

E-JUST Entrance Exam 2022

Faculty of Pharmacy

Subject: Biology

Time: 1 hour

Student Name:.....

Application ID No:.....

Undergraduate Entrance Examination Instructions

- 1. Examinees will be provided with question booklet and answer sheet.**
 - 2. Questions are on both the front and back of the page.**
 - 3. Question booklet contains scratch papers for use in solving exams.**
 - 4. Answer ALL questions to the best of your abilities. Be sure to write legibly and choose your answers clearly using HB or B pencil, not pen.**
 - 5. Question booklet will be collected back.**
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Choose the correct answer(s):

1. Sliding theory states that

- a) actin and myosin filaments shorten and slide past each other
- b) when myofilaments slide past each other, shortening of actin filaments occur
- c) when myofilaments slide past each other, shortening of myosin filaments occur
- d) actin and myosin filaments do not shorten, they only slide past each other

2. Pancreas is a mixed gland in which

- a) pancreatic juice is secreted directly to blood
- b) insulin and glucagon are secreted into duodenum
- c) Hormones (insulin and glucagone) and pancreatic juice are secreted from the same type of cells
- d) Alpha cells secrete glucagon and beta cells secret insulin directly to blood

3. is NOT involved in the human first-line defense against pathogens.

- a) The gastric juice
- b) Antibodies
- c) Tears
- d) Saliva

4. The relationship among DNA, a gene, and a chromosome is described as follows

- a) A gene contains hundreds of chromosomes, which are composed of protein.
- b) A gene contains hundreds of chromosomes, which are composed of DNA.
- c) A chromosome contains hundreds of genes, which are composed of protein.
- d) A chromosome contains hundreds of genes, which are composed of DNA.

5. Restriction enzymes are isolated from

- a) Virus
- b) fungi
- c) protozoa
- d) bacteria

6. Innate immunity

- a) is not directed specifically to the infectious agents.
 - b) is not affected by prior exposure to the agent.
 - c) is operating constantly to prevent the establishment of any infection.
 - d) All the above.
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7. A pea plant with a genotype of YY produces yellow seeds. A pea plant with a genotype of yy produces green seeds. If the two pea plants are crossed, which describes the possible genotypes of the offspring?

- a) all are YY
b) all are Yy
c) all are yy
d) half YY and half yy

8. During a biochemical reaction, the enzyme

- a) becomes part of the product.
b) is unchanged.
c) is broken down into amino acids.
d) reacts with fatty acids.

9. Cellular respiration in the absence of oxygen is called fermentation and is the product of fermentation in animal cells.

- a) acetyl-CoA
b) alcohol
c) pyruvic acid
d) lactic acid

10. are considered prokaryotes.

- a) Animals
b) Plants
c) Fungi
d) Bacteria

11. The photosynthesis takes place at

- a) Ribosome
b) Mitochondria
c) Chloroplast
d) Endoplasmic reticulum

12. is the powerhouse of the cell.

- a) Mitochondria
b) Chloroplast
c) Endoplasmic reticulum
d) Golgi apparatus

13. Viruses that attack bacteria are called

- a) Virophage
b) Lysophage
c) Bacteriophage
d) None of the above

14. The nucleic acid synthesis takes place in

- a) 3`to 5` direction
b) 5`to 3` direction
c) Both ways
d) Any direction
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15. The movement in man takes place by coordination of a group of systems which are

- a) The muscular, the skeletal and the circulatory systems.
- b) The respiratory, the nervous and the skeletal systems.
- c) The skeletal, the nervous and the muscular systems.
- d) The skeletal, the respiratory and the circulatory systems.

16. Physiological support in plants is represented by

- a) Thickness of plant cell to prevent water loss in plants.
- b) Turgidity of plant cell.
- c) Turgidity of vessels filled with nutrients.
- d) Deposition of cellulose on cell walls.

17. A piece of DNA containing 8000 nucleotides, including 2000 nucleotides adenine, so the number of cytosine nucleotides equals

- a) 2000 nucleotides.
- b) 2400 nucleotides.
- c) 2800 nucleotides.
- d) 3000 nucleotides.

18. In the DNA molecule, nitrogenous bases are linked to the deoxyribose ribose sugar by bonds.

- a) Hydrogen
- b) Covalent
- c) Ionic
- d) Polar

19. The Symptoms of cretinism and myxedema arise as a result of deficiency of hormone

- a) Adrenaline
- b) Thyroxin
- c) Parathormone
- d) Progesterone

20. is NOT among the mechanisms of action of antibodies

- a) Neutralization
- b) Agglutination
- c) Precipitation
- d) Denaturation

Good Luck

Answer key sheet

1	d
2	d
3	b
4	d
5	d
6	d
7	b
8	b
9	d
10	d
11	c
12	a
13	c
14	b
15	c
16	d
17	a
18	b
19	b
20	d