

This Question Paper contains 4 Printed Pages.

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20E (A)

SUMMATIVE ASSESSMENT – I (2018-19)

GENERAL SCIENCE, Paper-II

(BIOLOGICAL SCIENCES)

(English Version)

Parts A and B

Time : 2 Hours 45 Minutes]

[Maximum Marks : 40

Instructions :

1. The Question paper comprises of Four sections. i.e. I, II, III and IV.
2. All questions are compulsory.
3. There is no overall choice. However there is internal choice to the questions under section-III.
4. In the time duration of 2 hrs. 45 minutes, 15 minutes of time is exclusively allotted to read and understand to question paper.
5. Part-B should be issued along with Part-A.

PART – A

Time : 2 Hours

Maximum : 30 Marks

SECTION-I

4×1=4

NOTE : 1. Answer all the questions.

2. Each question carries **ONE** mark.

3. Answer each question in **1 or 2** sentences.

1. Name the types of asexual reproduction in the following organisms :
(a) Paramecium (b) Yeast
2. What happens if there are no valves in the Heart ?
3. Ravi went to his cotton field. There he observed some of the cotton leaves were affected by Insects. He also observed that weeds in between are not affected. Give reasons.
4. Your neighbour's children appear with swollen legs, hands and other body parts. They have dry skin and frequently suffering from Diarrhoea. What are the reasons for it ?
What suggestions do you give to their parent ?

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- NOTE :**
1. Answer all the questions.
 2. Each question carries **TWO** marks.
 3. Answer each question in **4 to 5** sentences.
5. Look at the following equation and answer the questions :

Fats + Bile \rightarrow Fat globules

- (a) What is the name of that reaction ?
 - (b) Which gland plays major role in this reaction ?
6. The sports man who participated in 100 mtr. race get more muscle pains. But the sports man who participates in 5 km's race get less muscle pains. What is the reason ?
7. What happens when the waste products are not sent out from the body ?
8. Read the para :

Platelets play major role in the coagulation of blood. Whenever the blood flows from the wound, platelets releases the enzyme called Thrombokinase. Thrombokinase acts on another substance present in the blood called prothrombin converting it into thrombin. Thrombin acts on another substance called fibrin that present in the dissolved state converting it into insoluble Fibrin fibers. The blood cells entangle in the Fibrin fibers forming the clot.

Now, answer the following questions :

- (a) What happens if blood is not coagulated ?
 - (b) Which enzyme helps in the coagulation process ?
 - (c) How is Thrombin formed ?
 - (d) What do we call the yellow coloured fluid appear after the formation of the clot ?
9. Write any four slogans on the conservation of natural resources.

SECTION-III

4×4=16

- NOTE :**
1. Answer all the questions.
 2. Each question carries **FOUR** marks.
 3. There is internal choice for each question. Only one option is to be attempted.
 4. Answer each question in **8 to 10** sentences.
10. Respiration is energy producing process in the organisms. It takes place both in the presence and absence of oxygen. Laxmi said there are some differences between the two processes. How do you support her ?

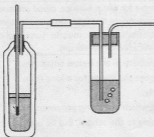
OR

Explain the process of water entry into the root hair in plants with the help of diagram.

11. You know that the factors like CO_2 , Light and Chlorophyll are essential for photosynthesis. Write any one of experiment related to the factors essential for photosynthesis.

OR

Look at the following experiment. Answer the questions.



- What is the aim of the experiment ?
- Which agent is used to find the presence of oxygen ? What changes do you observe when oxygen is present in Glucose solution ?
- Why liquid paraffin is poured on Glucose solution ?
- Which gas released during the experiment ? How can you prove it ?

Read the para :

In the heart, superior vena cava and inferior vena cava opened into right atrium. The pulmonary veins bring blood from the lungs and open into left atrium. The valve present between the right atrium and right ventricle is referred as 'Tricuspid valve'. The valve present between the left atrium and left ventricle is referred as Bicuspid valve. A major blood vessel that originate from right ventricle is Pulmonary Aorta. The valves present at the region of Pulmonary Aorta are called pulmonary valves. A major blood vessel originates from left ventricle is Systemic Aorta. The valves present at the region of Systemic Aorta are called systemic valves.

Now, fill the table with the above information.

Name of the valve	Location	Way of blood flow	Nature of the blood oxygenated/ deoxygenated
a. Tricuspid Valve			
b. Bicuspid Valve			
c. Pulmonary Valves			
d. Systemic Valves			

OR

Read the following table :

Part of the Brain	Functions
a. Olfactory lobes	Sense of smell
b. Cerebrum	Mental abilities, memory, reasoning, perception, emotion and speech. Respond to cold, heat, pain and pressure
c. Diencephalon	Controlling emotions. Center for water balance, blood pressure, sensory impulses such as pain, temperature and light, sleep and hunger.
d. Cerebellum	Maintains posture, equilibrium and muscle tone, co-ordinates voluntary movements initiated by cerebrum.

Now, identify the part of the brain which participate in the below situations.

- Ravi is an intelligent boy. He can remember the things for a long time.
 - The drunken man does not walk properly.
 - Identifies the food items without seeing which are being prepared in the Kitchen.
 - Naveen lost his Money Purse while coming to the school. But he is not crying.
 - It is time for lunch.
 - I cannot tolerate this type of heat in the summer.
 - Catching the ball perfectly.
 - There may be a drainage behind the house.
13. (a) Draw a neat and labelled diagram of Human female reproductive system.
 (b) What happens when the Fallopian tubes are closed ?

OR

Look at the picture and Answer the Questions :



- To which system does the diagram belong ?
- What is the name of A, B Parts ?
- What is 'C' ? What is its function ?
- Through which horn the sensory nerve enters ?

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20E (B)

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GENERAL SCIENCE, Paper-II

(BIOLOGICAL SCIENCES)

(English Version)

Parts A and B

Time : 2 hrs. 45 min]

[Maximum Marks : 40

	AS ₁	AS ₂	AS ₃	AS ₄	AS ₅	AS ₆	Total	Grade
Question Nos.	1,5,6,10, 14-27	2,7, 28-29	3,11, 30-31	8,12	13	4,9 32-33		
Total Marks allotted	16	4	6	6	4	4	40	
Marks Obtained								

Name of the Student : _____ Roll No. _____

PART – B

Time : 30 Minutes

Maximum : 10 Marks

SECTION – IV

$20 \times \frac{1}{2} = 10$

- NOTE :**
1. Answer all the questions. Attach Part-B with answer sheet of Part-A.
 2. Each Question carries $\frac{1}{2}$ mark.
 3. Answers should be written on Question paper itself. Choose the right answer.
14. The Pollen grain has 2 Nuclei. Whenever the pollen tube enters the Embryo soon after the tip of the pollen tube enters the embryo sac, the end of the tube ruptures and releases the two sperms into the embryo sac. One of the two sperms fuses with the egg to form 'X' and another sperm fuses with Polar nuclei and form Y.

What are X and Y in the above para ?

- ()
- | | |
|----------------------|-----------------------|
| (a) Fruit, seed | (b) Zygote, endosperm |
| (c) Fruit, endosperm | (d) Endosperm, seed. |

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15. Mother's uterus tissue and Chorion tissue of the embryo together form the structure called ()
 (a) Placenta (b) Amnion
 (c) Umbilical Cord (d) Allantois
16. Read the following sentences : ()
 P. Insulin secreted by Islets of Langerhans.
 Q. The deficiency of insulin leads to diabetes.
 Which of the above statements are correct ?
 (a) P only correct. (b) Q only correct.
 (c) Both P and Q are correct. (d) Both P and Q are wrong.
17. Which of the below part plays major role in Reflex arc ? ()
 (a) Brain (b) Cerebellum
 (c) Diencephalon (d) Spinal cord
18. The process occur at PCT region of nephron is ()
 (a) Glomerular Filtration (b) Tubular Secretion
 (c) Filtration (d) Tubular Reabsorption
19. Which of the below Excretory product is more poisonous ? ()
 (a) Ammonia (b) Urea
 (c) Uric Acid (d) Bile
20. Which Vitamin is useful in coagulation of blood ? ()
 (a) Vitamin B (b) Vitamin K
 (c) Vitamin E (d) Vitamin A
21. Valves play special role in the circulatory system. They cannot allow the reverse flow of blood. Which of the below vessels have valves ? ()
 (a) Arteries (b) Veins
 (c) Lymph vessels (d) (b) and (c)
22. Heart beat in the human embryo starts from ()
 (a) 24th day (b) 12th day
 (c) 22nd day (d) 21st day

23. Read the statements :

1. Occurs in the Grana Thylakoids
2. Photolysis occurs
3. Glucose formed by the Carbon fixation
4. ATP and NADP will formed

Which of the above are related to light reaction ?

- (a) 1, 2, 3, 4 (b) 3, 2
(c) 1, 3, 4 (d) 1, 2, 4

24. Match the following :

- | | |
|----------------------|-------------------------------|
| 1. Joseph Priestly | a. Valves in veins |
| 2. Girolama Fabrici | b. Functions of Spinal cord |
| 3. Charles Hufnagel | c. Oxygen |
| 4. Leonardo da Vinci | d. Transplantation of Kidneys |

Which of the below are right matching ?

- (a) 1-b, 2-c, 3-d, 4-a (b) 1-c, 2-a, 3-d, 4-b
(c) 1-c, 2-b, 3-d, 4-a (d) 1-c, 2-d, 3-a, 4-b

29. Read the following statements :

- P. Meiosis occur during the formation of Gametes.
Q. 2 daughter cells formed after completion of meiosis,

Which of the above statements are correct ?

- (a) P only correct. (b) Q only correct.
(c) Both P and Q are correct (d) Both P and Q are wrong.

26. Parasitic nutrition : Cuscuta :: Saphrophyte : _____

- (a) Leech (b) Pediculous
(c) Round worm (d) Mushrooms

27. Which of the below enzymes react with proteins ?

- (a) Pepsin (b) Tripsin
(c) Amylase (d) (a) and (b)

28. What happens if Haemoglobin is absent in the blood ? ()
- (a) Blood not in red colour. (b) Oxygen transport does not occurs.
(c) CO₂ transport does not occurs. (d) All the above
29. What happens if there is no epiglottis ? ()
- (a) We cannot swallow food. (b) We cannot breath properly.
(c) Food may enters into Trachea. (d) Cannot drink water properly.
30. Which of the following are essential to conduct the experiment to prove that Heat is liberated during Respiration ? ()
- i. Flask ii. Thermometer
iii. Cork iv. Sprouting seeds
v. Lime Water vi. Dry seeds
- (a) i, ii, iii (b) i, iii, iv
(c) i, ii, iv (d) i, ii, iii, iv
31. Your teacher conducted an experiment "Oxygen is evolved during photosynthesis" by using Hydrilla plant. If Hydrilla plant not available, which of the following plants can be used in that experiment ? ()
- (a) Elodea (b) Spirulina
(c) Neem (d) (a) and (b)
32. Identify the Eco-friendly activity. ()
- (a) Plantation (b) Removing plastic wastes
(c) Using water resources preciously (d) All the above
33. To avoid indigestion you have to ()
- (a) eat very fast
(b) doing violent exercise soon after eating
(c) eat the food without masticating properly
(d) take simple food and drink plenty of water