

**056 (E)**

**(JULY, 2006)**  
**(New Course)**

**Time : 3 Hours]**

**[Maximum Marks : 100**

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**Instructions :**

1. Attempt all questions.
2. Follow the instructions.
3. Begin new section on a new page.

**Section - A**

Question Nos. 1 to 16 are multiple choice questions, each carry **one** mark. Choose **16** the correct answer (a/ b/ c/ d) from the given alternative responses and write it.

1. Which type of parasite is plasmodium ?
  - a) Ectoparasite
  - b) Total parasite
  - c) Paratical Parasite
  - d) Endoparasite
2. What is the effect of PIF on LTH ?
  - a) Because of PIF secretion of LTH increases.
  - b) No effect of PIF on LTH is observed.
  - c) PIF inhibits the effects of LTH.
  - d) PIF activates LTH more.
3. A fat soluble vitamin responsible for clotting of blood is .....
  - a) Vitamin - D
  - b) Vitamin - A
  - c) Vitamin - E
  - d) Vitamin - K

4. Which ion is needed for the activity of carboxylase type of enzymes and auxin synthesis ?
- |              |           |
|--------------|-----------|
| a) Magnesium | b) Boron  |
| c) Zinc      | d) Copper |
5. A defensive barrier which prevents entry of pathogens is .....
- |                    |                   |
|--------------------|-------------------|
| a) skin            | b) Mucus membrane |
| c) mucus secretion | d) cilia          |
6. The glands on lateral sides of urethra, below the prostate gland is .....
- |                         |                   |
|-------------------------|-------------------|
| a) Seminal vesicles     | b) Prostate gland |
| c) Bulbo-urethral gland | d) Testis         |
7. A treatment used in breaking stone in kidneys is .....
- |               |              |
|---------------|--------------|
| a) Sonography | b) MRI       |
| c) CAT        | d) Endoscopy |
8. Which enzyme is present in gastric juice of children ?
- |                |            |
|----------------|------------|
| a) Trypsin     | b) Cassein |
| c) Casseinogen | d) Renin   |
9. In plants it hinders seed germination and the development of excised embryo.
- |               |                   |
|---------------|-------------------|
| a) Ethylene   | b) Gibberrelins   |
| c) Cytokinins | d) Absciscic Acid |

10. In which of the following animal, is nephridia found ?
- a) Cockroach    b) Earthworms  
c) Frog    d) Fish
11. Which of the following bacteria is symbiotic ?
- a) Azotobacter    b) Pseudomonas  
c) Nitrobacter    d) Rhizobium
12. During the process of opening of stomata which ions are entering into guard cells ?
- a)  $H^+$  and  $Mg^{++}$     b)  $K^+$  and  $Cl^-$   
c)  $K^+$  and  $Fe^{+++}$     d) Malate ion and  $Mg^{++}$
13. Which organ can be regenerated by birds ?
- a) Fractured bones    b) kidney  
c) Beak    d) Liver
14. How many ATP are formed during dephosphorylation of glycolysis ?
- a) 3 ATP    b) 2 ATP  
c) 4 ATP    d) 6 ATP
15. In human, which blood cells are without nucleus ?
- a) Lymphocytes    b) R.B.C.  
c) W.B.C.    d) Neutrophils
16. The genetic complex of such organisms is the same yet fertilization does not occur, what's it called ?
- a) Parthenogenesis    b) Polyembryony  
c) Incompatibility    d) Parthenocarpy

**Section - B**

Question Nos. 17 to 32 are very short answer type questions, each question carry **16** one mark. Give answer in the limit of 1 to 10 words.

17. What is endosporic development ?
18. Give names of the drugs excreted in distal convoluted region of uriniferous tubule. (any two)
19. Which hormone has profound effects on efficiency of endocrine system ?
20. Write the function of neutrophils.
21. State the deficiency effects of chlorine.
22. Which process does not take place during cyclic photophosphorylation ?
23. What is egg-apparatus ?
24. What is lenticular transpiration ?
25. State the location and function of sertoli cells.
26. Define : Respiratory Quotient.
27. State the main goals of 'Conservation' in Biosphere reserves.  
(Any two)
28. What is 'Vertebro-chondrial ribs' ?
29. State the names of countries, which have 0.6 % natural growth rate. (Any two)
30. State the function of LH in women.
31. What is 'tillage' ?
32. Which stage succeeds floating stage ?

**Section - C**

Question Nos. 33 to 44 are short answer type questions, each question carries two 24 marks. Give answers in the limit of 30 words.

33. Explain : Antigen.
34. Explain : Placenta.
35. Describe the factors affecting the process of osmosis.
36. State any four goals of animal breeding.
37. State the disorders resulting due to deficiency of Riboflavin and Thiamine and write any two symptoms of each.
38. Explain the synthesis of aminoacids.
39. State the oxides of nitrogen and particulate matter as type of air pollutants.
40. State the location : Caecum and vermiform appendix.
41. Which type of asexual reproduction is observed in Amoeba and Paramecium ? Explain it.
42. Write a short note on : Factors, affecting the Growth of plants.

**OR**

Write the factors responsible for seed dormancy. (any four)

43. Explain chemosynthetic nutrition, with examples.
44. Explain : the Theory of Error catastrophe and somatic mutation theory.

**OR**

What is nastism ? Explain nastism in plants.

## Section - D

Question Nos. 45 to 52 are short answer type questions, each question carries **24** **three** marks. Give answers in the limit of 50 words.

45. Explain bar diagrams of age and sex structure. (Bar graph necessary)
46. In which region of chloroplast the photo chemical phase takes place ?  
Explain photolysis of water.
47. What is the meaning of Harmful relationships ? Describe exploitation and predation.
48. On the basis of penetration of light, describe the various zones of lake.

OR

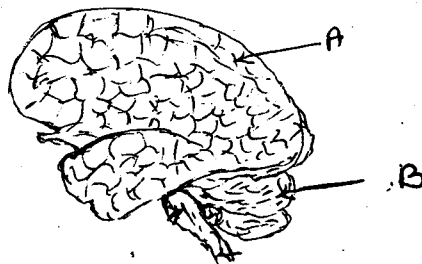
Explain : Soil profile.

49. Describe  $O_2$  transport through blood.
50. Describe : Hormones of adrenal cortex.

OR

Describe the effects of testosterone. (Any six points)

51. Explain Amoeboid movement and ciliary movement.
52. In the given diagram what does 'A' and 'B' represent ? Write their function.



OR

Describe the digestion of food in cockroach.

**Section - E**

Question Nos. 53 to 57 are long answer type questions, each question carries **four** 20 marks. Give answers in the limit of 100 words.

53. Describe Anthropogenic Extinction.

**OR**

What is Endoscopy ? Describe methodology and usefulness of endoscopy.

54. Describe capsella type of embryo development with a diagram.

**OR**

Describe the types of regeneration.

55. Explain the professional Induced-lung diseases and protective measures against them.

**OR**

Draw the diagram showing blood circulation path in heart and describe blood circulation through heart.

56. Explain Anaerobic respiration in plant cell and animal cell.

57. Describe the process of decomposition.

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