounts of sperms
86. The 'family planning' programs in India were initiated in:
1. 1947
  2. 1951
  3. 1957
  4. 1961
87. A canal called the cerebral aqueduct passes through the:
1. Cerebral hemispheres
  2. Diencephalon
  3. Mid brain
  4. Hind brain
88. What does RCH stand for?
1. Reproductive and Complete Health
  2. Regional and Central Healthcare
  3. Reproductive and Child Healthcare
  4. Reproductive and Cumulative Health
89. From outside to inside, the correct sequence of cells in the inner layer of human retina will be:
1. Photoreceptor cells, Bipolar cells, Ganglion cells
  2. Ganglion cells, Bipolar cells, Photoreceptor cells
  3. Photoreceptor cells, Ganglion cells, Bipolar cells
  4. Ganglion cells, Photoreceptor cells, Bipolar cells
90. Introduction of sex education in schools in India should be encouraged. This is because:
- I. This will discourage children from believing in misconceptions about sex related aspects
  - II. Sex education will help adolescents to lead a reproductively healthy life
1. Only I is correct
  2. Only II is correct
  3. Both I and II are correct
  4. Both I and II are incorrect

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