

# Test Exam Questions-2017: Creative



## Top Ranked Schools' Test Exam Questions of All Boards-2017: Creative

57. Rajuk Uttara Model College, Dhaka Subject Code : 

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Time — 2 hours 35 minutes

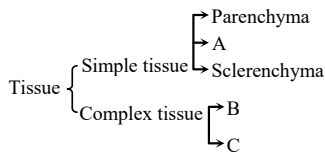
Biology (Creative)

Full Marks — 80

1. ► The scientific name of an organism is constituted with two parts which is accepted with the declared principles of ICBN & ICZN respectively, such as *Solanum tuberosum*, *Nostoc*, *Penicillium*.

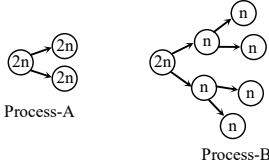
- Write down the scientific name of the national bird. 1
- Write the functions of cholesterol. 2
- Write down the characteristics of the kingdom of the 1<sup>st</sup> organism mentioned in the stem. 3
- 2<sup>nd</sup> & 3<sup>rd</sup> organisms mentioned in the stem are not included in the same kingdom, analyze the statement. 4

2. ►



- What is Microvilli? 1
- What is meant by Cristae? 2
- Write down the characteristics of 'A' mentioned in the stem. 3
- Analyze the significance of B & C of above stem. 4

3. ►

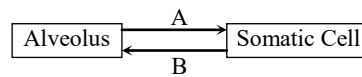


- Write down full name of ATP. 1
- What is meant by aerobic respiration? 2
- Draw labelled diagram of the 3<sup>rd</sup> & 4<sup>th</sup> steps of the process of 'A' mentioned in the stem. 3
- The process 'A' is different from 'B' mentioned in the stem, analyze it. 4

4. ► A triangular shaped hollow organ is situated in between the two lungs by which one kind of fluid circulates throughout the whole body.

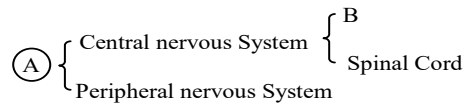
- What is stomata? 1
- What is meant by lenticular transpiration? 2
- Draw a labelled L.S. of the organ mentioned in the stem. 3
- Analyze the role of the fluid in human body mentioned in the stem. 4

5. ►



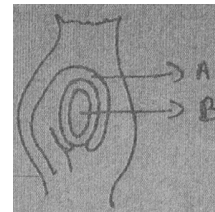
- What is diaphragm? 1
- Write down two differences between artery and vein. 2
- Draw a labelled diagram of the system of the process mentioned in the stem. 3
- Analyze the process of transportation of A & B mentioned in the stem. 4

6. ►



- What is paralysis? 1
- Write down two differences between bone & cartilage. 2
- Draw a labelled diagram of the structural & functional unit of 'A' mentioned in the stem. 3
- Functions of different parts of B is different- analyze it. 4

7. ►



- What is flower? 1
- What is meant by placenta? 2
- Draw a labelled L.S of 'A' mentioned in the stem. 3
- Analyze the different steps of development of 'B' mentioned in the stem. 4

8. ► Food chain & Food web present in an ecosystem by which Nutrition & energy flow in the ecosystem.

- What is explant? 1
- Write down two differences between DNA & RNA. 2
- Explain, the types of the chain mentioned in the stem. 3
- Analyze the flow of energy in the system mentioned in the stem. 4

58. Ideal School & College, Motijheel, Dhaka Subject Code : 

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Time — 2 hours 35 minutes

Biology (Creative)

Full Marks — 50

1. ► There is a special type of sensible cells of tissue in our body. These cells combinedly form nerve tissue. These nerve tissues perform different types of functions. On the basis of their structural and functional performance they are different from other cells.

- What is hormone? 1
- Why is involuntary muscle known as smooth muscle? Explain. 2
- Explain the structural characteristics of the above mentioned special cells with its diagram. 3
- Analyse the last statement of the above mentioned stem. 4

2. ►  $6\text{CO}_2 + 12\text{H}_2\text{O} \xrightarrow[\text{Chlorophyll}]{\text{Solar energy}} \text{A} + 6\text{H}_2\text{O} + 6\text{O}_2$

- What is bioenergy? 1
- Why is ATP called biological coin? 2
- Explain the process of producing 'A' compound in the above mentioned stem. 3
- The process of the above mentioned stem is very important for the living world. — Discuss it. 4



3. ▶



- a. What is Roughage? 1
- b. What is meant by an ideal food pyramid? 2
- c. How is food digested in the above labeled part 'A'? Explain. 3
- d. Explain the role of above mentioned "B" and "C" parts in the digestion of food. 4

4. ▶ There are two types of translocation or transportation in plants body. Firstly, water and minerals are absorbed from the soil by the up words translocation leaves are distributed to the different parts of the plants body by the down words translocation process. These two types of processes are occurred through the complex tissues.

- a. What is diaphragm ? 1
- b. Why is transpiration process called "necessary evil" ? 2
- c. Explain the above mentioned upwards translocated process with diagram. 3
- d. "The translocation process of the above mentioned stem is very significant activity in plants body." - Explain this statement. 4

5. ▶

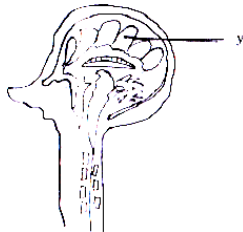


Fig : X

- a. What is Osteoblast ? 1
- b. Why is hormone known as chemical messenger ? 2
- c. Draw the above mentioned figure 'X' and label its different parts. 3
- d. "The labeled part 'Y' in the above mentioned figure is the manager of the nervous system". - Evaluate this statement. 4

6. ▶

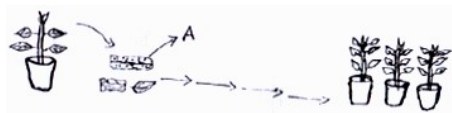


Fig : P

- a. What are called heredity materials? 1
- b. Why is the replication of DNA called half conservative process? 2
- c. Draw and complete the above mentioned figure 'P' and explain its different parts. 3
- d. Analyse the significance of the technology of the figure 'P'. 4

7. ▶

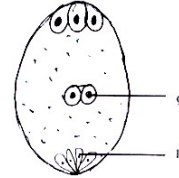


Fig : A

- a. What is placenta? 1
- b. Write two characteristics of cross pollination. 2
- c. Explain the producing of the labeled part 'P' in the above mentioned figure. 3
- d. "After fertilization the changed state of the labeled part 'Q' plays a significant role of the living world".-Analyse this statement. 4

8. ▶

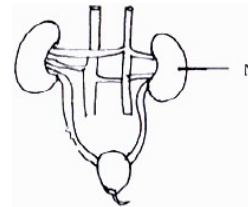


Fig : M

- a. What is trophic level? 1
- b. What is meant by commensalism? 2
- c. Draw the structural and functional unit of labeled part 'N' of the above mentioned figure 'M'. 3
- d. What do you think, what type of problems will be occurred in absence of the figure 'M' system in a human body?--Explain. 4

59. Milestone College, Dhaka

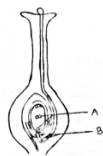
Subject Code : 1 3 8

Time — 2 hours 35 minutes

Biology (Creative)

Full Marks — 50

1. ▶ Observe the figure below and answer to the following questions.



- a. What is blastocyst? 1
- b. Write down the differences between self pollination and cross pollination? 2
- c. Write down the process of genesis of "A" mentioned in the stem. 3
- d. Changes after the union of A and B in the stem is important for living world-Analyze it. 4

2. ▶ Observe the figure below and answer to the following questions:



Figure: A

- a. What is evolution? 1
- b. What is thalassemia? 2
- c. Explain the structure of the organelle in which the figure-A lies. 3
- d. Human sex is determined by figure-A of the stem-Explain. 4

3. ▶ Teacher mentioned a special process to protect the plants which are about to be extinct. Aftward he discussed the strategy to improve quality of the plants.

- a. What is rhizobium? 1
- b. What do you mean by synovial joint? 2
- c. Explain the first process discussed by the teacher. 3
- d. Analyze the importance of the second process discussed in the stem. 4

4. ▶ Observe the figures below and answer to the following questions.



Figure: A

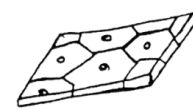


Figure: B

- a. What is interphase? 1
  - b. Write down the differences between the living world's kingdom-3 and 4. 2
  - c. Explain the structure of the organ which is formed by figure-A mentioned the stem. 3
  - d. Analyze the necessary steps to be followed if the organ formed by Figure-B becomes failure. 4
5. ► Observe the figures below and answer to the following questions :

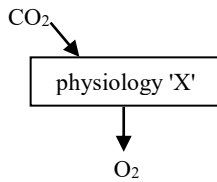


Figure : 1

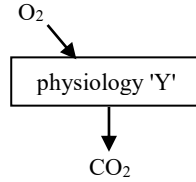


Figure : 2

- a. What is assimilatory power? 1
  - b. Why photosynthesis is known as oxidation reduction process? 2
  - c. Explain the mechanism of 'X', where energy is utilized. 3
  - d. 'X' and 'Y' are interrelated to each other - Analyze. 4
6. ► Large food particles  $\xrightarrow{A}$  Absorbable for cells  $\xrightarrow{B}$  Complex form.
- a. What is chime? 1
  - b. Why pancreas is called the mixed gland? 2
  - c. How does 'A' occur for carbohydrate food? Explain. 3
  - d. A and B of the stem are interdependent-Analyze. 4

7. ► Observe the figure below and answer to the following questions:

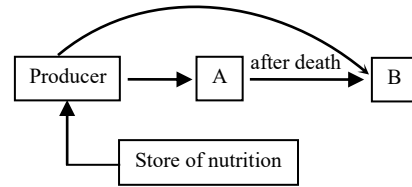
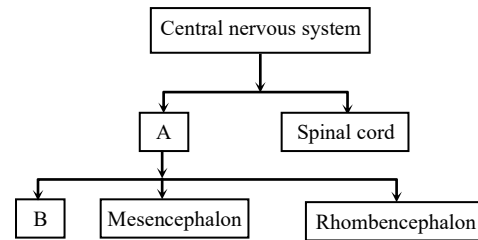


Figure: P

- a. What is bioenergy? 1
  - b. Why energy flow in ecosystem in non-cyclic? 2
  - c. Explain 'A' differs in different types of ecosystem. 3
  - d. Analyze the roles of B in continuation of 'P' of the stem? 4
8. ► Observe the Chart below and answer to the following questions:



- a. What is ligament? 1
- b. What do you mean by vernalization? 2
- c. Explain the structure of 'B' of the stem? 3
- d. Stimulation of 'A' influences the co-ordination process of human-Analyze. 4

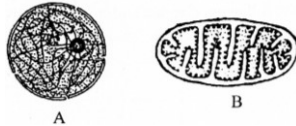
**60. Cambrian School & College, Dhaka** Subject Code : 1 3 8

Time — 2 hours 35 minutes

**Biology (Creative)**

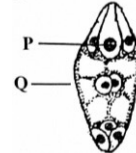
Full Marks — 50

1. ► Observe the following diagram and answer the questions:



- a. What is hormone? 1
  - b. What is meant by double-fertilization? 2
  - c. Explain the structure of 'B' presented in the stem. 3
  - d. If the organelles A and B are absent, what type of effects will arise in the living world? Give your opinion. 4
2. ► Prawn, beef and eggs are the favorite food of Mr. Azad. Now a day, he is suffering from chest pain and so he has gone to the doctor; then doctor told him that his condition is called angina and the components of his favorite foods are responsible for this condition. That component remains in the human body both good and bad states.
- a. What is diffusion? 1
  - b. What is meant by roughage? 2
  - c. What type of physical hazards would Mr. Azad face? Explain. 3
  - d. Analyze the effects of the good component that is mentioned in the stem. 4
3. ► Mr. Alam is a farmer. He grows crops according to the ancient system. On the other hand, Mr. Abid is a genetic engineer. He invents new featured crops through recombinant DNA technology. By using this technology a huge development has occurred in the field of fishing and medical.
- a. What is biotechnology? 1
  - b. What do you meant by culture medium? 2
  - c. Explain the steps of the technology of Mr. Abid. 3
  - d. Analyze the development of the technology mentioned in the stem has occurred in the field of fishing and medical. 4

4. ► Observe the following diagram and answer the questions:



- a. What is biodiversity? 1
  - b. What is meant by synovial bone joint? 2
  - c. Explain the origin of "P" mentioned in the stem. 3
  - d. Discuss in light of the picture the possible consequence of part-P and Part-Q afert fertilization. 4
5. ► Blood circulatory system is composed of heart and different blood capillary. The principal of the blood circulatory system is well known as pumping machine. Two types of blood – A(O<sub>2</sub>) and B(CO<sub>2</sub>) are circulated through this machine.
- a. What is Locus? 1
  - b. What is meant by blood pressure? 2
  - c. Explain the blood circulation system through the above mentioned machine. 3
  - d. Analyze the dissimilarities between the blood capillaries A and B mentioned in the stem. 4
6. ► Observe the following diagram and answer the questions:



- a. What is osteoporosis? 1
- b. What is meant by thalassemia? 2
- c. How is food digested in the part of 'A' mentioned in the stem? 3
- d. Part "B" present in the stem is called the "Organic laboratory" Analyze. 4

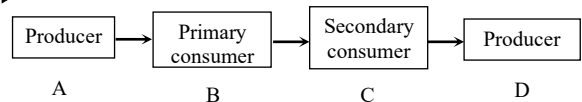


7. ▶ Observe the following diagram and answer the questions:



- a. What is biological clock? 1
- b. What is meant by glycolysis? 2
- c. Explain the role of above diagram to create stimulation in human body. 3
- d. The structure and nature of the cell is different-Analyze it with your opinion. 4

8. ▶



- a. What is ecosystem? 1
- b. What is meant by antibiotics? 2
- c. Explain the component of A, B, C and D present in the stem. 3
- d. If the component 'B' presented in above food chain decrease, what problem will arise? Analyze. 4

**61. Bangladesh International School & College, Dhaka** Subject Code : 1 3 8

Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

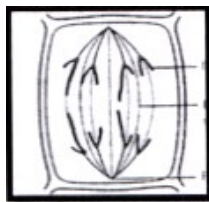
1. ▶ In the worst landslide since 2007, at least 130 people, have died in the hilly areas of Chittagong, Rangamati and Bandarban following incessant downpour overnight. The landslide happened due to too much rain in a short time. In 2017 it was also a life threatening issue. Destruction of hills and trees over the years has made the hills risky.

- a. What is mutualism? 1
- b. What is meant by antibiotics? 2
- c. Explain how interaction between the components of an ecosystem should be maintained. 3
- d. "Biodiversity will be sustained if the environment is well conserved"— Justify the statement with logic. 4

2. ▶ The annual mortality rate per 100,000 people from chronic kidney disease (CKD) in Bangladesh has increased by 52.3% since 1990, an average of 2.3% a year. The risk factors for kidney diseases are (BMI), smoking, hypertension and diabetes.

- a. What is glomerulus? 1
- b. What is meant by kidney stone? 2
- c. Draw and label the structural and functional unit of the organ mentioned in the stem. 3
- d. Explain how people can maintain a sound and healthy life by taking care of the organ mentioned in the stem. 4

3. ▶



- a. What is somatic cell? 1
- b. All traction fibers are spindle fibers but all spindle fibers are not traction fibers. Analyze. 2
- c. Identify the above mentioned figure and describe the characteristics of it with labeling. 3
- d. "Process mentioned in the stem plays a very important role in living organisms"— Explain the statement with logic. 4

4. ▶ Coronary artery disease (CAD) is an increasingly important medical and public health problem, and is the leading cause of mortality in Bangladesh. Like other South Asians, Bangladeshis are unduly prone to develop CAD.

- a. What is angina? 1
- b. What is meant by cholesterol? 2
- c. Draw and label the L.S of the organ mentioned in the stem with its circulation. 3
- d. "Human heart shows double circuit circulatory system"— Justify the statement. 4

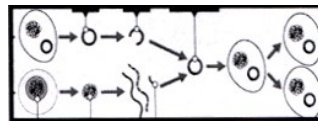
5. ▶ Drug addiction has significantly increased in the whole world, especially in the South Asian countries like Bangladesh. The trend of drug consumption is higher in youth and teenagers, their age spanning between 15 and 30 years. Students are mostly falling victims to drug abuse, which eventually lowers their standards of education and attendance at schools and colleges.

- a. When the Directorate of Narcotic control was established? 1
- b. What is meant by synapse? 2
- c. Describe which part of our body damage due to the reason mentioned in the stem? 3
- d. "Social mobilization and strongly enforce laws are very important to control addiction" justify the statement with logic. 4

6. ▶ Bioenergetics is the branch of biochemistry that focuses on how cells transform energy, often by producing, storing or consuming adenosine triphosphate (ATP). Bioenergetic processes, such as respiration or photosynthesis, are essential to most aspects of cellular metabolism, therefore to life itself.

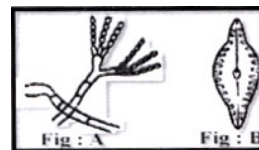
- a. Which one is known as biological coin? 1
- b. What is meant by assimilatory power? 2
- c. Explain what will happen for the second process mentioned in the stem in absence of light. 3
- d. Explain the role of the two process mentioned in the stem for maintaining the physiological activities in plant life. 4

7. ▶



- a. What is plasmid? 1
- b. What do you mean by GMO? 2
- c. Describe the process mentioned in the stem for developing disease free seedlings. 3
- d. "Process mentioned in the stem plays an important role in our agriculture"—Justify the statement with logic. 4

8. ▶



- a. What is the scientific name of Potato? 1
- b. What is meant by Binomial Nomenclature? 2
- c. Why the Fig-B is not included in the kingdom Animalia? Analyze with logic. 3
- d. Which branch of Biology may indicate the Fig-A? Explain how it can play an important role in our economy and health sector. 4



**62. Baridhara Scholars' Institution (BSI)** Subject Code : 

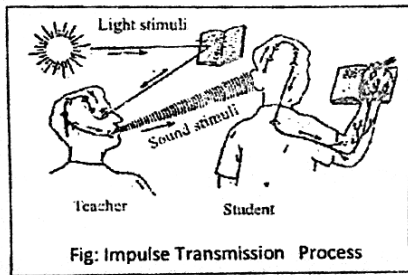
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

1. ►



- a. What is Diffusion Pressure Deficit? 1
- b. Why elbow is called hinge joint? 2
- c. Describe which unit is responsible for the activity of above diagram? 3
- d. "Multiple coordination is involved in between teacher and student during impulse transmission"-analyze in light of above figure. 4

2. ► Life of every organism starts with a single cell. Infact, every cell is originated from a pre-existing one. In multicellular organism, body is composed of crores of cell. During the time of reproduction they form gamete. In human male gamete consists of X and Y chromosome whereas female XX. When they fuse there will be genetic diversity found in the next generation because of exchange of genes occurs during meiosis.

- a. What is locus? 1
- b. What is the importance of endocrine gland? 2
- c. Who plays role in determining sex in human? How? 3
- d. Evaluate the last line of the stem according to the proces of cell division. 4

3. ► A blood donation program is arranged during last Independence Day on behalf of the club of Mr.Shawon. Many people came to donate blood inspired by Mr. Shawon. The volunteers collected blood after checking the blood group and deposited to the Blood Bank. This club inspires the local people to donate blood and campaign about the fear and false conception regarding blood donation.

- a. What do you mean by movement of curvature? 1
- b. Which food element digest in buccal cavity? Explain. 2
- c. Why do the volunteers collect blood after checking the blood group? Explain? 3
- d. "Mr. Shawon and his club performs public awareness and noble task for the society"-how? 4

**4. ► Case study: 1**

Ahona's mother went to the doctor for some symptoms like tiredness, feeling excessive thirst and hunger and frequent urination in her body. Doctor prescribed some tests including glucose level in blood.

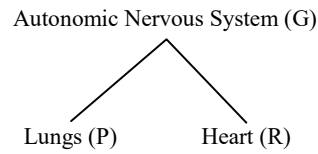
**Case study: 2**

Binita loves to play. One day while she was running she fell down and her ligaments of the leg injured.

- a. What is lymph? 1
- b. What do you mean by Super Rice? 2
- c. Explain why the injured part of Binita's body is compared with hinge? 3

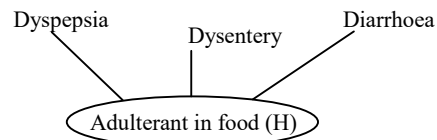
- d. Which disease is incurable from the problems mentioned in two case studies-explain with reasons. 4

5. ►



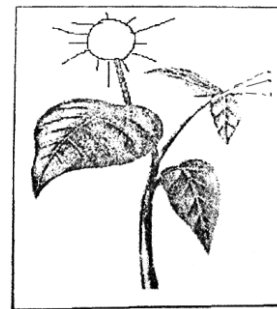
- a. What is bile? 1
- b. What do you mean by incomplete oxidation of Pyruvic acid? 2
- c. How G is related with P and R? 3
- d. Explain without R, P cannot run. 4

6. ►



- a. What is epipetalous flower? 1
- b. Why the medium should be sterilized during tissue culture? 2
- c. What are the symptoms of these disorders? 3
- d. Justify the impact of H in above cases. 4

7. ►



- a. What is bast fiber? 1
- b. What is the role of feromon in biological control? 2
- c. In above process what are the other requirements? Mention their names in a chemical equation. 3
- d. How does sunlight play indispensable role for this process? 4

8. ►



Fig : 1



Fig : 2

- a. What is somatic cell? 1
- b. What is the function of diaphragm? 2
- c. How will you maintain the continuity in naming the plant in figure 2? 3



- d. Analyse with explanation which organism is more advanced between the two shown in fig:1 and fig: 2. 4

**63. Willes Little Flower School & College, Dhaka** Subject Code : 

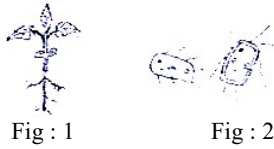
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Time — 2 hours 35 minutes

**Biology (Creative)**

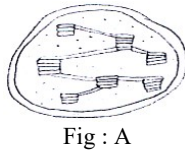
Full Marks — 80

1. ▶



- a. What is taxa? 1  
 b. Write down the aim of classification? 2  
 c. How will you maintain the continuity in naming the plant in figure-1? 3  
 d. Analyse, comparison and state your opinion on the above stem figure. 4

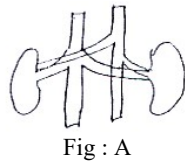
2. ▶



- a. What is protoplasm? 1  
 b. Write down the components of cell wall? 2  
 c. Labelled the above figure and explain the structure. 3  
 d. Analyse and state your opinion if the above figure doesn't exist in plant. 4

3. ▶  $6CO_2 + A \xrightarrow{\quad ? \quad} B + C + 6O_2$   
 a. What is ATP stand for and complete above reaction? 1  
 b. What do you mean by glycolysis? 2  
 c. Explain the important of light phase to produce B. 3  
 d. Analyse the role of  $C_3$  cycle to produce B. 4

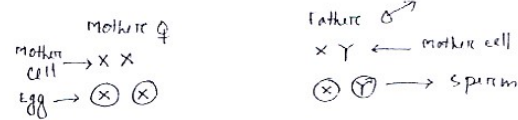
4. ▶



- a. What is nephrone? 1  
 b. Write down the components of Urine/ 2  
 c. Explain the structure of the unit of above figure. 3

- d. Analyse the role of above figure to maintain the balance of body fluids. 4

5. ▶



- a. What is autosome? 1  
 b. What do you mean by DNA finger printing? 2  
 c. Determine whether a son or a daughter will be born on above stem. 3  
 d. Analyse and state your opinion who will responsible for daughter off springs? 4

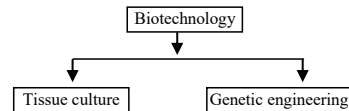
6. ▶ Grass → Grasshopper → toad → snake → guinea snake = A  
 Dead body → Fungus → earthworm = B

- a. What is Food chain? 1  
 b. What do you mean by food web? 2  
 c. Describe the difference between A and B. 3  
 d. Analyse How to Nutrition flow in ecosystem with the help of above stem. 4

7. ▶ A woman is 33 years old, height 165 cm and weight is 94kg.

- a. What is BMR? 1  
 b. What do you mean by BMI? 2  
 c. What her BRIR according to stem? 3  
 d. Analyse and state your opinion on that woman's physical condition. 4

8. ▶



- a. What is explant? 1  
 b. What do you mean by biotechnology? 2  
 c. Describe the different steps of tissue culture. 3  
 d. Analyse the role of genetic engineering in developing crops. 4

**64. Greenfield School & College, Dhaka** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

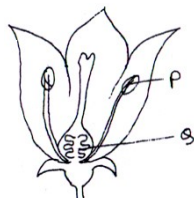
Full Marks — 50

1. ▶ X → Heart

Y → Blood

- a. What is Blood Pressure? 1  
 b. What is the difference between Artery and Vein? 2  
 c. Above Y plays a great role in human body. Describe it. 3  
 d. Above X is a pumping machine in our-body—Analyse. 4

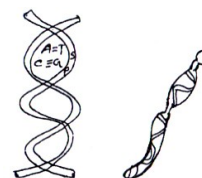
2. ▶



**Fig : X**

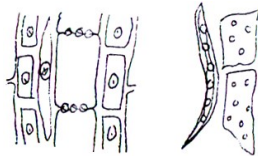
- a. What is cambium? 1  
 b. Difference between DNA and RNA? 2  
 c. Describe how gametophyte is developed inside labelled Q part. 3  
 d. Labelled P and Q directly takes part in reproduction—Analyse. 4

3. ▶



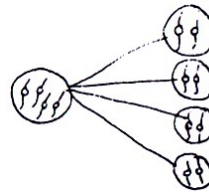
**Fig : X Fig : Y**

- a. What is Dialysis? 1
- b. What is colour blindness? Explain. 2
- c. Describe the above fig X. 3
- d. In determining sex a part of fig Y is the main factor— Explain it. 4
4. ► Sumona want to know from her brother Sumon, we receive that Oxygen how it ventilation into cell tissue. In respect of this Sumon inform sumona some organ and system of body perform this function properly.
  - a. What is Gene? 1
  - b. Write draw the symptoms of Tuberculosis. 2
  - c. According to stem function of circulation occurs by which organ— Explain. 3
  - d. Subject matter discussed between Sumona and Sumon occurs by many vessel— Analyze it. 4
5. ► Rna, son of Mr Rahman, was not mentally developing. Recently Mr Rahman was urinating frequently and was getting loss his weight. While he was meeting the doctor with Rana, the doctor suggested Rana to eat iodized Salt. At the sometime he informed to Mr Rahman that his disease can be controlled by following three 'D' .
  - a. What is hormone? 1
  - b. What do you mean by Islets of langerhans? 2
  - c. Discuss the reason for giving mentioned advice to Rana by the doctor. 3
  - d. "The disease of Mr Rahman cannot by fully cured but controllable"— Analyze the statement. 4

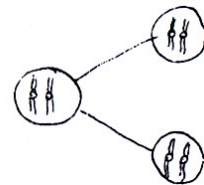


**P Q**

- a. What is prokaryotic cell? 1
- b. What do you understand by Bionomial Nomenclature? 2
- c. Compare between the structures of P and Q. 3
- d. Evaluate the role of 'P' in increasing the national income. 4
7. ► Moti was an unemployed young man. He takes a training how to improve quality of plant tissue from the nearest agriculture developing center. For this reason now he is an economically solvent and self-dependent young man.
  - a. What is GMO? 1
  - b. Explain natural selection. 2
  - c. Explain the steps of the process of Moti's training. 3
  - d. Mentioned process is very much useful to develop our country—Analyze it with logic. 4



**Fig : A**



**Fig : B**

- a. What is interphase? 1
- b. What do you mean by Amitosis cell division? 2
- c. Explain the role of fig 'A' in maintaining the flow of generation. 3
- d. Compare between 'A' and 'B' of the above stem. 4

**65. Viqarunnisa Noon School & College, Dhaka** Subject Code : 

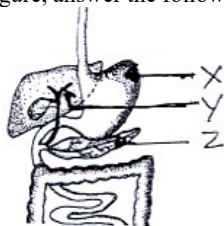
1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

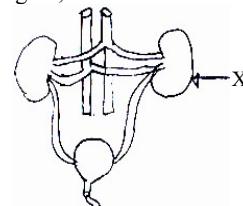
Full Marks — 50

1. ►  $CO_2 + \text{Assimilatory energy} \rightarrow \text{carbohydrate}$ .
  - a. What is GTP? 1
  - b. What is meant by Glycolysis? 2
  - c. Explain the above mentioned process. 3
  - d. The biochemical process is very much significant for the living world—analyze. 4
2. ► Mrs. Nahid is a scientist. She wants to develop flood resistance variety of paddy. By using recombinant DNA technology, she developed a variety with desire characters.
  - a. What is Entomolgy? 1
  - b. What do you mean by inflorescence? 2
  - c. Explain the process of above mentioned stem for producing new variety. 3
  - d. Evaluate the contribution of stem mentioned technology in case of agriculture and healthcare. 4
3. ► Observe the figure, answer the following questions.



- a. What is alveolus? 1
- b. What is meant by Roughage? 2

- c. Explain the process of digestion in 'X' organ of the stem. 3
- d. 'Y' control different biological function of the body— give logic in favour of your answer. 4
4. ► For growth and development of the body of higher organism, one kind of cell division takes place. In one step of cell division centromere get divide into two. As a result two daughter chromosomes are produced from one chromosome.
  - a. What is Explant? 1
  - b. Why Chromosome is called the physical basis of heredity? 2
  - c. Explain the step of cell division mentioned in the stem. 3
  - d. What problems may arises if the above mentioned process does not happen properly? Analyze. 4
5. ► Observe the figure, answer the following questions.

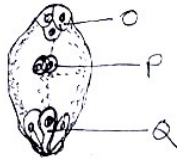


- a. What is capsule? 1
- b. What are the causes of kidney stone? 2
- c. With diagram explain the structure of unit of 'X'? 3
- d. What are the steps you will follow if 'x' is damaged give logic is? 4

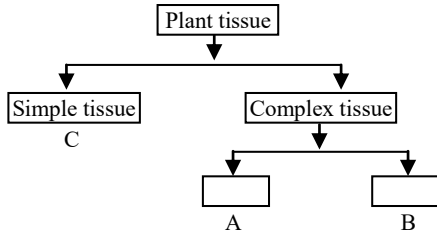


Biology

6. ► By observing following figure answer the questions.



- a. What is the first cell of sporophyte. 1
- b. Why AIDS is called a fatal disease? 2
- c. Explain the process of developing 'Q' of the above stem. 3
- d. Analyze the changes of 'P' and 'Q' after fertilization. 4



- a. What is Blood? 1
- b. Tendon is different from ligament– Explain. 2

- c. Explain the structural characters of 'B'. 3
  - d. A, B and C of the stem play important roles of various physiological function– analyze your opinion. 4
8. ► (i) Algae → small fish → large fish → Man  
 (ii) Grass → Insect → Bird → Fox
- a. What is plankton? 1
  - b. What is meant by species diversity of organism? 2
  - c. Explain the nutrient flow of first food chain. 3
  - d. 'Ecosystem will be changed due to the absent of the first organism of the above food-chain'– analyze with logics. 4

**66. Savar Cantonment Public School and College, Dhaka** Subject Code : 1 3 8

Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

1. ► Look at the figure given below and answer the following questions:



- a. What is anisogamous? 1
- b. What is meant by binomial nomenclature? 2
- c. What type of relationship exists between A and B? Explain. 3
- d. Why the organism B has not been included in the eukaryote phylum?? Analyze. 4

2. ► Salim ate a mango and threw the seed outside the house. A few days later he observed that a seedling has grown and it is growing in both upside and downsides. He asked about the fact to his father who is an agriculturist. His father answered that a was due to cell division.

- a. What is prokaryotic cell? 1
- b. What is phototropism? 2
- c. Discuss the significance of the type of cell division through which the plant was growing. 3
- d. What will happen if this type of cell divides beyond control in human body? Analyze. 4

3. ► Fahima weights 45 kg, and her height is 152 cm. She likes to eat burger but does not do physical labour. So she remains often ill. When she was taken to the doctor, he advised to change her food and habit.

- a. What is diffusion pressure? 1
- b. What is exofertilization? 2
- c. Determine the BMI of Fahima from the given description. 3
- d. Evaluate the possible advice given by the doctor. 4

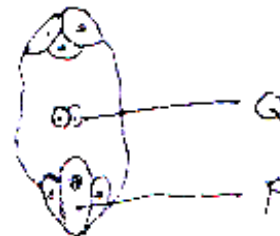
4. ► Nadia's younger brother has been suffering from coughing and asthma. She brought him to the doctor and do some diagnostic tests. The doctor gave him some medicines.

- a. What is nucleotide? 1
- b. What type of gene are called dominant gene? 2
- c. Describe the possible symptoms of Nadia's brother's disease. 3
- d. "Prevention is better than cure"— analyze the statement in the light of Nadia's brother. 4

5. ► Turjo got a serious hurt in his left knee while playing football. He was taken to a doctor. The doctor said, after various diagnostic tests, portion of his knee joint capsule has tore.

- a. What is osteoporosis? 1
- b. What is arthritis? 2
- c. Describe with figure the part where Turjo got hurt. 3
- d. The function what Turjo did needs a co-ordination— analyze. 4

6. ► Look at the figure given below and answer the following questions:



- a. What is placenta? 1
- b. What do you mean by inflorescence? 2
- c. Describe the initiation process of part 'P' of the figure. 3
- d. How the biological organisms are saved due the post fertilization state of 'Q'? Analyze. 4

7. ► Masum went to his country house during the last vacation. He started fishing with a fishing gear. He got plenty



of small and large fishes. He also saw different types of small and large hydrophytes are there. During his stay one day he saw a kite catching a large fish. He thoughtfully observed that an industry was being set up the beside the water body of which effluent system was related to the water body.

- What is parasitic food chain? 1
- What is meant by positive interrelationship? 2
- Describe the ecosystem which Masum saw. 3
- What impact is gonna take place when the industry will start? Analyze. 4

8. ► Mr. Atiq, a genetic engineer, was explaining about recombinant DNA technology to his class ten daughter. She understood its importance.

- What is DNA test? 1
- What is meant by transgenic organism? 2
- Describe the steps of the process hinted in the stem. 3
- The mentioned method is playing an important role in agriculture and in medical field. Analyze. 4

**67. BIAM Laboratory School and College, Bogra** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

1. ►

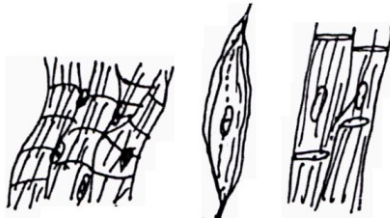


Fig : A                      Fig : B                      Fig : C

- What is fluid connective tissue? 1
  - Write the names of different types of muscle tissue. 2
  - What is A, B and C? Describe their structure. 3
  - Where these A, B and C are located? Give some examples. 4
2. ►

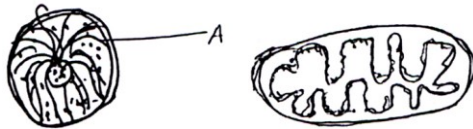
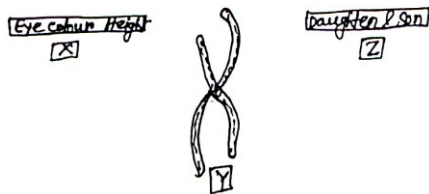


Fig : A                      Fig : B

- What is constipation? 1
- What do you mean by articulation? 2
- Describe the structure and function of the figure "B"? 3
- Inside materials of figure "A" play an important role in heredity, how? Explain. 4

3. ►



- Who discover chromosome? 1
- Why DNA replication is called semi-conservative way? 2
- Explain Y is the physical host to determine X. 3
- Explain the relation between Y and Z. 4

4. ► Food is the body's fuel source. The nutrients in food give the body cells the energy and other substances. They need to operate. But before food can do any of these things, it has to be digested into small pieces the body can absorb and use.

- What is connective tissue? 1
  - Why heart muscle is structurally like voluntary muscle and functionally like involuntary? 2
  - Explain- "Public health is now threatened due to the adulterants". 3
  - Describe the human digestive system. 4
5. ► i)  $6CO_2 + 12H_2O = C_6H_{12}O_6 + O_2 + 6H_2O$   
ii)  $C_6H_{12}O_6 + O_2 = 6CO_2 + 12H_2O + ATP$
- What is the optimum temperature for photosynthesis? 1
  - Why assimilatory power is necessary? 2
  - Describe the first process in presence of light. 3
  - The existence of the living organisms will be threatened if the 2nd process in plant become stop. Explain. 4

6. ► Observe the following figure A and B-

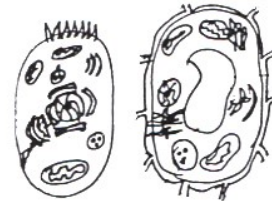


Fig : A                      Fig : B

- What is prokaryotic cell? 1
  - What do you mean by Golgi body? 2
  - Mention the difference between A and B in the stem. 3
  - With diagram describe the structure and function of the tissue where A and B are found. 4
7. ► The cell of some tissues are capable of division, again some tissues the cells has lost the capacity of division.
- What is simple tissue? 1
  - What do you mean by complex tissue? 2
  - State the characteristics of tissue mention in the stem which has lost their division. 3
  - Differentiate the two types of tissue mention in the stem. 4
8. ► Grass, snake, grasshopper, mosquito larvae, fish, toad and falcon are the components of the ecosystem.
- What is food chain? 1
  - What is meant by energy flow of an ecosystem? 2
  - Describe the above mentioned consumers of the stem are which level. 3
  - Analyze what will happen if the number of above amphibian component of the stem becomes increase. 4

**68. BIAM Laboratory School & College, Naogaon** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50



1. ► Monira is a powerful man of 30 years old. He has enough of taste and he also eats a lot. He is 236 cm in height and of 126 kg.
- What is hormone? 1
  - What do you mean by roughage? 2
  - Determine the BMI of Monira. 3
  - How should Monira take care of his body following the BMI value? Explain logically. 4
2. ► Munna was an unemployed young man. He takes a training how to improve quality of plant tissue from the nearest agriculture developing center. For this reason now he is an economically solvent and self-dependent young man.
- What is tissue? 1
  - How will you prepare culture medium? 2
  - Explain the steps of the process of Munna training. 3
  - Mentioned process is very much useful to develop our country-Analyze it with logic. 4
3. ►

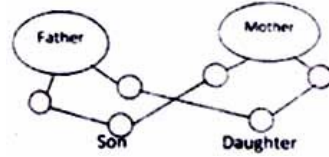


- What is karyokinesis? 1
  - Why mitosis is called the equational cell division? 2
  - Write the difference between mitosis cell division and above mentioned cell division? 3
  - What problem will be occurred if above mentioned cell division does not complete the organism? 4
4. ► Biology is the branch of science concerned with the study of living organisms including their structure, function, growth, reproduction, classification, origin and evolution, the scientific naming of an organism is accomplished in accordance with some rules and regulations set internationally.
- What is biology? 1
  - What is binomial nomenclature? 2
  - Mention the taxonomic level with example. 3
  - Explain the necessity of classification of living organism. 4

5. ►  $6CO_2 + 12H_2O \rightarrow C_6H_{12}O_6 + 6H_2O$   
 $C_6H_{12}O_6 + O_2 \rightarrow 6CO_2 + 6H_2O + ATP$
- What is photophosphorilation? 1
  - What do you mean by bioenergy? 2
  - Describe light dependent phase. 3
  - If the second process in plant stops, the existence of the living organism will be threatened. Explain. 4
6. ► Sabuj's teacher drew a table in the classroom :

Difference between RBC and WBC		
Characteristics	RBC	WBC
Nucleus		
Shape		
Hemoglobin		
Number		
Function		

- What is cell sap? 1
  - What do you mean by cohesive energy? 2
  - How will you fill up the above mentioned chart? 3
  - If RBC in the stem is decreased in human body, what will happen? 4
7. ►

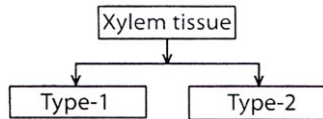


- What is heredity? 1
  - Why chromosome is called the physical basis of heredity? 2
  - What type of chromosome will remain in the blank spaces of the stem? Explain. 3
  - 'Mother is not responsible for giving birth to female offspring'. Explain with argument in the light of stem. 4
8. ►

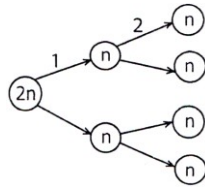


- What is thalamus? 1
- What is inflorescence? Explain. 2
- How does the part- X play role in pollination? 3
- Part-Y saves the life of animal- analyze with logic. 4





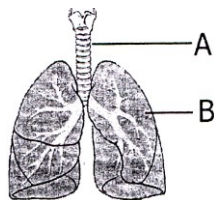
- a. What is tissue? 1
  - b. What is the function of xylem tissue? 2
  - c. Draw the pictures of the tissue of type-1 with labeling. 3
  - d. Give a comparative description of type-1 and type-2. 4
2. ►



- a. What is zygote? 1
  - b. Where is meiosis cell division occurred? 2
  - c. Explain the step-2 that is mentioned in the figure. 3
  - d. Describe the differences of step-1 and step-2 4
3. ► There is a triangular shape organ with blank space inside it acts by expansion and contraction. This organ transports red colour fluid through the whole body.
- a. What is connective tissue? 1
  - b. Write some differences between artery and vein. 2
  - c. Describe the mechanism of transportation of red colour fluid by this organ. 3
  - d. What would be happed in your body in the lack of this fluid?— Describe it. 4



- a. What is dopamine? 1
  - b. What do you mean by DNA replication? 2
  - c. Describe the process of 'A' that mentioned in the stem. 3
  - d. What are the importance of 'B' that mentioned in the stem? 4
5. ►



- a. What is respiration? 1
  - b. What are differences between aerobic and anaerobic respiration? 2
  - c. Describe two diseases of part 'B' with symptom, causes and remedy. 3
  - d. If any problem occurs in figure how will you affect— describe it. 4
6. ►

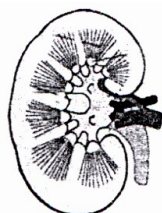


Figure-A

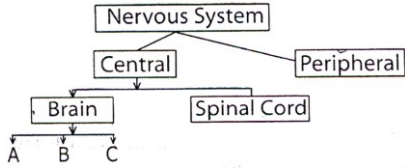
- a. What is medulla? 1

- b. What do you mean by glomerulus? 2
  - c. Why the figure is compared to the sieve?— explain it. 3
  - d. If the figure gets damaged how will you take preventive measures?— opine it. 4
7. ► 12 year old Binita is healthy and restless. She spends most of her time by playing, running. One day while she was running she got injury in her leg ligament.



- a. What is osteoporosis? 1
- b. What do you mean by arthritis? 2
- c. Why the injured part of Binita is compared to hinge? 3
- d. What type of co-ordination is necessary to carry out the activities done by Binita—analyze it. 4

8. ►



- a. What is meanings? 1
- b. What do you mean by reflex action? 2
- c. Describe the structure of 'A' in the stem. 3
- d. Give a description of structural unit of mentioned system in the stem. 4

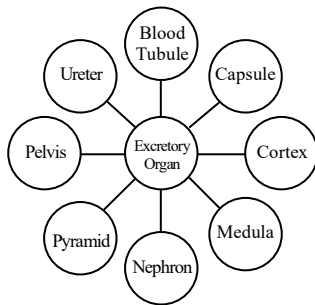
**70. The Millennium Stars School and College, Rangpur** Subject Code : 1 3 8

Time — 2 hours 35 minutes

**Biology (Creative)**

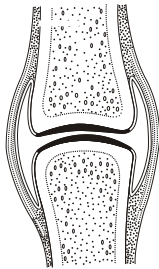
Full Marks — 50

1. ►



- a. What is dialysis? 1
- b. Why posthumous kidney donation is important? 2
- c. How do the elements in the above chart give the structure of excretion tract of the human body? Explain. 3
- d. Are the elements of the chart involved in expelling the excretory product of the human body? Give logic. 4

2. ►



- a. What is arthritis? 1
- b. What do you mean by tendon ligament? 2
- c. How do you describe the given stem? 3
- d. Analyze the role of above stem in human locomotion. 4

3. ► Mitochondria plays a very important role in cellular respiration. Within some exceptions this organelle is found in all plants and animal cells.

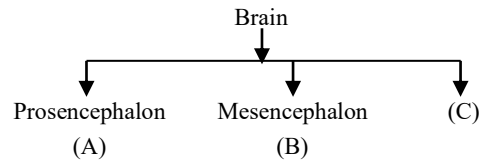
- a. What is cell? 1
- b. Write two functions of plastid. 2
- c. Draw a labeled diagram of given organelle in the stem. 3
- d. How the above mentioned organelle play vital role in cell respiration—analyze with your logics. 4

4. ► Innumerable living beings are there around us. They have many regional name to know them easily. Binomial Nomenclature accomplished in accordance with some rules set internationally.

- a. What is genetics? 1

- b. Why amoeba belongs to kingdom protista? 2
- c. Explain the principles of mentioned system. 3
- d. Do you think above naming system serves only one aim to know every organism? Give your logics. 4

5. ►



- a. What is postulated hormone? 1
- b. What do you mean by cytokinin? 2
- c. Explain the part 'A' of the figure of the stem. 3
- d. "C part of the stem has different subparts"—Analyze. 4

6. ►

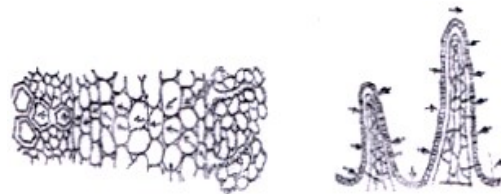


Figure: A

Figure: B

- a. What is protoxylem? 1
- b. Write the functions of hormone. 2
- c. "It is must to use figure:B part of the stem during digestion—explain. 3
- d. Give the analytical comparison between figure:A and figure:B of the stem. 4

7. ► Mrs. Zaman is 35 years old. Her height is 150 cm and weight is 65 kg. She has to abide by the rules of 'three D'. For this reason she takes 200gm carbohydrate, 150 gm fat and protein as per requirement at her age daily.

- a. What is trophic level? 1
- b. Pancreas plays the main role in food digestion—why? 2
- c. How much appropriate is the BMR value of the above mentioned woman is according to her age? Explain. 3
- d. "In special situation the diet list mentioned above is appropriate"—give logic. 4

8. ► There are some diseases that occur due to abnormal condition of hormone secretion and nervous system.

- a. What is called hormone? 1
- b. What do you mean by passive absorption? 2



- c. Explain the control measures of the disease which occur due to first mentioned abnormality. 3
- d. "Abnormality of last underlined system of the stem may cause some fatal disease." Analyze. 4

**71. Cantonment English School & College, Chittagong** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 80

1. ►  $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + A$
- a. Write the formula of Pyruvic acid. 1
- b. What do you mean by anaerobic respiration? 2
- c. Represent the process for the formation of A. 3
- d. The process mentioned in the stem is important for the living beings-analyse. 4
2. ► Shahrugh is 16 years old. His height is 160 cm and weight is 72 kg.
- a. What is chlorosis? 1
- b. What do you mean by placenta? 2
- c. Determine the BMI of Shahrugh. 3
- d. How should Shahrugh take care of his body following the value-explain. 4
3. ► Shakib and Karina are siblings. Shakib cannot distinguish red-green colours but Karina does not have this disorder. Their mother also has got the same problem.
- a. What is gene? 1
- b. What do you mean by sex linked inheritance? 2
- c. State the characteristics of the disorder. 3
- d. Evaluate that Shakib's disorder is inherited. 4
4. ► Grass → Grasshopper → Frog → Snake → Vulture
- a. What is plankton? 1
- b. What do you mean by mutualism? 2
- c. Form a food web using the stem. 3
- d. There are rarely more than five links in a food chain-analyse on the basis of the stem. 4
5. ► Watson and Crick propagated the theory of X-Ray Diffraction of a structure of a winding stair case.
- a. What is pleura? 1
- b. How does Ligase work? 2
- c. How does the structure mentioned in the stem replicate? 3
- d. The revolutionary discovery of the above is a gift of modern science-explain. 4
6. ► In the classroom, the Biology teacher said that the food is deposited in a bag like muscular part in the human body. It is situated in between oesophagus and small intestine. She also said that there is a gland from where hormone is secreted. That hormone helps to control the diabetes disease.
- a. What is roughage? 1
- b. What is meant by mixed protein? 2
- c. How the food is digested in the deposited part? Explain. 3
- d. What will be effects in our body if the function of the hormone secreting gland are hampered? Analyze it. 4
7. ► All on a sudden, a banker felt unbearable chest pain and sweated excessively during the office hour. He also felt the pain was spread out at neck and left hand. Immediately he came to the hospital for treatment. After doing an ECG, the Doctor prescribed him necessary medicines and some guidelines.
- a. What is hypertension? 1
- b. What are the functions of artery? 2
- c. What are the reasons of banker's chest pain? Explain 3
- d. Evaluate the guidelines which are given by the doctor to keep him safe and sound health. 4
8. ► Kamal is an unemployed young man. He has participated a training program to improve the quality of the plant tissue from the nearest agriculture developing centre. After completing the course, now he is a financially solvent and self sufficient young man.
- a. What is biological clock? 1
- b. What do you mean by adaptation? 2
- c. Explain the steps of the process of Kamal's training. 3
- d. Mentioned process is very much useful to develop our country— Analyze it with logic. 4

**72. BAF Shaheen College, Chittagong** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

1. ►

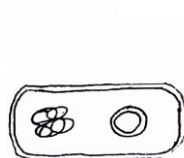
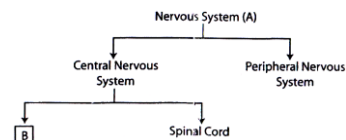


Fig : A



Fig : B

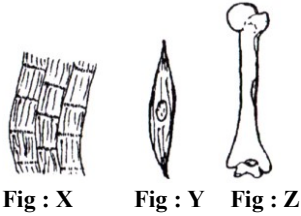
- a. Define Tax. 1
- b. Why does mitochondria consider as powerhouse of cell? 2
- c. Describe the principles of naming above B indicated organism according to ICBN. 3
- d. "In between A & B, which one is more advanced group"? Put your opinion. 4
2. ►



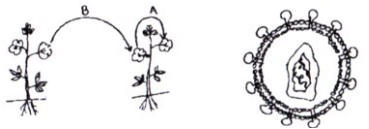
- a. What is explant? 1
- b. Explain "Survival of fittest". 2
- c. Draw and describe the structure of B. 3
- d. "The Unit of A plays an vital role in impulse transmission". Analyze this statement. 4

3. ►





- a. What is synapse? 1
- b. What are the differences in between diffusion and osmosis? 2
- c. How does fig. X is different from fig. Y? 3
- d. "The role of X & Z in human locomotion is immense". Analyze the statement. 4



- a. Define phytohormone. 1
  - b. What do you mean by blood pressure? 2
  - c. Describe the differences in between A & B. 3
  - d. Write down the causes and symptoms of the disease that creates 'Y' indicated virus. 4
5. ► A red color fluid connective tissue present in our body. It can be classified on the basis of antigen and antibody. To donate blood at regular interval is our social responsibility.
- a. Define leukemia. 1
  - b. What do you mean by glycolysis? 2
  - c. Describe the characteristics of different blood group. 3
  - d. Analyze the last line of above indicated stem. 4
6. ► Neerupoma is 33 years old and do not like to work. Her body weight is 94 kg and daily demand of calorie is 1699.3. By analyzing the BMI, doctor advise her a few important suggestion to keep a sound health.

- a. Define embryonic membrane. 1
- b. What is reflect arch? Explain it. 2
- c. Calculate the BMI of Neerupoma by using the stem indicated information. 3
- d. "What will be the suggestion of doctor to Neerupopma for keeping sound health"? Analyze it. 4



- a. Define Centrosome. 1
  - b. What is educational cell division? Explain. 2
  - c. Describe the absorption process of C through A indicated part of plant. 3
  - d. How many ATP can produce from different stages of B indicated process. Explain with calculation. 4
8. ►
- i) Algae → zooplankton → small fish → large fish → falcon
  - ii) Mosquito → Dengue virus → human
  - iii) Conservation of environment.
- a. Define dinphram. 1
  - b. What is fluid of life? Explain. 2
  - c. In between i & ii, which food chain is incomplete? Describe it. 3
  - d. "The significant of (iii) indicated topics is enormous" Analyze the statement. 4

**73. Bangladesh Elementary School, Chittagong** Subject Code : 

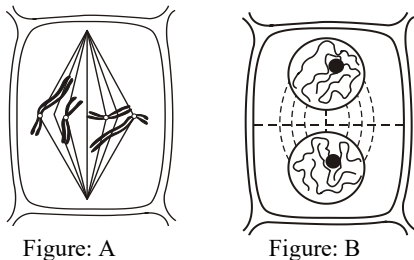
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Time — 2 hours 35 minutes

**Biology (Creative)**

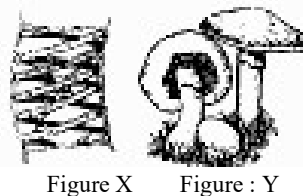
Full Marks — 50

1. ► See the picture given below and answer the following questions:



- a. What type of cell division is represented with above figures? 1
- b. Why does cell division very important for living organisms? 2
- c. Write dissimilarities between the figure A and B. 3
- d. Describe the significance of the cell division indicated by above figure A and B. 4

2. ► See the picture given below and answer the following questions:



- a. What is biological coin? 1
  - b. Show the distribution of taxonomic ranks. 2
  - c. Mention the differences two plants shown in fig: X and Y. 3
  - d. Evaluate why fig: X and Y are in the same super kingdom but categorized in different kingdoms. 4
3. ► Chemically chromosome is made up of protein and nucleic acid. Generally, nucleic acid is of two types. Mentionable differences can be found in the formation of two types of nucleic acid. Two scientists named Watson and Crick



gave a definite idea about one type of these nucleic acids. They proposed a double helical structure for this nucleic acid.

- a. What is vernalization? 1
  - b. Why do children not like exactly like their parents? 2
  - c. Write the differences between the two nucleic acids mentioned in the stem. 3
  - d. Discuss the characteristics of the model mentioned in the stem. 4
4. ►

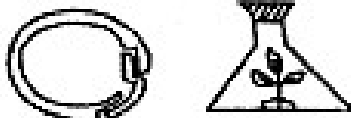


Figure A      Figure : B

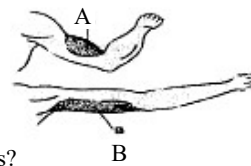
- a. What is transgenic animal? 1
  - b. What is meant by DNA test? Explain. 2
  - c. Mention significance of the process of Fig: B in getting new improved breed of plants. 3
  - d. "Using process of Fig: A both plants and animals can be developed" justify the statement with examples. 4
5. ► During summer vacation Tina went to the Sunderbans with her grandfather. She saw Sundari, Gewa trees, insects, wild cock, magpie robin (Doel), common tailor bird (Tuntuni), fish, kites etc. Her grandfather said that there was more animal in twenty years ago but now they were extinct and the environment became imbalanced.
- a. What is decomposer? 1
  - b. What are the components of ecosystem? 2
  - c. Show the food web that can be formed with the animals seen by Tina. 3
  - d. What do you think about the steps should be taken to stop further extinction in the Sunderbans? 4

6. ►



- a. What is Valve? 1
  - b. What do you mean by universal donor and recipient? Explain. 2
  - c. Write the differences between A and B parts of above figure. 3
  - d. Describe how part A and B play role in circulation of a fluid of human body. 4
7. ► Rina picked some spinach from her garden and kept them in a polythene bag. When she brought it out at noon she found that droplets of water have formed on inner wall of polythene.
- a. What are diffusion pressure? 1
  - b. What is meant by tropism? Explain. 2
  - c. Explain how the water droplets have formed inside polythene. 3
  - d. "The mentioned process in the stem is necessary for existence of plants"- analyze the statement. 4

8. ►



- a. What is locus? 1
- b. What do you mean by fertilization? 2
- c. Write down the differences between the parts marked A and B in the stem. 3
- d. In absence of A and B human hand works like an inert object- Explain it. 4

**74. Jalalabad Cantonment Public School & College, Sylhet** Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

**Biology (Creative)**

Full Marks — 50

1. ► Observe the following figures and give answers —



Fig-A

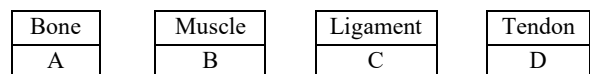
- a. What is scleride? 1
  - b. What do you mean by irregular cell division? 2
  - c. Describe the structure of above figure. 3
  - d. Discuss the role of above figure 'A' in plant life. 4
2. ► The lemon plants of Mr. Azad's garden suffer from disease and do not produce high yield. He produced the plantlets of diseases resistant & high yield variety of lemon by using a special process in his lab.
- a. What is *GMO*? 1
  - b. What do you mean by negative interaction? 2
  - c. Describe the technique followed by Mr. Azad for the development of above plant. 3

d. The technique is beneficial for the development of different organisms- Analyze. 4

3. ► Abrar is a student of class ten. In his biology book he has known about amoeba, mushroom and elephant. All of these organisms belong in the living world.

- a. What is Biogeography? 1
- b. Why Marine biology called the applied branch of Biology? 2
- c. Describe the characters of mentioned saprophytic organism of the stem. 3
- d. Above three organism are placed on different position as systemic category- Discuss with logic. 4

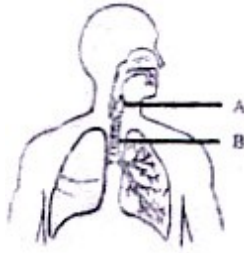
4. ►



- a. What is *BMI*? 1
- b. Why Fe is called Macronutrient? 2
- c. Compare between C and D of above diagram. 3
- d. Discuss the role of A, B, C, D of above diagram in human locomotion. 4



5. ▶ Observe the following figures and give answers–



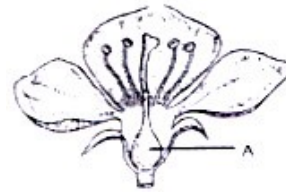
- a. What is diaphragm? 1
- b. Why is LDL called bad cholesterol? 2
- c. Describe the function of part A and B of the figure. 3
- d. How does the whole organ work? Describe in two steps. 4

6. ▶ Observe the following figures and give answers–

Lungs	Heart	Kidney
P	Q	R

- a. What is epiglottis? 1
- b. Why is O group called universal donar? 2
- c. How the function of the R is related to Q? 3
- d. Explain without Q, P cannot run. 4

7. ▶ Observe the following figures and give answers–



- a. What is explant? 1
- b. What is meant by double fertilization? 2
- c. Describe the formation of gamete, which is present in label part 'A'. 3
- d. Discuss the importance of Part– 'A' in plant life. 4

8. ▶ Abruptly a fly comes too close to your eyes and you instantly move your head away from the fly.

- a. What is epilepsy? 1
- b. Why pituitary gland is important? Explain. 2
- c. A part of nervous system control the stated action, write down the structure and role of that part. 3
- d. As per stem, Discuss transmission of impulse in human body. 4

**75. SCHOLARSHOME, Sylhet**  
**Biology (Creative)**

Subject code : 

1	3	8
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Full marks – 50

Time – 2 hours 35 minutes

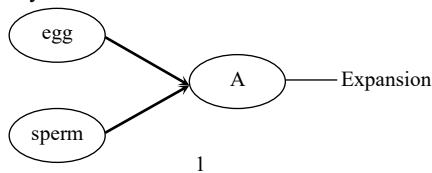
1. ▶ While playing cricket. Shams got hurt severely on his left knee. After the diagnosis, the doctor opined that the ligament of his knee joint has been ragged.

- a. What is tendon? 1
- b. What do you mean by Osteoporosis? 2
- c. Explain the structure of the part that Shams got injured. 3
- d. How does the injured part work and co-ordinate with other parts of the body?–Analyze. 4

2. ▶ Ruji, a student of Class Ten described her friend the importance of photosynthesis. She said that it is an important bio-chemical process. In this process photolysis of water occurs and carbohydrate is produced by reducing CO<sub>2</sub>. Some factors have special significance of this process.

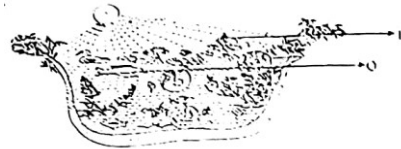
- a. What is glycolysis? 1
- b. What are the essential factors for photosynthesis? Explain 2
- c. Photolysis of water and production of ATP happen simultaneously in the process described by Ruji. Analyze. 3
- d. Describe the impact of the above mentioned process on living organisms. 4

3. ▶ Study the figure underneath and answer the questions followed by it



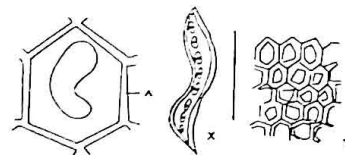
- a. What is the full form of ATP? 1
- b. What do you mean by external fertilization? 2
- c. Describe the development process of 'A'. 3
- d. Explain the role of hormone in the above mentioned process. 4

4. ▶ Observe the following figure and answer the questions followed by it.



- a. What is Explain? 1
- b. What is meant by Universal donor? 2
- c. What will be the effects in the above figure in absence of 'P'? 3
- d. What will happen if the number of 'Q' increases in the above figure? 4

5. ▶ Go through the following stem and answer the questions followed by it.



- a. What is true cell? 1
- b. Explain epithelial muscle. 2
- c. Explain the structure of the part marked as 'A' in the stem. 3
- d. Analyze the similarities and dissimilarities between 'X' and 'Y'. 4

6. ▶ Observe the following figure and answer the questions followed by it.

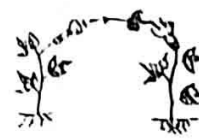
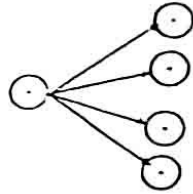


Figure-A

- a. What is genetics? 1
  - b. What is meant by evolution? 2
  - c. Explain the process shown in figure 'A' 3
  - d. What are the probable problems that will arise if the process in figure 'A' is absent in environment?- State your opinion. 4
7. ► Study the figure with attention and answer the questions followed by it



- a. What is plasmid? 1
- b. Why is Mitosis called Equational division? 2

- c. Show differences between the cell division process shown in the stem with Mitosis. 3
  - d. Analyse the impact on living organism, if the cell division mentioned in the stem does not occur. 4
8. ► With his students, Mr. Haque, the Biology teacher observed neighbouring trees of the school. Later showing various trees, he discussed a special topic on categorising organisms. He mentioned Carolus Linnaeus as the father of that topic. Finally he analyzed the system of Binomial nomenclature introduced by that scientist.
- a. What is auxin? 1
  - b. Why are bacteria included in the kingdom Monera? 2
  - c. Describe the aim of the subject-matter discussed by Mr. Haque, 3
  - d. Is the system invented by the scientist mentioned in the stem correlated to naming of man? Analyse your answer with logic. 4

**76. TESL English Version School & College, Kushtia** Subject Code : 

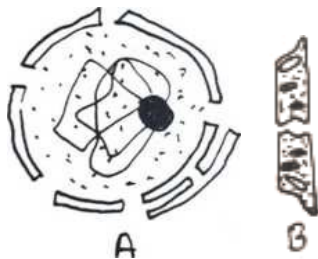
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Time — 2 hours 35 minutes

**Biology (Creative)**

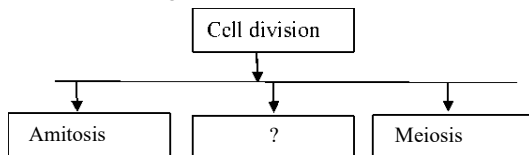
Full Marks — 50

1. ► Observe the figure and answer :



- a. What is nucleus? 1
- b. Why is it seen colourless when the green grass is covered with brick? 2
- c. Explain the structure of 'B' in the plant body. 3
- d. Explain the role of the stem in the living body? 4

2. ► Observe the figure and answer :



- a. What would be in place of (?) marks? 1
- b. Give some examples of unicellular and multicellular bodies. 2
- c. Mention the difference between Prokaryotic and Eukaryotic cell. 3
- d. Describe the significance of (?) marked cell division process. 4

3. ► Read the following passage and answer the question below:

Green plants trap light energy and energy in carbohydrate (and others) food. This food successively being oxidized release energy. Using this energy living world perform all functions and reactions. O<sub>2</sub> is needed to oxidize these organic compound. As a result of oxidation CO<sub>2</sub> is formed inside the living body. Therefore it is revealed that organic compounds are oxidized by the reaction with O<sub>2</sub> which is absorbed from the

atmosphere. As a result of oxidation energy and CO<sub>2</sub> is released living bodies utilize the energy but release CO<sub>2</sub> to the atmosphere. This process run in both plant and animal cells.

- a. What is respiration? Show this process through equation. 1
- b. Make a list of internal and external factors affecting respiration. 2
- c. Show the difference between aerobic and anaerobic respiration in a table. 3
- d. Describe the process of aerobic respiration in plant. 4

4. ► Read the following passage and answer the question below:

A man having 55 kg weight and 120 cm height would like to eat but he is too much lazy. Now a days he becomes fatty. Doctor advises him trying to change his BMI.

- a. What is digestion? 1
- b. What are BMI and BMR? 2
- c. How can we measure the above BMI? 3
- d. How can we prevent night blindness and anemia? 4

5. ► Read the following passage and answer the question below:

Mr. Sharif has a kidney failure. So he purifies his blood with a machine. Other way Mr. Ashraf's kidney is damaged due to disease then he transplants his kidney by his brothers kidney.

- a. What is nephron? 1
- b. What is called malphigian organ? 2
- c. Which procedure does Mr. Sharif take? 3
- d. Who is taking more advantages from those different treatment systems. Mr. Sharif or Mr. Ashraf? 4

6. ► Read the following passage and answer the question below:

The features of parents are transferred to their offspring through heredity materials told Mr. Rafiq, the new biology teacher of BAF Shaheen College Dhaka, to the students. He also showed them a video clip about the physical basis of heredity, a student asked him about chemical carrier of heredity. The teacher explained them about it.

- a. What are the nitrogen bases of RNA? 1  
 b. What is DNA finger printing? 2  
 c. Describe the structure of the material showed in the video.3  
 d. Describe the replication process of the main component of the material mentioned in the stem. 4

7. ► Look at the following table and answer the question:

Name of the scientist	Work	Result
Dr. Adnan	Developing new plant's gene	plants with new character

Name of the scientist	Work	Result
Dr. Mazumder	Developing new animal's gene	Animals with new character.

- a. What is tissue culture? 1  
 b. What do you understand by culture medium? 2  
 c. Explain the technique followed by Dr. Adnan. 3  
 d. How human beings can be benefited from the research of Dr. Mazumder? 4

## 77. Islamabad Collegiate School, Khulna Subject Code : 1 3 8

Time — 2 hours 35 minutes

Biology (Creative)

Full Marks — 50

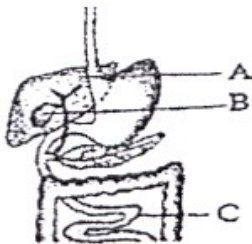
1. ► Hasan is a student of class ten. In his biology book he has known about amoeba, mushroom and tiger. All of these organisms belong to living world.

- a. What is genetics? 1  
 b. Why entomology called the applied branch of Biology? 2  
 c. Describe the characters of mentioned saprophytic organism of the stem. 3  
 d. Analyze why above three organisms are placed on different position as system category? 4

2. ► Mr. Karim is fifty years old. He has been suffering from kidney failure. Doctor told him that he needed to purify blood with the artificial machine. His eight years old son Asif frequently attacked by cold allergy. It increases in certain season round the year.

- a. Why the color of urine is light yellow? 1  
 b. What do you mean by kidney stone? Explain it. 2  
 c. Explain the structure of functional unit of mentioned affected organ in the stem. 3  
 d. Mention what types of complexities arise in Asif? Explain how can he prevent it? 4

3. ► Observe the figure and answer the following question.

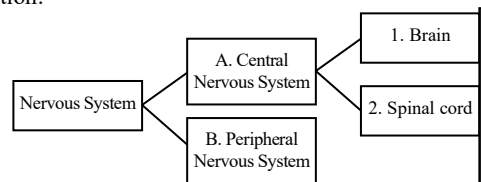


- a. What is recessive gene? 1  
 b. What do you mean by osmosis? 2  
 c. If somehow the 'A' marked part is damaged. What kinds of problems will be occurred? 3  
 d. 'C' marked part is partially dependent on 'B' – Analyze this statement. 4

4. ► Moutushi works in a laboratory where she is helping a scientist to unite material DNA with a rose plant DNA.

- a. What is an explant? 1  
 b. What do you mean by GMO? 2  
 c. Explain the stages that Moutushi has to do for helping the scientist in process of the mentioned stem. 3  
 d. Describe about the other achievements in the field of the mentioned process. 4

5. ► Observe the chart below and answer the following question:



- a. What is color blindness? 1  
 b. What is cuticular transpiration? Explain. 2  
 c. Draw the label diagram of 1 no. part of the above chart. 3  
 d. Describe the structure of functional and structural unit of system of above chart. 4

6. ► Mr. Anis saw a road accident. A boy was run over by a car and was bleeding. His blood group is AB<sup>+</sup>. At that moment, Mr. Anis gave him blood. Doctor gave thanks to Mr. Anis and said everybody should come forward to donate blood for patient, like you.

- a. What is LDL? 1  
 b. What is meant by hypertension? 2  
 c. Explain the characteristics of the blood group of that patient. 3  
 d. Analyze the Doctor's statement—with logic. 4

7. ► Mansura was listening from her teacher about food and nutrition. Her teacher Mr. Khan was saying that, food is the fuel of our body and water is the life. Due to deficiency of some vitamins people may suffer from many diseases- like night blindness, goiter etc.

- a. What is food pyramid? 1  
 b. What do you mean by balanced diet? 2  
 c. What are the functions of mentioned life in the stem. 3  
 d. Give your opinion on mentioned diseases in the stem. 4

8. ► Observe the figure and answer the following questions:



- a. What is flower? 1  
 b. What do you mean by inflorescence? 2  
 c. What is called the process of figure? Explain it. 3  
 d. What problems will be created in the environment when mentioned process will not happen? Give your opinion. 4



## 78. BAF Shaheen College, Jessore

Subject Code : 

1	3	8
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Time — 2 hours 35 minutes

## Biology (Creative)

Full Marks — 50

1. ►



- a. What do you mean by kidney stone? 1
- b. What is meant by dialysis machine? 2
- c. How excretory product goes from X to Y? 3
- d. To keep human body sound what is the role of the system in the figure. 4
2. ► Rakib describes regarding his different physical problem to his friend Sakib. He says that he is suffering from physical weakness. Any sore in his body does not get dried. Hearing these, Sakib advised Rakib to take the advice of doctor and get the test of diabetes.
- a. What is stroke? 1
- b. What is meant by diabetes? 2
- c. Write the description and means of remedies of the symptoms of the disease which is caused by this as mentioned in the extract. 3
- d. Analyze that the controlling of the disease mentioned in the extract is extremely necessary. 4
3. ► A man having 55 kg weight and 120 cm height would like to eat but he is too much lazy. Now a days he becomes fatty. Doctor advices him trying to change his BMI.
- a. What is digestion? 1
- b. What are BMR and BMI? 2
- c. How can we measure the above BMI? 3
- d. To lead a good health what kind of change he would have to do? 4
4. ► Dipto has a problem that he cannot differ the red or green colour comfortably. On the other way, Dipto has a friend named Mousumi is suffering from Thalassemia. Both the diseases are cause of genetic disorder.
- a. What is the chemical carrier of heredity? 1
- b. Without genetic disorder what can be responsible for colour blindness? 2
- c. What is the problem of Dipto? 3
- d. Describe the reason, symptom and treatment of Thalassemia. 4

5. ► In the garden belonged to Mr. Arman tomato plants are dying rapidly being diseased though the tomato harvest is high. He finds that there are some tomato tree which he sowed last year, live long though they do not produce high yield. From these two varieties of tomato, he developed new, high yielding and disease resistant variety by recombinant DNA technology.
- a. What is explants? 1
- b. Why biotechnology is an applied branch of Biology? 2
- c. Explain the technique followed by Mr. Arman for the development of tomato variety. 3
- d. Explain the importance of the discussed technology for the development of harvest.
6. ► Bappi was eating rice with mutton. At that time he got taste by eating the soft and elastic part of a bone. But he could not eat the hard portion of the back side of the bone though he tried.
- a. What is bone joint? 1
- b. What is the role of muscular system in locomotion? 2
- c. Describe the formation of element of the mentioned soft part in human body. 3
- d. Discuss the comparison with the eaten part and un-eaten part of Bappi. 4
7. ► Foods are digested in the stomach being purified. Our digestion is hampered due to industrial color, chemical substances and formalin at present. "Life would be threatened if people don't become conscious."
- a. What is calorie? 1
- b. What is Roughage? 2
- c. Describe the action of enzyme in the organ mentioned above. 3
- d. Evaluate the last line of the stem. 4
8. ► Rafiq gets tired most of the time. He observed that his is hunger and thirst have insreased. Injury doesn't get well easily. Skin is getting dry. He consulted a doctor and tested his blood and diagnosed a disease. Doctor said that there is nothing to be worried. This disease can be controlled by leading a systematic life.
- a. What is epilepsi? 1
- b. What do you mean by reflex? 2
- c. State the reason behind this disease. 3
- d. Analyze that last statement of the doctor. 4

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