St. Xavier's Sr. Sec. School
Delhi-54

Final Examination in **BIOLOGY**

Std. 11

M. Marks : 70

3-3-2017

Time : 3 hrs.

Total printed pages : 07
Total printed questions : 26

Roll No: | | |

General Instructions:-

i) This paper consists of 26 questions in five sections:
Section - A has 1 to 5 questions carrying one mark each.
Section - B has 6 to 10 questions carrying two marks each.
Section - C has 11 to 22 questions carrying three marks each.
Question 23 is of four marks. (Value Based)
Section - D has 24 question carrying five marks.
Section - E has 25 and 26 questions carrying five marks each. (OTBA)

ii) OTBA material is provided with this question paper. Refer it for question numbers 25 and 26.

iii) There is internal choice in one 2 marks question, one 3 marks question and one 5 marks question. Attempt only one of the choices in such questions.

SECTION – A

1. What is the stored food material of Rhodophyceae?

2. Name the following:-
a) The Covering sheath of Radicle in seeds _____.
b) The compact arrangement of sporophylls and sporangia in Gymnosperms _____.

3. What is the one main difference between Anaphase of Mitosis and Anaphase I of Meiosis cell division?

4. Define the term Hunger Signs.

5. Draw the cell cycle.

SECTION –B

6. Explain the differences between the following:-
a) Open and closed vascular bundles.
b) Conjoint and radial vascular bundles.

7. Draw a well labelled diagram showing Striated muscle fibres.
(OR)
Compound Epithelium.

8. i) State the function of F0-F1 particles of Mitochondria.
ii) Who was first to explain that new cells arise from pre-existing cells?

9. Depict diagrammatically the process of Plasmolysis.

10. Describe the the detailed structure of a Nucleus.

SECTION – C

11. What do the following terms mean?
    a) Plasmodesmata b) Middle Lamella c) Secondary Cell Wall

12. Differentiate between Mitosis and Meiosis.

13. What are uniport, symport and antiport modes of transport? Explain giving examples and diagrams.

14. How is progressive reduction of dinitrogen forms ammonia? Depict it by a well labelled diagram only.

15. Explain briefly:
    a) ABA (Stress hormone) b) Photoperiodism c) Apical dominance

16. How are respiratory gases transported in human respiratory system?

17. Explain the transmission of a nerve impulse across a synapse.
    (OR)
    Explain briefly the mechanism of hearing.

18. Draw a well labelled diagram of unit of excretion and define ultrafiltration and smoregulation.

19. Fill in the blanks with suitable words:-
    a) Scientific name of a single cotyledon of Maize _____.
    b) The bone cells are called as _____ scientifically.
    c) The communicating junctions of cardiac muscles are _____.
    d) The _____ cells make up more than one half the volume of Neural tissue in our body.
    e) The pattern of arrangement of leaves on the stem _____.
    f) The roots of maize and sugarcane that arise for support from the lower stem _____.

20. Explain the process of secondary growth in a dicot stem.

21. What are the sailent features of porifera?

22. Give the reason for the following:-
    a) Why are fern leaves called as sporophylls?
    b) Why are Bryophytes refer as amphibians of the Plant Kingdom?
    c) Why do Gymnospermic seeds referred as naked seeds?

23. a) Why does the ingestion of vegetable fibers improve the regularity of the bowel movements in people who suffer from hard stool?

b) Eating junk food results in several health problems including obesity and heart problems. Still lot of children prefer to eat junk food. What suggestion you will give to avoid eating junk food?

SECTION – D

24. Draw schematic diagram of Kreb's cycle.

(OR)

a) Give comparisons between C3 and C4 plants.

b) Explain Z scheme of Light reaction in brief with diagram**.**

SECTION – E (OTBA)

Theme 1: Long Live Humanity

Abstract

What began with the kidney has now expanded to hearts, lungs, livers and other organs. Development of cadaveric and living organ donation practices, deciding who can donate organs has been a flexible and changing process, starting with living donors and then moving to include deceased and brain dead donors. The debate about increasing and restricting the pool of eligible donors continues today. Development of anti-rejection drugs have done wonders to increase the success of organ transplants. This intriguing field of study becomes more attractive to some researchers as the number of people needing organ transplants through donation continues to grow. Stem cell research is examining adult and human embryo cells in an attempt to discover how organs are developed and what stimulates their growth.

The way humans die has changed significantly during the past half-century. Once a sudden and unexpected event, death has become an actively managed and often prolonged process that occurs more often in hospitals than in the community. Advances in healthcare, in particular, have transformed the way we die. Organ failure, for example, is no longer inextricably linked to death. Patients with end-stage renal disease are routinely dialyzed for many years. The lives of patients with cardiac failure can be prolonged with inotropic and chronotropic therapies, and patients with respiratory failure can receive invasive and non-invasive ventilation in hospital or at home. Also, for more than 100,000 patients per year of the estimated 1.7 million patients worldwide in need of transplant for failing organs, the transplantation of organs and tissues from patients that have died in intensive care settings provide significant benefits - reducing mortality and morbidity, increasing long-term survival, increasing quality of life and reducing the economic burden of the cost of healthcare for patients with chronic diseases. Organ transplantation -- the surgical removal of a healthy organ from one person and its transplantation into another person whose organ has failed or was injured -- is often life-saving and gives the recipient a wonderful new lease of life. But organ transplantation is also a major surgery that carries potential risks and drawbacks, such as the chance of organ rejection. That's precisely why you and your loved ones need to gather as much information as possible on organ transplants.