

## Biology. Part 1.

1. All prokaryotic cells have:  
A) nucleoid, cytoplasm, membrane B) mitochondria, ribosome, cytoplasm C) membrane, ribosome, nucleus D) flagella, vacuole, Golgi complex
2. All eukaryotic cells have:  
A) plastides, flagella, endoplasmic reticulum B) nucleus, cytoplasm, mitochondria C) mitochondria, plastides, vacuole D) nucleus, plastides, Golgi complex
3. In eukaryotic cells ATP is synthesised in  
A) endoplasmic reticulum and nucleus B) ribosomes and cytoplasm C) on chromosomes and in the nucleolus D) mitochondria and cytoplasm
4. Heredity is based on the following molecule in eukaryotes  
A) RNA B) DNA C) Chromatin D) Chitin
5. The main source of energy for the reactions within the eukaryotic cell is  
A) DNA B) RNA C) ATP D) NADP
6. Angiosperms are:  
A) club moss (*Lycopodium clavatum*), common haircup (*Polytrichum commune*), bitter-sweet nightshade (*Solanum dulcamara*) B) birch (*Betula pendula*), oat (*Avena sativa*), common wormwood (*Artemisia absinthium*), C) red clover (*Trifolium pratense*), flax (*Linum usitatissimum*), pine (*Pinus sylvestris*) D) laminaria (*Laminaria digitata*), peat moss (*Sphagnum palustre*), common haircup (*Polytrichum commune*)
7. Fruits of Angiosperms are usually produced by  
A) sepals and receptacle B) stamens and pistils C) petals and stipules D) ovary and receptacle
8. Gymnosperms are:  
A) spruce (*Picea abies*), birch (*Betula pendula*), larch (*Larix sibirica*) B) Pine (*Pinus sylvestris*), juniper (*Juniperus communis*), thuja (*Thuja occidentalis*) C) bitter-sweet nightshade (*Solanum dulcamara*), cedar (*Cedrus atlantica*), juniper (*Juniperus communis*) D) ginkgo (*Ginkgo biloba*), birch (*Betula pendula*), English yew (*Taxus baccata*)
9. Only angiosperms have  
A) flower B) seed C) Vascular system D) fertilization
10. Flower has 5 petals and 5 sepals usually have plants from family  
A) Fabaceae B) Cruciferae C) Rosaceae D) Poaceae
11. The main distinctive character of type Cnidaria is  
A) radial body symmetry B) calcareous skeleton C) specialised stinging cells D) tentacles
12. Life cycle with free-floating larva is characteristic for class  
A) flukes B) tapeworms C) oligochaetes D) cephalopods
13. The most primitive nervous system appears in  
A) Cnidarians B) Flatworms C) Roundworms D) annelids
14. Complete digestive system with a mouth and anus first appears in  
A) Cnidarians B) Flatworms C) Roundworms D) Annelids
15. Digestive system is absent in some  
A) Roundworms B) Crustacean C) Flatworms D) Mollusks
16. The main distinctive characters of Annelids are:  
A) Shell and foot B) Mantle and heart C) Similar body segments and ventral nerve cord D) Heart and intestine
17. All the animals of Type Arthropoda have  
A) Chitine cuticle and wings B) Segmented legs, chitine cuticle C) Segmented legs, wings D) Chitine cuticle, cephalothorax
18. Insects with complete metamorphosis are  
A) cockroach and flea B) cabbage butterfly and Colorado beetle C) mosquito and firebug D) silkworm and dragonfly

19. Excretory organs of common cockroach are  
A) Malpighian tubules B) Metanephridia C) Protonephridia D) Green glands
20. Chordates are  
A) lancelet, carp, ascidia B) perch, frog, starfish C) cat, shark, sea cucumber D) lancelet, sea cucumber, sea angel
21. Skeleton of modern amphibia includes  
A) Skull, ribs, limb belts B) Skull, limb skeleton, cervical spine C) brancial arches, limb skeleton, limb belts D) gill covers, ribs, upper limb belt
22. Adult representatives of Class Amphibia are similar to representatives to superclass Pisces to the presence of  
A) gills B) trunk kidney C) two limb belts D) gill cover
23. Gill covers are absent in  
A) Catfish and tiger shark B) Protopterus, sturgeon C) sterlet, trout D) whale shark, sea devil
24. The main organ of gas exchange in mammals is  
A) Skin B) Lungs C) bronchia D) trachea
25. Birds feather are homologous to  
A) Shark scales B) Reptile scales C) Mollusk radule D) Ascarida cuticle
26. Digestion of carbohydrates starts in human  
A) esophagus B) mouth C) stomach D) intestine
27. The main function of human rectum is  
A) digestion of carbs B) digestion of fats C) absorption of proteins D) absorption of water and formation of faeces
28. Human visual analyzer consists of  
A) cornea, pupil, eyeball B) pupil, retina, auditory nerve C) eye, optical nerve, optical zone of cortex D) cornea, pupil, retina
29. The main hormone inducing uterine contractions in mammals is  
A) oxytocin B) glucagon C) aldosterone D) vasopressin
30. The main features of nervous tissue are  
A) conductivity and excitability B) contractility and excitability C) conductivity and contractility D) excitability and extensibility