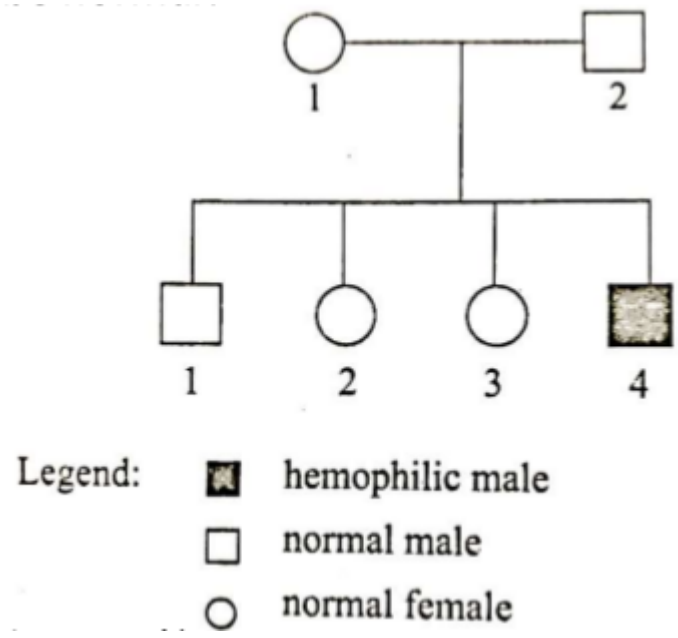
1.

A man who is achondroplastic dwarf with normal vision marries a color-blind woman of normal height. The man's father was six feet tall, and both the woman's parents were of average height. Achondroplastic dwarfism is autosomal dominant, and red-green color blindness is X-linked recessive. What proportion of their sons would be color-blind and of normal height ?

1. All
2. None
3. Half
4. One out of four

2.

On the basis of information given in the pedigree, if II 3 marries a hemophilic man, what is the probability that her first child will be normal ?



1. 1/4
2. 1/2
3. 3/4
4. 0

3.

Glucocorticoids are characterized by all except:
1. Glucocorticoids stimulate the breakdown of muscle proteins into amino acids.
2. Cortisol is a glucocorticoid.
3. Glucocorticoids stimulate the pancreas to produce the enzymes needed for gluconeogenesis.
4. Glucocorticoids are released during times of stress.

4.

Feeling the tremor of an earthquake a scared resident of seventh floor of a multistoried building starts climbing down the stairs rapidly. Which hormone initiated this action?
1. Thyroxine
2. Adrenaline
3. Glucagon
4. Gastrin

5.

What factor is responsible for the movement of the blood in the vascular system?
1. valves in the walls of the blood vessels.
2. peristalsis caused by the smooth muscle in the blood vessel walls.
3. pressure gradients created by the heart.
4. osmotic pressure.

6.

Which of these pressures pulls water into capillaries?
1. blood hydrostatic pressure
2. blood colloid osmotic pressure
3. interstitial fluid pressure
4. interstitial colloid osmotic pressure

7.

The regulation of blood pressure is regulated by:
1. hypothalamus
2. medulla oblongata
3. cerebellum
4. pons

8.

The trachea divides into two primary bronchi where the right with respect to the left is:
1. wider
2. longer
3. more horizontally oriented
4. all of the above

9.

The diffusion of gases in lungs occur across the respiratory membrane. Which of the following is incorrect regarding the respiratory membrane?

1. it is the only barrier between the blood and the inhaled gases within each alveolus

2. basement membranes of alveolar type I cells and their adjacent capillaries are fused

3. oxygen cannot diffuse through the membrane and so must be actively transported

4. carbon dioxide diffuses across the membrane from the blood into the alveolar lumen

10.

Urine from the major calyces in kidney is collected by:
1. minor calyces.
2. renal pelvis.
3. ureters.
4. renal papillae

11.

The functional unit of the human kidney is the:
1. glomerulus.
2. Malpighian body.
3. nephron.
4. medullary pyramids.

12.

The reflex arc ends at:
1. sensory neuron
2. motor neuron
3. effector
4. receptor

13.

Hearing impairment affects which part of brain?
1. Frontal lobe
2. Parietal lobe
3. Temporal lobe
4. Cerebellum

14.

Process of digestion is accomplished by —
1. Only mechanical process
2. Only chemical process
3. Neither mechanical nor chemical process
4. Both mechanical and chemical processes

15.

Which one of the following statements is true regarding digestion and absorption of food in humans
1. Fructose and amino acids are absorbed through intestinal mucosa with the help of carrier ions like Na^+
2. Chylomicrons are small lipoprotein particles that are transported from intestine into blood capillaries.
3. About 60% of starch is hydrolysed by salivary amylase in our mouth.
4. Oxyntic cells in our stomach secrete the proenzyme pepsinogen.

16.

After being released the secondary oocyte must be fertilized within:
1. 1 hour.
2. 12 hours.
3. 24 hours.
4. 72 hours.

17.

Female secondary sexual characteristics develop in response to:
1. estrogen
2. progesterone
3. androgen
4. luteinizing hormone

18.

Chose the correct chronological order in which the following cells are produced:
a. primary spermatocytes
b. secondary spermatocytes
c. spermatids
d. spermatogonia
e. sperm cells.
1. a,b,c,d,e
2. b,a,c,e,d
3. c,a,b,d,e
4. d,a,b,c,e

19.

The minimum stimulus needed to cause a contraction is called the:
1. chronaxie
2. threshold
3. rheobase
4. reversal potential

20.

Stimulation by a nerve impulse is always required for the contraction of:
1. multi-unit smooth muscle
2. skeletal muscle
3. visceral smooth muscle
4. cardiac muscle

21.

The second maturation division of the mammalian ovum occurs
1. shortly after ovulation before the ovum makes entry into the Fallopian rube
2. after the ovum has been penetrated by a sperm
3. until the nucleus of the sperm has fused with that of the ovum
4. in the Graafian follicle following the first maturation division

22.

The incidence of sexually transmitted infections is reported to very high among persons in the age group of:
1. 15 – 24 years 2. 25 – 34 years
3. 35 – 44 years 4. 45 – 54 years

23.

The primary dentition in human differs from permanent dentition in not having one of the following type of teeth
1. Canine
2. Premolars
3. Molars

4. Incisors

24.

Which one of the following is a matching pair of a certain body feature and its value/count in a normal human adult?
1. Urea -5-10 mg/100 ml of blood
2. Blood sugar (fasting) - 80-100 mg/100 ml
3. Total blood volume - 3 - 4 litres
4. ESR in Wintrobe method -9-15 mm in males and 20-34 mm in females

25.

When a plant undergoes senescence, the nutrients may be
1. Exported
2. Withdrawn
3. Translocated
4. None of the above

26.

Read the following four statements a,b,c and d and select the right option having both correct statements:
(a) Z scheme of light reaction takes place in presence of PSI only
(b) Only PS I is functional in cyclic photophosphorylation
(c) Cyclic photophosphorylation results into synthesis of ATP and NADPH
(d) Stroma lamellae lack PSII as well as NADP reductase
Options :
1. (c) and (d)
2. (b) and (d)
3. (a) and (b)
4. (b) and (c)

27.

Just as a person moving from Delhi to Shimla to escape the heat for the duration of hot summer, thousands of Migratory birds from Siberia and other extremely cold northern regions move to
1. Western Ghat.
2. Meghalaya.
3. Corbett national park.
4. Keoladeo national park.

28.

About what percent of all insects is phytophagus?
1. 1
2. 25
3. 65
4. 99

29.

The most common means of morphological defense in plants against herbovory are:
1. Spines
2. Thick cuticle
3. Thorns
4. Slime

30.

The rate of formation of new organic matter by rabbit in a grassland, is called: (AIPMT Mains- 2012)
1. Net productivity
2. Secondary productivity
3. Net primary productivity
4. Gross primary productivity

31.

The process of mineralization by micro organisms helps in the release of(NCERT Exemplar):
1. Inorganic nutrients from humus
2. Both organic and inorganic nutrients from detritus
3. Organic nutrients from humus
4. Inorganic nutrients from detritus and formation of humus.

32.

In which of the following both pairs have correct combination? (AIPMT- 2015)
1. In situ conservation : Cryopreservation
Ex situ conservation : Wildlife Sanctuary
2. In situ conservation : Seed Bank
Ex situ conservation : National Park
3. In situ conservation : Tissue calture
Ex situ conservation : Sacred groves
4. In situ conservation : National Park
Ex situ conservation: Botanical Garden

33.

Which of the following is not an invasive alien species in the Indian context? (NCERT Exemplar)
1. Lantana
2. Cynodon
3. Parthenium
4. Eichhornia

34.

Which one of the following is a wrong statement? (AIPMT Pre.- 2012)
1. Most of the forests have been lost in tropical areas.
2. Ozone in upper part of atmosphere is harmful to animals.
3. Greenhouse effect is a natural phenomenon.
4. Eutrophication is a natural phenomenon in freshwater bodies.

35.

Which of the following exhibits biomagnifications?
1. SO_2
2. Mercury
3. DDT
4. Both b & c

36.

A competitive inhibitor of succinic dehydrogenase is **(AIPMT 2008)**

(1) malonate

(2) oxaloacetate

(3) α-ketoglutarate

(4) malate

37.

The number of ends in a glycogen molecule would be
1. Equal to the number of branches plus one
2. Equal to the number of branch points
3. One
4. Two, one on the left side and another on the right side

38.

A pure protein should normally have
1. Two ends
2. One end
3. Three ends
4. No ends

39.

Important site for formatition of glycoproteins and glycolipids in (AIPMT2011)
1. Vacuole
2. Golgi apparatus
3. Plastid
4. Lysosome

40.

Select the Taxon mentioned that represents both marine and fresh water species– (AIPMT 2014)
1. Echionoderms
2. Ctenophroa
3. Cephalocoradata
4.Cnidaria

41.

Birds and mammals share one of the following characteristics as a common feature.
1. Pigmented skin
2. Alimentary canal with some modification
3. Viviparity
4. Warm blooded nature

42.

Which one of the following sets of animals belongs to a single taxonomic group?
1. Cuttlefish, Jellyfish, Silverfish, Dogfish, Starfish
2. Bat, Pigeon, Butterfly
3. Monkey, Chimpanzee, Man
4. Silkworm, Tapeworm, Earthworm

43.

In land plants, the guard cells differ from other epidermal cells in having (AIPMT Pre.-2011)
1. Cytoskeleton
2. Mitochondria
3. Endoplasmic reticulum
4.Chloroplasts

44.

Anthesis is (AIPMT- 2004)
1. Opening of floral bud
2. Development of anthers
3. Maturation of anthers
4. Reception of pollen by stigma

45.

The Cyanobacteria are also referred to as (AIPMT-2012)
1. Proists

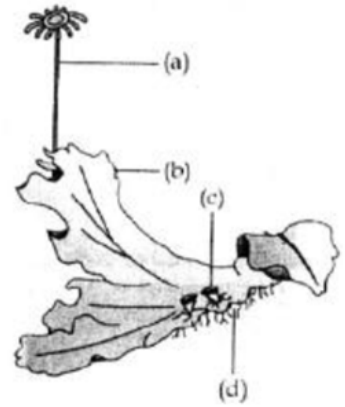
2. Golden algae

3. Slime moulds

4. Blue green algae

46.

Examine the figure given below and select the right option giving all the four parts (a, b, c and d) correctly identified.(Mains AIPMT - 2011)



	(A)	(B)	(C)	(D)
1.	Archegoniophore	Female' thallus	Gemmacup	Rhizoids
2.	Archegoniophore	Female' thallus	Bud	Foot
3.	Seta	Sporophyte	Protonema	Rhizoids
4.	Antheridiophore	Male thallus	Globule	Roots

47.

If the fruit is formed without the fertilization of ovary, it is called as:
1. Parthenogenetic
2. Parthenocarpic
3. Aggregate

4. False

48.

Epigynous flower is seen in:
1. China rose
2. Brinjal
3. Mustard
4. Ray florets of sunflower

49.

The term 'stele'in a dicot root does not include:
1. Endodermis
2. Pericycle
3. Vascular bundles
4. Pith

50.

Meiosis results in the formation of:
1. Two genetically identical diploid cells
2. Two genetically non identical diploid cells
3. Four genetically identical haploid cells
4. Four genetically non identical haploid cells

51.

Crossing over or recombination can be defined as:

1. exchange of segments between sister chromatids of homologous chromosomes

2. exchange of segments between non sister chromatids of homologous chromosomes

3. exchange of segments between sister chromatids of heterologous chromosomes

4. exchange of segments between non sister chromatids of heterologous chromosomes

52.

Which of the following features is common to prokaryotes and many eukaryotes?
1. Chromosomes present
2. Cell wall present
3. Nuclear membrane present
4. Sub cellular organelles present

53.

Mosaic vision in Periplaneta is characterized by:
1. High sensitivity but low resolution
2. Low sensitivity but high resolution
3. High sensitivity and high resolution
4. Low sensitivity and low resolution

54.

In the Two Kingdom classification the Kingdom Plantae was erroneous with some major issues that include:

I. Placing bacteria and blue green algae with eukaryotic groups

II. Grouping together the unicellular organisms with multicellular ones
III. Placing heterotrophic fungi with autotrophic plants

1. I and II only
2. I and III only
3. II and III only
4. I, II and III

55.

Ergot fungus that can be a source for the hallucinogen LSD is:
1. *Phytophthorainfestans*
2. *Alternariasolani*
3. *Claviceps purpura*
4. *Neurosporacrassa*

56.

The term 'strobilus' in a gymnosperm defines a:
1. collection of megasporophylls
2. collection of microsporophylls
3. site of sporangial development
4. collection of megasporophylls, microsporophylls and/or a site of sporangial development

57.

The main difference between taxonomy and systematic is that:
1. Taxonomy is involved in the naming and classification of organisms while systematics is involved in determining evolutionary relationship between organisms
2. Systematics is involved in the naming and classification of organisms while taxonomy is involved in determining evolutionary relationship between organisms
3. Taxonomy is not a true science and has largely been replaced with systematic
4. Systematics can be considered as a part of taxonomy

58.

ADA is an enzyme which is deficient in a genetic disorder SCID. What is the full form of ADA?

1. Adenosine deoxyaminase

2. Adenosine deaminase

3. Aspartate deaminase

4. Arginine deaminase

59.

Silencing of a gene could be achieved through the use of:

1. RNAi only

2. antisense RNA only

3. both RNAi and antisense RNA

4. none of the above

60.

Which of the following bacteria is not a source of restriction endonuclease?

1. Haemophilusinfluenzae

2. Escherichia coli

3. Entamoeba coli

4. Bacillus amyloliquefaciens

61.

Which of the following steps are catalysed by Taq DNA polymerase in a PCR reaction?

1. Denaturation of template DNA

2. Annealing of primers to template DNA

3. Extension of primer end on the template DNA

4. All of the above

62.

Match the scientists listed under column 'I' with ideas listed column 'II'.

Column I	Column II
1. Darwin	i. abiogenesis
2.Oparin	ii. use and disuse of organs
3. Lamarck	iii. continental drift theory
4. Wagner	iv. evolution by natural selection

1. A-i; B-iv; C-ii; D-iii

2. A-iv; B-i; C-ii; D-iii

3. A-ii; B-iv; C-iii; D-i

4. A-iv; B-iii; C-ii; D-i

63.

In 1953 S. L. Miller created primitive earth conditions in the laboratory and gave experimental evidence for origin of first form of life from pre-existing non-living organic molecules. The primitive earth conditions created include:

1. low temperature, volcanic storms, atmosphere rich in oxygen

2. low temperature, volcanic storms, reducing atmosphere

3. high temperature, volcanic storms, non-reducing atmosphere

4. high temperature, volcanic storms, reducing atmosphere containing CH_4, NH_3 etc.

64.

Variations during mutations of meiotic recombinations are:

1. random and directionless

2. random and directional

3. small and directional

4. random, small and directional

65.

Transplantation of tissues/organs to save certain patients often fails due to rejection of such tissues/organs by the patient. Which type of immune response is responsible for such rejections?

1. auto-immune response

2. humoral immune response

3. physiological immune response

4. cell-mediated immune response

66.

Antibodies present in colostrum which protect the new born from certain diseases is of

1. Ig G type

2. Ig A type

3. Ig D type

4. Ig E type

67.

Tobacco consumption is known to stimulate secretion of adrenaline and nor-adrenaline. The component causing this could be:

1. Nicotine

2. Tannic acid

3. Curamin

4. Catechin

68.

Big holes in Swiss cheese are made by a:

1. a machine

2. a bacterium that produces methane gas

3. a bacterium producing a large amount of carbon dioxide

4. a fungus that releases a lot of gases during its metabolic activities.

69.

The residue left after methane production from

cattle dung is:

1. burnt

2. burried in land fills

3. used as manure

4. used in civil construction.

70.

Which of the following statements is correct about the role of regulatory proteins in transcription in prokaryotes?

1. They only increase expression

2. They only decrease expression

3. They interact with RNA polymerase but do not affect the expression

4. They can act both as activators and as repressors

71.

Which was the last human chromosome to be completely sequenced:

1. Chromosome 1

2. Chromosome 11

3. Chromosome 21

4. Chromosome X

72.

Which of the following are the functions of RNA?

1. It is a carrier of genetic information from DNA to ribosomes synthesising polypeptides.

2. It carries amino acids to ribosomes.

3. It is a constituent component of ribosomes.

4. All of the above

73.

Mother and father of a person with 'O' blood group have 'A' and 'B' blood group, respectively. What would be the genotype of both mother and father?

1. Mother is homozygous for 'A' blood group and father is heterozygous for 'B'

2. Mother is heterozygous for 'A' blood group and father is homozygous for 'B'

3. Both mother and father are heterozygous for 'A' and 'B' blood group, respectively

4. Both mother and father are homozygous for 'A' and 'B' blood group, respectively

74.

In an embryo sac, the cells that degenerate after fertilisation are:
1. Synergids and primary endosperm cell
2. Synergids and antipodals
3. Antipodals and primary endosperm cell
4. Egg and antipodals

75.

While planning for an artificial hybridization programme involving dioecious plants, which of the following steps would not be relevant:
1. Bagging of female flower
2. Dusting of pollen on stigma
3. Emasculation
4. Collection of pollen

76.

In the embryos of a typical dicot and a grass, true homologous structures are:
1. Coleorhiza and coleoptile
2. Coleoptile and scutellum
3. Cotyledons and scutellum
4. Hypocotyl and radical

77.

The term 'totipotency' refers to the capacity of a:

1. cell to generate whole plant

2. bud to generate whole plant

3. seed to germinate

4. cell to enlarge in size.

78.

Given below are a few statements regarding somatic hybridization. Choose the correct statements.

(i) protoplasts of different cells of the same plant are fused

(ii) protoplasts from cells of different species can be fused

(iii) treatment of cells with cellulase and pectinase is mandatory

(iv) the hybrid protoplast contains characters of only one parental protoplast.

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

79.

Vegetative propagation in Mint occurs by [AIPMT 2009]
1. Sucker
2. Runner
3. Offset
4. Rhizome

80.

Meiosis occurs in [NEET 2013]
1. Megaspore
2. Meiocyte
3. Conidia
4. Gemmule

81.

Which one of the following is wrong about Chara? [AIPMT 2014]
1. Globule and nucule present on the same plant
2. Upper antheridium and lower oogonium
3. Globule is male reproductive structure
4. Upper oogonium and lower round antheridium

82.

A genetically engineered microorganism used successfully in bioremediation of oil spills is a species of (AIPMT 2007)

(1) Bacillus
(2) Pseudomonas
(3) Trichoderma
(4) Xanthomonas

83.

Breeding of crops with high level of minerals, vitamins and proteins is called (AIPMT -2010)
1. Biofortification
2. Biomagnification
3. Micropropagation
4. Somatic hybridization

84.

A harmful condition which is also a potential saviour form a mosquito borne infectious disease (AIPMT- 2003)
1. Thalassemia
2. Sickle cell anaemia
3. Leukemia
4. Pernicious anaemia

85.

A person Iikey to develop tetanus is immunized administering (AIPMT 2009)
1. Dead germs
2. Preformed antibodies
3. Wide spectrum antibiotics
4. weakened germs

86.

Main objective of production / use of herbicide resistant GM crops is to (AIPMT-2008)
1. Encourage eco-friendly herbicides
2. Reduce herbicide accumulation in food articles for health safety
3. Eliminate weeds from the fields without the use of manual labour
4. Eliminate weeds from the fields without the use of herbicides

87.

What would be number of chromosomes in the cells of aleurone layer in plant species have 8 chromosomes in its synergids (AIPMT - 2006)
1. 8
2. 16
3. 24
4. 32

88.

In gene mutation, adenine is replaced by guanine. It is (AIPMT- 2004)
1. Frame-shift mutation
2. Transcription
3. Transition
4. Transversion

89.

There is a restriction endonuclease called EcoRI. What does ‘co’ part in it stand for?
(AIPMT Pre. - 2011)
1. Colon
2. Coelom
3. Coenzyme
4. coli

90.

If a random mating population is in equilibrium, which of the following brings about a change in gene frequency in a non-directional manner? (AIPMT 2003)
1. Mutations
2. Random drift
3. Selection
4. Migration

Fill OMR Sheet