

1. The globular head of the myosin filament has active site/s for binding to:
 - I. ATP
 - II. Active site on actin filament
 - III. Calcium
 1. Only I
 2. Only I and II
 3. Only II and III
 4. I, II and III
2. The only exopeptidase amongst the following is:
 1. Carboxypeptidase
 2. Chymotrypsin
 3. Trypsin
 4. Elastase
3. The first heart sound is heard during the:
 1. Beginning of ventricular systole
 2. End of ventricular systole
 3. Beginning of atrial systole
 4. End of ventricular diastole
4. Which substance is filtered, reabsorbed, and secreted by different regions of the nephron tubules?
 1. potassium ion (K^+)
 2. inulin
 3. urea
 4. glucose
5. FSH:
 1. Acts on Sertoli cells and stimulates secretion of some factors that help in spermiogenesis
 2. Acts on Sertoli cells and inhibits secretion of some factors that help in spermiogenesis
 3. Acts on Leydig cells and stimulates secretion of some factors that help in spermiogenesis
 4. Acts on Leydig cells and inhibits secretion of some factors that help in spermiogenesis
6. The functions of male sex accessory ducts and glands are maintained by:
 1. Hypothalamic releasing hormone
 2. Pituitary gonadotropins
 3. Adrenal cortex steroids
 4. Testicular androgens
7. A protozoan reproduces by binary fission. What will be the number of protozoans in its population after six generations?(NCERT Exemplar)
 1. 128
 2. 24
 3. 64
 4. 32
8. A cell at telophase stage is observed by a student in a plant brought from the field. He tells his teacher that this cell is not like other cells at telophase stage. There is no formation of cell plate and thus the cell is containing more number of chromosomes as compared to other dividing cells. This would result in (NEET-1-2016)
 1. Polyteny
 2. Aneuploidy
 3. Polyploidy
 4. Somaclonal variation
9. Coconut fruit is a (NEET-2017)
 1. Drupe
 2. Berry
 3. Nut
 4. Capsule
10. The morphological nature of the edible part of coconut is (NEET-2017)
 1. Perisperm
 2. Cotyledon
 3. Endosperm
 4. Pericarp
11. Aleurone layer of Maize grain is specially rich in (AIPMT- 2003)
 1. Proteins
 2. Starch
 3. Lipids
 4. Auxins.
12. Select the mismatch. (NEET-II-2016)
 1. Methanogens-Prokaryotes
 2. Gas vacuoles-Green bacteria
 3. Large central vacuoles-Animal cells
 4. Protists-Eukaryotes
13. The animals belonging to all the following groups are exclusively marine except:
 1. Ctenophora
 2. Porifera

3. Protochordata
4. Echnodermata

14.

Identify the incorrect statement regarding true bacteria?

- As a group, they exhibit maximum metabolic diversity
- Chemosynthetic autotrophic bacteria play a great role in recycling nutrients like nitrogen, phosphorous, iron and sulphur.
- Heterotrophic bacteria are the most abundant in nature.
- Bacteria reproduce mainly by fission but sometimes under favourable conditions, they producespores.

15.

In Whittaker's Five Kingdom classification, heterotrophic mode of nutrition is present in members of:

- Two kingdoms
- Three kingdoms
- Four kingdoms
- Five kingdoms

16.

Coralloid roots in Cycas are associated with nitrogen fixing:

- Rhizobium
- Frankia
- Azospirillum
- Cynobacteria

17.

Which of the following is wrongly matched in the given table? (NEET-I 2016)

	Microbe	Product	Application
1.	Trichoderma polysporum	Cyclosporin A	Immunosuppressant drug
2.	Monascus purpureus	Statins	Lowering of blood cholesterol
3.	Streptococcus	Streptokinase	Removal of clot from blood vessel
4.	Clostridium butylicum	Lipase	Removal of oil stains

18.

A system of rotating crops with legume or grass pasture to improve soil structure and fertility is called (NEET-I 2016)

- Ley farming
- Contour farming
- Strip farming

4. Shifting agriculture

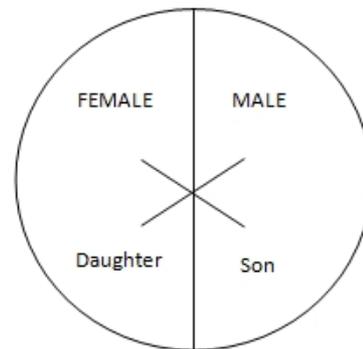
19.

Among the following edible fishes, which one is a marine fish having rich source of omega-3 fatty acids? (NEET-II 2016)

- Mangur
- Mrigala
- Mackerel
- Mystus

20.

Represented below is the inheritance pattern of a certain type of traits in humans. Which one of the following conditions could be an example of this pattern? (AIPMT Mains. 2012)



- Phenylketonuria
- Sickle cell anaemia
- Haemophilia
- Thalassemia

Which one of the following is a wrong statement regarding mutations? (AIPMT Mains. 2012)

- Deletion and insertion of base pairs cause frame-shift mutations
- Cancer cells commonly show chromosomal aberrations
- UV and Gamma rays are mutagens
- Change in a single base pair of DNA does not cause mutation

22.

F₂ generation in a Mendelian cross showed that both genotypic and phenotypic ratios are same as 1 : 2 : 1 It represents a case of : (AIPMT Pre. 2012)

- Co-dominance
- Dihybrid cross
- Monohybrid cross with complete dominance
- Monohybrid cross with incomplete dominance

23. A test cross is carried out to: (AIPMT Mains 2012)
1. Determine the genotype of a plant at F₂.
 2. Predict whether two traits are linked.
 3. Assess the number of alleles of a gene.
 4. Determine whether two species or varieties will breed successfully.
24. The idea of mutations was brought forth by: (AIPMT Mains 2012)
1. Hugo de Vries, who worked on evening primrose
 2. Gregor Mendel, who worked on Pisumsativum
 3. Hardy Weinberg, who worked on allele frequencies in a population
 4. Charles Darwin, who observed a wide variety of organisms during sea voyage
25. If two persons with 'AB' blood group marry and have sufficiently large number of children, these children could be classified as 'A' blood group: 'AB' blood group: 'B' blood group in 1:2 :1ratio. Modern technique of protein electrophoresis reveals presence of both 'A' and 'B' type proteins in 'AB' blood group individuals. This is an example of: (NEET- 2013)
1. Incomplete dominance
 2. Partial dominance
 3. Complete dominance
 4. Codominance
26. If both parents are carrier for thalessemia, which is an autosomal recessive disorder, what are the chances of pregnancy resulting in an affected child ? (NEET- 2013)
1. 50%
 2. 25 %
 3. 100%
 4. no chance
27. In higher vertebrates, the immune system can distinguish self-cells and non-self, If this property is lost due to genetic abnormality and it attacks self-cells, then it leads to : (NEET-2016)
1. Active immunity
 2. Allergic response
 3. Graft rejection
 4. Auto-immune disease
28. What is the criterion for DNA fragments movement on agarose gel during gel electrophoresis? (NEET-2017)
1. The larger the fragment size, the farther it moves
 2. The smaller the fragment size, the farther it moves
 3. Positive charged fragment moves to farther end.
 4. Negatively charged fragments do not move
29. A gene whose expression helps to identify transformed cell is known as: (NEET-2017)
1. Selectable marker
 2. Vector
 3. Plasmid
 4. Structural gene
30. The DNA fragments separated on an agarose gel can be visualised after staining with
1. Bromophenol blue
 2. Acetocarmine
 3. Aniline blue
 4. Ethidium bromide
31. Which of the following are the important floral rewards to the animal pollinators? (AIPMT-2015)
1. Nectar and pollen grains
 2. Floral fragrance and calcium crystals
 3. Protein pellicle and stigmatic exudates
 4. Colour and large size of flower
32. Transmission tissue is characteristic feature of (AIPMT-2015)
1. Solid style
 2. Dry stigma
 3. Wet stigma
 4. Hollow style
33. Male gametophyte in angiosperms produces: (Re-AIPMT - 2015)
1. Single sperm and a vegetative cell
 2. Single sperm and two vegetative cells
 3. Three sperms
 4. Two sperms and a vegetative cell
34. Coconut water from a tender coconut is: (Re-AIPMT - 2015)
1. Free nuclear endosperm
 2. Innermost layers of the seed coat
 3. Degenerated nucellus
 4. Immature embryo
35. Flowers are unisexual in: (Re-AIPMT - 2015)
1. Cucumber
 2. China rose

3. Onion
4. Pea
36.
In sea urchin DNA, which is double stranded, 17% of the bases were shown to be cytosine. The percentages of the other three bases expected to be present in this DNA are : (AIPMT- 2015)
1. G 17%, A 16.5%, T 32.5%
 2. G 17%, A 33%, T 33%
 3. G 8.5%, A 50%, T 24.5%
 4. G 34%, A 24.5%, T 24.5%
37.
Satellite DNA is important because it : (Re-AIPMT- 2015)
1. shows high degree of polymorphism in population and also the same degree of polymorphism in an individual, which is heritable from parents to children.
 2. does not code for proteins and is same in all members of the population
 3. codes for enzymes needed for DNA replication
 4. codes for proteins needed in cell cycle.
38.
Which of the following is required as inducer(s) for the expression of Lac operon? (NEET-1-2016)
1. lactose and galactose
 2. glucose
 3. galactose
 4. lactose
39.
Which one of the following scientists' names is correctly matched with the theory put forth by him? (AIPMT 2008)
1. Mendel - Theory of Pangenesis
 2. Weismann - Theory of continuity of germplasm
 3. Pasteur - Inheritance of acquired characters
 4. De Vries - Natural selection
40.
What is true about the isolated small tribal populations? (AIPMT 2008)
1. There is no change in population size as they have a large gene pool.
 2. There is a decline in population as boys marry girls only from their own tribe.
 3. Hereditary diseases like color blindness do not spread in the isolated population.
 4. Wrestlers who develop strong body muscles in their life time pass this character on to their progeny
41.
In the case of peppered moth (*Biston betularia*) the black-colored form became dominant over the light-colored form in England during industrial revolution. This is an example of (AIPMT 2009)
1. Inheritance of darker color character acquired due to the darker environment.
 2. Natural selection whereby the darker forms were selected.
 3. Appearance of the darker colored individuals due to very poor sunlight.
 4. Protective mimicry.
42.
Sweet potato is homologous to (AIPMT MAINS 2011)
1. Turnip
 2. Potato
 3. Colocasia
 4. Ginger
43.
The lac Y gene codes for permease which increases the permeability of the cell to:
1. Glucose
 2. Galactose
 3. cAMP
 4. β -galactosides
44.
Which of the following is not a part of lac operon?
1. Operator
 2. lacI
 3. Promoter
 4. lac Z
45.
A very low level of expression of the lac operon has to be present in the cell:
1. When lactose is present
 2. When lactose is absent
 3. When glucose is absent
 4. All the time
46.
The lac operon is regarded as:
1. Negative, Inducible
 2. Negative, Repressible
 3. Positive, Inducible
 4. Positive, Repressible
47.
A tumor that invades surrounding

tissues, is usually capable of producing metastases, may recur after attempted removal, and is likely to cause death unless adequately treated. Such a tumor is called as a :

1. Benign tumor
2. Malignant tumor
3. Teratoma
4. Secondary tumor

48.

Conventional breeding is often constrained by the availability of limited number of disease resistance genes that are present and identified in various crop varieties or wild relatives. This is most commonly overcome by:

1. Inducing mutations
2. Somaclonal variations
3. Genetic engineering
4. Plant introduction

49.

An exchange of segments between non-homologous chromosomes is called as:

1. Crossing over
2. Inversion
3. Reciprocal translocation
4. Transposing

50.

If a father and son are both affected by red-green colour blindness, then what can be said definitely?

- I. The son has received the trait from the father.
- II. The mother of the affected son has to be affected by red-green colour blindness.
- III. Any sister of the affected son can never be affected by red-green colour blindness,

1. I and II only
2. I and III only
3. II and III only
4. None

51.

If individuals of genotype AaBbCc are intercrossed, how many different phenotypes can appear in their offspring?

1. 3
2. 6
3. 8
4. 9

52.

A man of which of the following blood groups could not

be the father of a group O child?

1. A
2. B
3. O
4. AB

53.

Two garden pea dihybrids with round seed shape and yellow seed color [RrYy] are intercrossed. Assuming independent assortment, the gene for seed shape is inherited by the progeny in a phenotypic ratio of:

1. 3 : 1
2. 1 : 1
3. 9:3:3:1
4. 1:1:1:1

54.

Identifying all the genes in the genome that are transcribed into RNA is called as:

1. Expressed Sequence Tag
2. Sequence Annotation
3. Inverse PCR
4. Retrotransposition

55.

The last of 24 human chromosomes to be sequenced was:

1. Chromosome 1 and completed in 2003
2. Chromosome 1 and completed in 2006
3. Chromosome X and completed in 2003
4. Chromosome X and completed in 2006

56.

Which of the following is not a feature of the human genome?

1. The human genome contains 3164.7 million nucleotide bases
2. The largest human gene of dystrophin has about 2.4 million bases
3. The total number of genes in human genome is much higher than the previous estimates
4. Less than 2 % of the genome codes for proteins

57.

Which human chromosome has maximum and minimum genes located on it respectively?

1. X and 1
2. X and Y
3. Y and 1
4. 1 and Y

58. What is antisense technology? (AIPMT 2008)
1. RNA polymerase producing DNA.
 2. A cell displaying a foreign antigen used for synthesis of antigens.
 3. Production of somaclonal variants in tissue cultures.
 4. When a piece of RNA that is complementary in sequence is used to stop expression of a specific gene.
59. The two polypeptides of human insulin are linked together by (NEET-I 2016)
1. Hydrogen bonds.
 2. Phosphodiester bond.
 3. Covalent bond.
 4. Disulphide bridges.
60. Which of the following is not a component of downstream processing? (NEET-II 2016)
1. Purification
 2. Preservation
 3. Expression
 4. Separation
61. In genetic drift, the term “genetic bottleneck” means:
1. reduction in allele frequencies or richness
 2. random change in allele frequency by chance alone
 3. sudden increase in the number of individuals
 4. reproductive isolation of the population
62. The ‘phrase’ that will best describe ‘Natural Selection’ will be:
1. differential success in reproduction
 2. differential mortality
 3. assortative mating
 4. descent with modification
63. Which of the following is a useful tool to measure microevolution?
1. Genetic drift
 2. Hardy-Weinberg equation
 3. Mendelian ratios
 4. Age/sex ratio
64. Seaweeds existed probably around:
1. 500 mya
 2. 350 mya
 3. 320 mya
 4. 300 mya
65. The genetic drift is also called as :
1. Sewall-wright effect
 2. Hardy-Weinberg equilibrium
 3. Balanced polymorphism
 4. Gene flow
66. Seeds offer several advantages to angiosperms. One of them is that seed formation is more dependable. This is because:
1. Being products of sexual reproduction, they generate new genetic combinations leading to variations
 2. They have sufficient food reserves to nourish young seedlings
 3. They have better strategies for dispersal to new habitats and help the species colonise new areas
 4. Reproductive processes such as pollination and fertilization are independent of water
67. If one needs to derive a cDNA of human insulin, which cells should be taken up for extraction?
1. Any cell of the human body as the DNA is same in all cells
 2. Any nucleated cell of the human body
 3. Beta cells of islets of Langerhans of human pancreas
 4. WBCs
68. What limitation of traditional hybridization procedures used in plant and animal breeding can be overcome by recombinant DNA procedures?
- I. Inclusion and multiplication of undesirable genes
 - II. Inability of inclusion of desirable traits from other species
1. Only I
 2. Only II
 3. Both I and II
 4. Neither I nor II
69. A piece of DNA, somehow transferred into an alien organism, will be able to multiply itself in the progeny cells of organism if:
1. It includes the centromere
 2. It becomes a part of chromosome
 3. It does not contain any intron sequences
 4. It is a single stranded polynucleotide
70. The work of which of the following scientists led

to the establishment of the discipline of modern biotechnology?

1. Banting and Best
2. Bolivar and Rodriguez
3. Hershey and Chase
4. Cohen and Boyer

71.

Hormones secreted by the placenta to maintain pregnancy are

- (1) hCG, hPL, progesterone, estrogen
- (2) hCG, hPL, estrogen, relaxin, oxytocin
- (3) hCG, hPL, progesterone, prolactin
- (4) hCG, progesterone, estrogen, glucocorticoids

72.

Which of the following hormones can play a significant role in osteoporosis?

- (1) Estrogen and Parathyroid hormone
- (2) Progesterone and Aldosterone
- (3) Aldosterone and Prolactin
- (4) Parathyroid hormone and Prolactin

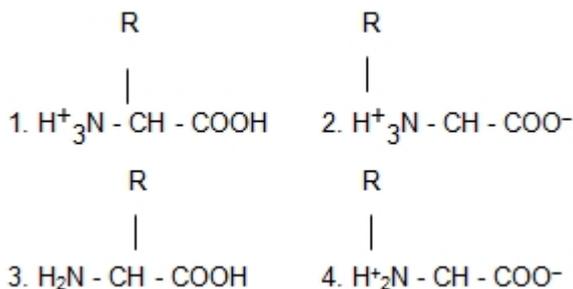
73.

Place stages of Prophase I in correct order.

1. diakinesis, diplotene, leptotene, pachytene, zygotene.
2. diplotene, leptotene, pachytene, zygotene, diakinesis.
3. leptotene, pachytene, diakinesis, diplotene, zygotene.
4. leptotene, zygotene, pachytene, diplotene, diakinesis

74.

Identify the structure of the amino acid that is a Zwitter ion :



75.

The ion required as the co-factor for the proteolytic enzyme, carboxypeptidase, is:

1. Zinc
2. Copper
3. Iron
4. Manganese

76.

A ribbonlike structure consisting of three protein components and extending across the region of synapsed

chromosomes during the prophase of meiosis, is called:

1. Phragmoplast
2. Phragmosome
3. Synaptonemal complex
4. Recombination nodule

77.

The point of contact between paired chromatids during meiosis, resulting in a cross-shaped configuration and representing the cytological manifestation of crossing over is called:

1. Centromere
2. Centrosome
3. Chiasmata
4. Tetrad

78.

Organisms prefer sexual mode of reproduction in adverse conditions because:

1. It leads to a rapid proliferation of numbers
2. It requires two individuals that can support the progeny
3. It is less energy consuming than the asexual mode of reproduction
4. It provides protection and increases variations that may help progeny to survive

79.

If there were 4 chromosomes present during prophase I, how many chromosomes are there in each cell at the end of anaphase II?

1. 2
2. 4
3. 8
4. 16

80.

Which of the following distinguishes the prophase I of meiosis from the prophase of mitosis?

1. homologous chromosomes pair up
2. spindle forms
3. nuclear membrane breaks down
4. chromosomes become visible

81.

The living state of an organism is a :

1. non-equilibrium steady state
2. non-equilibrium variable state
3. steady state in perfect equilibrium
4. variable state in perfect equilibrium

82.

Out of 'X' pairs of ribs in humans only 'Y' pairs are true ribs. Select the option that correctly represents values of X and Y and provides their explanation

1. X = 12, Y = 15 True ribs are attached dorsally to vertebral column and sternum on the two ends
2. X = 24, Y = 7 True ribs are dorsally attached to vertebral column but are free on ventral side
3. X = 24, Y = 12 True ribs are dorsally attached to vertebral column but are free on ventral side
4. X = 12, Y = 7 True ribs are attached dorsally to vertebral column and ventrally to the sternum
83. Identify the incorrectly matched pair:
1. Conn's disease: Hyperaldosteronism
 2. Addison's disease: Hypoadrenalism
 3. Osteitisfibrosacystica: Hypoprathyroidism
 4. Hashimoto's disease: Hypothyroidism
84. The causes of indigestion include all except:
1. parasympathetic stimulation
 2. anxiety
 3. food poisoning
 4. eating spicy food.
85. Inability to conceive or produce children even after _____ years of unprotected sexual co-habitation is called as infertility.
1. 1
 2. 2
 3. 3
 4. 4
86. Implantation in humans occurs at the stage of:
1. Zygote
 2. Morula
 3. Blastocyst
 4. Gastrula
87. After implantation, finger like projections appear on the trophoblast cells called:
1. Chorionic villi
 2. Allantois
 3. Decidua
 4. Sinusoids
88. Which of the following hormones is not secreted by the human placenta?
1. hCG
 2. hGH
 3. hPL
 4. Progesterone
89. The placenta is connected to the embryo through:
1. Ligaments
 2. Portal vein
 3. Umbilical cord
 4. Mesentery
90. When one enters a dark room from a bright area:
1. retinol is converted to rhodopsin and eye sensitivity is decreased
 2. rhodopsin is converted to retinol and eye sensitivity is decreased
 3. rhodopsin is converted to retinol and eye sensitivity is increased
 4. retinol is converted to rhodopsin and eye sensitivity is increased

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