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**Grade** 23 out of 30 (77%)

Question 1

Correct

Mark 1 out of 1

One of the characteristics of DNA replication is that-

- a. It is reversible
- b. It is semiconservative ✓
- c. It is disruptive
- d. It is conservative

The correct answer is: It is semiconservative

Question 2

Correct

Mark 1 out of 1

During an infection, immune cells assume various specific functions as part of defense response. In case of an infested cell, antibodies are mainly produced by:

- a. T cells
- b. B cells ✓
- c. Antigen presenting Cells
- d. RBCs

The correct answer is: B cells

**Question 3**

Correct

Mark 1 out of 1

The sequence of the RNA after transcription of this DNA strand: 5'- ATTGCCTGGATCGGA-3' will be-

- a. 5'-AATTGCCCTAACCGG-3'
- b. 5'-TAACGGACCTAGCCT-3-
- c. 5'-AGGCTAGGTCCGTTA-3'
- d. 5'-UAACGGACCUAGCCU-3-✓

The correct answer is: 5'-UAACGGACCUAGCCU-3-

**Question 4**

Incorrect

Mark 0 out of 1

Cockroaches could survive longer than other organisms in the nuclear radiations of Hiroshima and Nagasaki due to a strong exoskeleton.  
which of the following biomolecules acts as an exoskeleton?

- a. Protein ✗
- b. monosaccharide
- c. Disaccharide
- d. Polysaccharide

The correct answer is: Polysaccharide

**Question 5**

Correct

Mark 1 out of 1

The RT-PCR test for Covid-19 diagnosis is based on-

- a. Microscopic Imaging of infected cells
- b. Denaturation of viral genetic material into nucleotides
- c. DNA Microarray of genetic materials of human and virus
- d. Amplification of the genetic material of the virus by Polymerase chain reaction ✓

The correct answer is: Amplification of the genetic material of the virus by Polymerase chain reaction

**Question 6**

Correct

Mark 1 out of 1

DNA replication is .....

- a. Bidirectional✓
- b. None of these
- c. Unidirectional
- d. Nondirectional

The correct answer is: Bidirectional

**Question 7**

Correct

Mark 1 out of 1

All the organism's chemical reactions are collectively known as-

- a. Metabolism✓
- b. none of the mentioned
- c. Entropy
- d. Energy dynamics

The correct answer is: Metabolism

**Question 8**

Correct

Mark 1 out of 1

In the process of evolution, mitochondria are evolved from?

- a. virus
- b. eukaryotic cell
- c. bacterial cell✓
- d. None of these

The correct answer is: bacterial cell

**Question 9**

Incorrect

Mark 0 out of 1

One of the characteristics of DNA replication is that-

- a. It is unidirectional X
- b. It is continuous
- c. It is semi-discontinuous
- d. It is disruptive

The correct answer is: It is semi-discontinuous

**Question 10**

Correct

Mark 1 out of 1

The outside concentration of Cl<sup>-</sup> ions is 120 mM and inside concentration of Cl<sup>-</sup> is 5 mM. Then the movement of Cl<sup>-</sup> ions from inside to outside is -

- a. Will not require ATP
- b. Will require a carrier protein
- c. Will require ATP ✓
- d. Will require steeper concentration gradient

The correct answer is: Will require ATP

**Question 11**

Incorrect

Mark 0 out of 1

Which of the following is way of thermoregulation in Cold-blooded animals:

- a. change in patterns of blood circulation
- b. behavioural changes such as panting and shivering X
- c. sensing by hypothalamus
- d. Hibernation

The correct answer is: Hibernation

**Question 12**

Correct

Mark 1 out of 1

In respiration, high energy electrons are carried by-

- a. None of the mentioned
- b. NADH
- c. FADH
- d. NADH and FADH ✓

The correct answer is: NADH and FADH

**Question 13**

Incorrect

Mark 0 out of 1

NADPH is formed during -

- a. Kreb cycle
- b. Calvin cycle ✗
- c. Cyclic electron transfer
- d. Non-cyclic electron transfer

The correct answer is: Non-cyclic electron transfer

**Question 14**

Correct

Mark 1 out of 1

Which of the following does not have a role in immunity?

- a. RBCs ✓
- b. T cells
- c. B cells
- d. Antigen presenting Cells

The correct answer is: RBCs

**Question 15**

Correct

Mark 1 out of 1

If glycolysis contributes 4 ATP out of the total 32 ATP formed from 1 molecule of glucose, then the percentage of ATP contributed by glycolysis is-

- a. 20%
- b. 12.5% ✓
- c. 40%
- d. 100%

The correct answer is: 12.5%

**Question 16**

Correct

Mark 1 out of 1

Which of the following is one of the approaches in Nanotechnology?

- a. Bottom up ✓
- b. Bottom side
- c. front side
- d. Side top

The correct answer is: Bottom up

**Question 17**

Correct

Mark 1 out of 1

Vitamin D causes mobilisation of which of the following nutrients?

- a. K, Na
- b. Mg, Mn
- c. Fe, Zn
- d. Ca, P ✓

The correct answer is: Ca, P

**Question 18**

Correct

Mark 1 out of 1

Which of this is NOT major function of blood?

- a. stress reponse✓
- b. Immunity
- c. transport of nutrients and gases
- d. homeostasis

The correct answer is: stress reponse

**Question 19**

Correct

Mark 1 out of 1

Complete the following sentence: When different genes are expressed in a cell, it can lead to ...?

- a. Change in cell metabolism
- b. All of these✓
- c. Different cellular response to environment
- d. Change in cell behaviour

The correct answer is: All of these

**Question 20**

Correct

Mark 1 out of 1

Which of the following is NOT a method for scaffold preparation during tissue engineering?

- a. Gel eletrophoresis✓
- b. Solvent casting ang particulate leaching
- c. Gas foaming
- d. self assembly of nanomaterial

The correct answer is: Gel eletrophoresis

**Question 21**

Correct

Mark 1 out of 1

Compartmentalisation evolved in the ancient ancestor cell, and led to formation of various cell organelles. It increased the efficiency of the eukaryotic cells by?

- a. increasing the surface tension of the aqueous surrounding
- b. increasing the surface area to volume ratio for efficient exchange of matter with surroundings ✓
- c. increasing the cell size
- d. decreasing the surface area to volume ratio to create vacuum inside cell

The correct answer is: increasing the surface area to volume ratio for efficient exchange of matter with surroundings

**Question 22**

Incorrect

Mark 0 out of 1

Carbohydrate (sugar) is synthesized at the ..

- a. first phase of Calvin cycle ✗
- b. none of the mentioned
- c. third phase of Calvin cycle
- d. second phase of Calvin cycle

The correct answer is: second phase of Calvin cycle

**Question 23**

Correct

Mark 1 out of 1

Tissue engineering is based on

- a. To fuse different tissues of same person
- b. Creating a chimera tissue, by fusion of a tissue from 2 species
- c. Replicating the biological environment to artificially program cells to form exact biologically functional tissue ✓
- d. To separate cells and grow them individually

The correct answer is: Replicating the biological environment to artificially program cells to form exact biologically functional tissue

**Question 24**

Correct

Mark 1 out of 1

The eukaryotic cell lacks?

- a. Mitochondria
- b. Ribosomes
- c. cytoplasm
- d. Nucleoid✓

The correct answer is: Nucleoid

**Question 25**

Correct

Mark 1 out of 1

Formation of antibodies is which type of protein function?

- a. Motion
- b. Structure
- c. Defense✓
- d. Storage

The correct answer is: Defense

**Question 26**

Incorrect

Mark 0 out of 1

During evolution, mitochondria became a part of early eukaryotic cell by:

- a. phagocytosis ✗
- b. Endosymbiosis
- c. Protocooperation
- d. Exosymbiosis

The correct answer is: Endosymbiosis

**Question 27**

Correct

Mark 1 out of 1

Hybridoma technology involves fusion of –

- a. Myeloma and B cells ✓
- b. B cells and sarcoma cells
- c. Myeloma cells and T cells
- d. Melanin cells and B Cells

The correct answer is: Myeloma and B cells

**Question 28**

Correct

Mark 1 out of 1

Most common constituents of organic compounds found in Biopolymers are-

- a. C, H, O
- b. S, H, O
- c. C, H, O, N, P ✓
- d. C, H, N, S

The correct answer is: C, H, O, N, P

**Question 29**

Incorrect

Mark 0 out of 1

The classification of reducing and nonreducing sugars is possible for-

- a. Proteins
- b. Disachharides
- c. Long polysachharides
- d. Monosachharides ✗

The correct answer is: Disachharides

Question **30**

Correct

Mark 1 out of 1

Nanobiotechnology can revolutionize agriculture by means of-

- a. All of these ✓
- b. Increased yield with nano-fertilizers
- c. Increased protection using nano- pesticides
- d. Smart monitoring using sensors

The correct answer is: All of these

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