

1.

Philadelphia chromosome is associated with:

1. Retinoblastoma
2. Chronic Myeloid Leukemia
3. Xerodermapigmentosum
4. Kaposi's sarcoma

2.

Plants do not have cancers as:

1. they do not have circulation
2. they have highly developed immunity against them
3. the plant cells have cell walls
4. they already have meristems at their tips

3.

A piece of nucleic acid used to find a gene, by forming a hybrid with it, is called a

1. Probe
2. Vector
3. Restriction sequence
4. Retrovirus

4.

In situ hybridization is used to

1. Remove mutations from a chromosome
2. Remove plasmids from a cell
3. Clone a gene
4. Locate a gene on a chromosome

5.

Restriction enzymes are synthesized by

1. Bacteria only
2. Either yeast or bacteria only
3. Eukaryotic cells, only
4. All kind of cell

6.

What process causes shortening of telomeres during cell division?

1. DNA synthesis.
2. Exonuclease removal of primers.
3. Ligation of DNA fragments.
4. Telomerase activity.

7.

In the first gene cloning experiment:

2. Researchers successfully identified a human gene responsible for disease.
3. Researchers successfully inserted a gene for kanamycin resistance into a plasmid vector.
4. Researchers demonstrated that many different DNA fragments could insert into a plasmid vector.
5. Researchers produced a strain of bacteriophage with increased ability to infect E. coli.

8.

Diseases amenable to treatment by gene therapy:

1. Must be relatively mild.
2. Must be caused by a defect in cells that are clinically accessible.
3. Must have other types of treatments available in case gene therapy fails.
4. Must lower the humoral and cell mediated immune responses

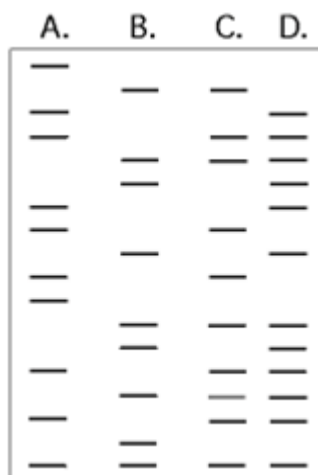
9.

One possible use of transgenic plants is in the production of human proteins, such as vaccines. Which of the following is a possible hindrance that must be overcome?

1. prevention of transmission of plant allergens to the vaccine recipients
2. prevention of vaccine-containing plants being consumed by insects
3. use of plant cells to translate non-plant derived mRNA
4. inability of the human digestive system to accept plant-derived protein

10.

The DNA profiles below represent four different individuals. Which of the following statements is consistent with the results?



1. B is the child of A and C.
 2. C is the child of A and B.
 3. D is the child of B and C.
 4. A is the child of B and C.
- 11.
- Dideoxynucleotide chain-termination is a method of
1. cloning DNA.
 2. sequencing DNA.
 3. digesting DNA.
 4. synthesizing DNA.
- 12.
- A steroid hormone which regulates glucose metabolism is:
1. cortisol
 2. corticosterone
 3. 11- deoxycorticosterone
 4. cortisone
- 13.
- Stroke volume is the
1. amount of blood pumped by the left ventricle per minute.
 2. difference between end-diastolic and end-systolic volume.
 3. difference between systolic and diastolic blood pressure.
 4. amount of blood pumped by atrial systole into the ventricles.
- 14.
- Cardiac output is defined as
1. blood pressure X stroke volume.
 2. peripheral resistance X heart rate.
 3. heart rate X stroke volume.
 4. Systolic pressure – diastolic pressure
- 15.
- About what percent of the glomerular ultrafiltrate is reabsorbed by the tubules during urine formation?
1. 99%
 2. 70%
 3. 50%
 4. 20%
- 16.
- The proximal convoluted tubule of the nephron reabsorbs about what fraction of the filtrate?
1. 99%.
 2. 85%.
 3. 65%.
 4. 19%.
- 17.
- When a patient is given an analgesic his pain:
1. increases
 2. decreases
 3. remains unaltered
 4. first increases than decreases
- 18.
- Injury to vagus nerve in humans is not likely to affect
1. tongue movements
 2. gastrointestinal movements
 3. pancreatic secretion
 4. cardiac movements.
- 19.
- Anxiety and eating spicy food together in an otherwise normal human, may lead to
1. Indigestion
 2. Jaundice
 3. Diarrhoea
 4. Vomiting
- 20.
- The initial step in the digestion of milk in humans is carried out by
1. Lipase
 2. Trypsin
 3. Rennin
 4. Pepsin
- 21.
- Identify the incorrectly matched pair [with respect to a 28 days cycle]:
1. beginning of menstrual flow - day 1
 2. ovulation - day 14
 3. LH surge - day 21
 4. beginning of proliferative phase - day 5
- 22.
- What maintains corpus luteum after fertilization?
1. release of HCG by the trophoblast to maintain the corpus luteum.
 2. production of LH by the maternal pituitary.
 3. maintenance of the corpus luteum by prolactin.
 4. production of estrogen by the adenohypophysis.
- 23.
- What happens during the contraction of a skeletal muscle fiber?
1. The myosin filaments stay the same size but the actin filaments shorten
 2. The sarcomeres shorten
 3. The actin filaments stay the same size but

the myosin filaments shorten

4. Both actin and myosin filaments shorten

24.

A change in the amount of yolk and its distribution in the egg will affect

1. formation of zygote
2. pattern of cleavage
3. number of blastomeres produced
4. fertilization

25.

What is transferred into the fallopian tube in ZIFT?

1. Zygote only
2. Embryos with more than 8 blastomeres
3. Zygote or embryos with up to 8 blastomeres
4. All of the above can be transferred during ZIFT

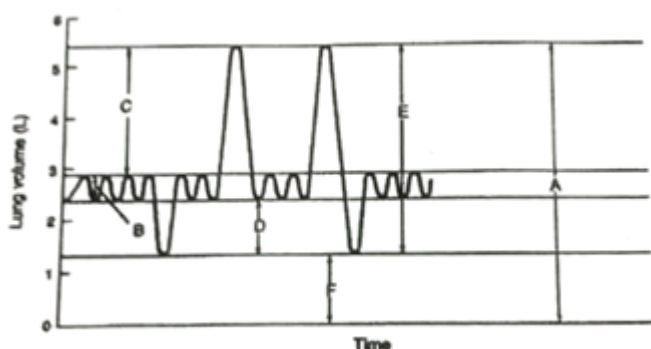
26.

Thickening of arteries due to cholesterol deposition is:

1. arteriosclerosis
2. rheumatic heart
3. blood pressure
4. cardiac arrest

27.

In the given diagram, the functional residual capacity will be depicted by:



1. B + F
2. B + D + F
3. A - [B + C]
4. A - E

28.

ACTH controls the secretion of

1. Cortisol
2. Aldosterone
3. Epinephrine
4. Testosterone

29.

Mark the mismatched pair :

- | | | |
|-----------------|--|---------------|
| 1. Amyloplast | i. protein granule | Store |
| 2. Elaioplast | ii. fats | Store oils or |
| 3. Chloroplasts | iii. chlorophyll pigments | Contain |
| 4. Chromoplasts | iv. coloured pigments other than chlorophyll | Contain |

30.

The principle of competitive exclusion was stated by

1. G. F. Gause.
2. Mac Arthur.
3. Verhulst and Pearl.
4. C. Darwin.

31.

The 'Competitive Exclusion Principle' was given by:

1. Gause
2. Connell
3. Tillman
4. Paul Ehrlich

32.

If 20 J of energy is trapped at producer level, then how much energy will be available to peacock as food in the following chain?

(AIPMT- 2014)

plant → mice → snake → peacock

1. 0.02 J
2. 0.002 J
3. 0.2 J
4. 0.0002 J

33.

Which of the following ecosystems is most productive in terms of net primary production?(NCERT Exemplar)

1. Deserts
2. Tropical rain forests
3. Oceans
4. Estuaries

34.

Which of the following is correctly matched? (NEET-2 - 2016)

1. Stratification-Population
2. Aerenchyma-Opuntia

3. Age pyramid-Biome
4. Parthenium hysterophorus-Threat to biodiversity

35.

The one-horned rhinoceros is specific to which of the following sanctuary (NCERT Exemplar)

1. Bhitarkanika
2. Bandipur
3. Kaziranga
4. Corbett park

36.

Global warming can be controlled by: (NEET- 2013)

- 1 Reducing reforestation, increasing the use of fossil fuel.
- 2 Increasing deforestation, slowing down the growth of human population
- 3 Increasing deforestation, reducing efficiency of energy usage.
- 4 Reducing deforestation, cutting down use of fossil fuel

37.

Among the following which one causes maximum indoor chemical pollution? (NCERT Exemplar)

1. Burning coal
2. Burning cooking gas
3. Burning mosquito coil
4. Room spray

38.

Genetic drift is most powerful in

1. changing environments
2. small populations
3. large populations
4. stable environments

39.

The concept of genetic bottlenecks includes which of the following?

1. a loss of genetic diversity in descendent populations
2. extensive gene flow
3. sharing of genetic material between two populations
4. increased ability to resist new diseases

40.

Which statement most accurately reflects what population geneticists refer to as "fitness"?

1. Fitness is the measure of an organism's adaptability to various habitats.
2. Fitness reflects the number of mates each individual of the population selects.
3. Fitness refers to the relative health of each individual in the population.
4. Fitness is a measure of the contribution of

a genotype to the gene pool of the next generation.

41.

Organisms that are least likely to experience extinction over the long term are most likely to be found in _____.

1. areas inhabited by humans
2. very stable habitats
3. desert
4. savanna

42.

The class of immunoglobulins that attach to mast cells and basophils to initiate an inflammatory response are:

1. IgA
2. IgM
3. IgG
4. IgE

43.

The cells responsible for humoral adaptive immune responses proliferate and differentiate into plasma cells in the

1. liver
2. bloodstream
3. lymph nodes
4. red pulp of the spleen

44.

Which of the following is the best evidence for the 'Lock-and-key model' of enzyme action?

(AIPMT

2011)

- (1) all isolated enzymes have been identified as proteins
- (2) compounds similar in structure to the substrate inhibit the reaction
- (3) enzymes are found in living organisms and speed up certain reactions
- (4) enzymes determine the direction of reaction

45.

Ribosomal RNA is actively synthesized in (AIPMT Pre. 2012)

1. Lysosomes
2. Nucleolus
3. Nucleoplasm
4. Ribosomes

46.

Which of the following is not true of a eukaryotic cell?

1. It has 80S type of ribosome present in the mitochondria

2. It has 80S type of ribosome present in the cytoplasm
3. Mitochondria contain circular DNA
4. Membrane bound organelles are present

47.

The active form of *Entamoeba histolytica* feeds upon – (AIPMT - 2015)

1. Mucosa and submucosa of colon only
2. Food in intestine
3. Blood only
4. Erythrocytes; mucosa and submucosa of colon

48.

Which one of the following is not a poisonous snake?

1. Cobra
2. Viper
3. Python
4. Krait

49.

Match the following list of animals with their level of organization.

Division of Labour	Animal
A. Organ level	i. Pheritima
B. Cellular aggregate level	ii. Fasciola
C. Tissue level	iii. Spongilla
D. Organ system level	iv. Obelia

Choose the correct match showing division of labour with animal example.

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

50.

Closed vascular bundles lack (AIPMT Pre.-2012)

1. Ground tissue
2. Conjunctive tissue
3. Cambium
4. Pith

51.

Which one of the following statement is correct? (AIPMT Pre 2011)

1. In Tomato, fruit is a capsule
2. Seeds of Orchids have oil-rich endosperm
3. Placentation in Primrose is basal
4. Flower of Tulip is a modified shoot

52.

Flower are Zygomorphic in (AIPMT Pre 2011)

1. Mustard
2. Gulmohur
3. Tomato

4. Datura

53.

Which statement is wrong for viruses(AIPMT-2012)

1. All are parasites
2. All of them have helical symmetry
3. They have ability to synthesize nucleic acids and proteins
4. Antibiotics have no effect on them

54.

Which one of the following is a correct statement [AIPMT - 2012]

1. Pteridophyte gametophyte has a protonemal and leafy stage
2. In gymnosperms female gametophyte is free-living
3. Antheridiophores and archegoniophores are present in pteridophytes.
4. Origin of seed habit can be traced in pteridophytes

55.

Generally, monocotyledonous seeds are endospermic. An important exception may be:

1. Rice
2. Wheat
3. Orchids
4. Pea

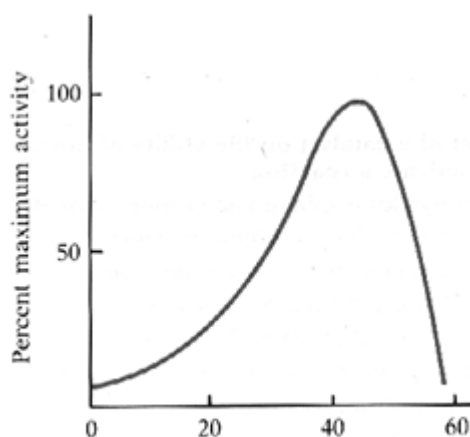
56.

The ring arrangement of vascular bundles is a characteristic feature of:

1. Monocot stem
2. Dicot stem
3. Monocot root
4. Dicot root

57.

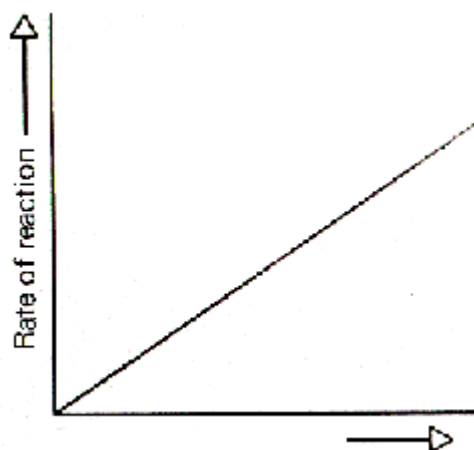
The graph shown below shows the effect of a certain factor on the rate of a reaction catalyzed by an enzyme. The X-axis would show the said factor and that will be:



1. substrate concentration
2. pH
3. enzyme concentration
4. temperature

58.

In the following graph, the X-axis will show:



1. substrate concentration
2. enzyme concentration
3. pH
4. enzyme concentration or substrate concentration

59.

Meiosis occurs in organism during

1. Sexual reproduction
2. Vegetative reproduction
3. Both sexual and vegetative reproduction
4. None of these above

60.

During anaphase I of meiosis

1. Homologous chromosomes separate
2. Non-homologous autosomes separate
3. Sister chromatids separate
4. Non-sister chromatids separate

61.

The exoskeletal plates in the exoskeleton of cockroach are joined to each other by:

1. Proteinaceous pellicle
2. Arthroal membrane
3. Ligament
4. Cellulose threads

62.

The cell walls of diatoms are 'indestructible' as they are embedded with:

1. Silica
2. Chitin
3. Calcium

4. Raphides

63.

Bacteriophages are:

1. Bacteria infecting ssRNA viruses
2. Bacteria infecting dsRNA viruses
3. Viruses that infect bacteria and generally have dsDNA
4. Viruses that infect bacteria and generally have dsRNA

64.

Identify the incorrect statement regarding brown algae:

1. Major pigments are chlorophyll a, and fucoxanthin
2. Stored food is mannitol and laminarin
3. Cellulosic cell wall lacking algin
4. 2, unequal and lateral flagellar insertions

65.

A store house of collected plant specimens that are dried, pressed and preserved on sheets is called as:

1. Herbarium
2. Monograph
3. Flora
4. Manual

66.

A few statements with regard to sexual reproduction are given below:

- i. Sexual reproduction does not always require two individuals
- ii. Sexual reproduction generally involves gametic fusion
- iii. Meiosis never occurs during sexual reproduction
- iv. External fertilisation is a rule during sexual reproduction

Choose the correct statements from the options below:

1. i and iv
2. i and ii
3. ii and iii
4. i and iv

67.

A multicellular, filamentous alga exhibits a type of sexual life cycle in which the meiotic division occurs after the formation of zygote. The adult filament of this alga has

1. haploid vegetative cells and diploid gametangia
2. diploid vegetative cells and diploid gametangia
3. diploid vegetative cells and haploid gametangia
4. haploid vegetative cells and haploid gametangia

68.

The male gametes of rice plant have 12 chromosomes in their nucleus. The chromosome number in the female gamete, zygote and the cells of the seedling will be, respectively,

1. 12, 24, 12
2. 24, 12, 12
3. 12, 24, 24
4. 24, 12, 24.

69.

More than 70 per cent of livestock population is found in:

1. Denmark
2. India
3. China
4. India and China

70.

The agriculture sector of India employs about:

1. 50 per cent of the population
2. 70 per cent of the population
3. 30 per cent of the population
4. 60 per cent of the population.

71.

33 percent of India's Gross Domestic Product comes from

1. Industry
2. Agriculture
3. Export
4. Small-scale cottage industries.

72.

Which one represents male gamete [AIPMT 2012]

1. Antipodals
2. Synergids
3. Endosperm
4. Pollen grain

73.

Which one of the following pairs is wrongly matched? (AIPMT 2009)

- (1) Textile - amylase
- (2) Detergents - lipase
- (3) Alcohol - nitrogenase
- (4) Fruit juice - pectinase

74.

Green revolution in India occurred during: (AIPMT Mains - 2012)

1. 1960's
2. 1970's
3. 1980's
4. 1950's

75.

A mutation at a gene locus changes a character due to change in (AIPMT- 2004)

1. DNA replication
2. Protein synthesis pattern
3. RNA transcription pattern
4. Protein structure

76.

A normal woman whose father was colour blind is married to normal visioned man. Their sons would be (AIPMT- 2004)

1. 75% colour blind
2. 50% colour blind
3. 100% colour blind
4. All normal.

77.

Ringworm in humans is caused by (AIPMT 2010)

1. Fungi
2. Nematodes
3. Viruses
4. Bacteria

78.

The genetically-modified (GM) brinjal in India has been developed for (AIPMT-2010)

1. Enhancing shelf life
2. Enhancing mineral content
3. Drought-resistance
4. Insect-resistance

79.

Unisexuality of flowers prevents (AIPMT - 2008)

1. Geitonogamy but not xenogamy
2. Autogamy and geitonogamy
3. Autogamy but not geitonogamy
4. Both geitonogamy and xenogamy

80.

On which organism Beadle and Tatum worked to propose one gene-one enzyme hypothesis (AIPMT - 2007)

1. Drosophila
2. Escherichia coli
3. Neurospora crassa
4. Nostoc

81.

Which one is a true statement regarding DNA polymerase used in PCR (AIPMT Pre. 2012)

1. It is used to ligate introduced DNA in recipient cell
2. It serves as a selectable marker
3. It is isolated from a virus
4. It remains active at high temperature

82.

Age of fossils in the past was generally determined by radiocarbon method and other methods involving radioactive elements found in the rocks. More precise methods, which were used recently and led to the revision of the evolutionary periods for different groups of organisms includes (AIPMT 2004)

1. study of the conditions of fossilization.
2. electron spin resonance (ESR) and fossil DNA
3. study of carbohydrates/proteins in rocks
4. study of carbohydrates/proteins in fossils

83.

A plant, on repeated self pollination, preserves the trait expressed for many generations. Such a plant is said to be:

1. Panmictic
2. Homologous
3. Apomictic
4. Pure line

84.

Which of the following is a recessive trait for a character chosen by Mendel in garden pea?

1. Violet flower colour
2. Yellow pod colour
3. Axial flower position
4. Tall stem height

85.

Identify the incorrect statement regarding experiments on *Pisum sativum* by Gregor Mendel?

1. He conducted hybridisation experiments on garden peas for seven years (1856-1863) and proposed the laws of inheritance in living organisms.
2. It was for the first time that statistical analysis and mathematical logic were applied to problems in biology.
3. Unfortunately his experiments had a small sampling size, which gave less credibility to the data that he collected.
4. He investigated characters in the garden pea plant that were manifested as two opposing traits.

86.

Majority of water plants like water hyacinth and water lily are pollinated by:

1. Water
2. Wind

3. Insects

4. Both 2 and 3

87.

Majority of the flowering plants produce:

1. Female flowers
2. Male flowers
3. Hermaphroditic flowers
4. Neutral flowers

88.

In artificial hybridization experiments, if the female plant produces unisexual flowers, emasculation:

1. Must be done before maturity
2. Must be done after maturity
3. Must be done at maturity
4. Is not needed

89.

During which stage of the sewage treatment are the microbes used?

1. Primary
2. Secondary
3. Tertiary
4. Quaternary

90.

Biogas is a mixture of:

1. Methane, Carbon dioxide and Hydrogen sulfide
2. Methane, Carbon dioxide and Ammonia
3. Methane, Ammonia and Hydrogen sulfide
4. Ammonia, Carbon dioxide and Hydrogen sulfide

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