2011

ಮುಖ್ಯವಿಷಯ

ಭಾಗ 2

[ವಿಷಯ : 3 ಗಂಟಿಗಳ]

[ವಿಷಯ : 300]

ಮಹತ್ವಪಡೆ

ಇನ್ನೂ ದೃಢತೆಯಿಟ್ಟು ಅಂಕುಗಳು ಕಾಣುವ ಶುಲ್ಕಗಳೊಂದಿಗೆ ಮೇಲೆದುಕಾಯಿದ್ದರೆ,

ವಸ್ತು ತೆರೆದ ಸಂಖ್ಯೆಯ ಸಮನಾಂಕನ ಮಾಡುವ ಪ್ರಾಥಮಿಕ ಅಂಕುಗಳಿಗೆ (ಅಂಕುಗಳು ಎರಡು
ಡನೇ) ನೀಡಲು ಪರೀಕ್ಷಕಾರು ಸದ್ಯವಾಗಿರುತ್ತಾರೆ; ಅಲ್ಲದೇ ದೃಢತೆಯಿಟ್ಟು
ಮೇಲೆದುಕಾಯಿದ್ದರೆ ಸಂಖ್ಯೆಯ ಮಾಡಬಹುದು ಅಂಕುಗಳಿಗೆ ಸೂವಿಗಳು
ಪ್ರಮಾಣಪಡಿಸಲೇ ಇರುತ್ತಾರೆ. ಸಂಖ್ಯೆ ರೂಪನಿಂದಿಂದ ವಿಷಯ ವಿಷಯವನ್ನು ಮೇಲೆದುಕಾಯಲು,
ಅಂಕುಗಳ ರೂಪನಿಂದಿಂದ ವಿಷಯವನ್ನು ಮೇಲೆದುಕಾಯಲು ಮತ್ತು

ಇಂದು ದೃಢತೆಯಿಟ್ಟು ಅಂಕಗಳಿಗೆ ಹಾಗೆ ಹಾಗೆ ಪ್ರತ್ಯೇಕಿಸಲಾಗಿದ್ದು,

A 20 ಎಕರೆ
B 100 ಎಕರೆ
C 90 ಎಕರೆ
D 90 ಎಕರೆ

ಈ ಅಂಕಗಳ ನಿರೂಪಣೆಯಿಂದಾಗಿ ವಿಷಯವನ್ನು ಮಾಡಲು ಮುಂದನೀಡಿದ ಸಮಸ್ಯೆಗಳಿಗೆ ಪ್ರತಿಕೂಲಾಗಿದ್ದರೆ,

ಎಂದರೆ A, B ಮತ್ತು C ಅಥವೆ ಅಥವಾ ಸಂಖ್ಯೆಯ ರೂಪದಲ್ಲಿ ಅಂಕವಾದರು.
ಎಂದರೆ D ಅಂಕವಾದರು ಪರೀಕ್ಷಕಾರರಿಗೆ ಅದರ ಅಂಕವಾದರು.

ಸಂಖ್ಯೆಗಳು ಕ್ರಮಕ್ರಮದಲ್ಲಿ ಎಂದೆಂದಿಗೂ.

Note: The English version of the instructions is printed on the front cover of this question paper.
PART D

Answer any three of the following questions, each in about 300 words. Each question carries 30 marks.

18. Explain the Genic balance theory of sex determination.

19. With the help of a neat labelled diagram, explain the structure of the eye and physiology of vision in man.

20. Trace the process of carbohydrate digestion, absorption and assimilation in man. Add a note on blood glucose balancing act.

21. What are egg membranes? Classify. Add a note on the importance of such membranes in cleidoic eggs.

22. Trace the major trends in the origin and evolution of Homo Sapiens from Pleistocene to Recent periods. Add a note on cultural evolution and its impact.
PART C

Answer each question in about 150 words. Each question carries 15 marks.

12. Explain Citric acid cycle.

13. Define regeneration. Explain the axial gradient experiments of C.M. child.

14. Compare the process of gastrulation between Amphioxus and Frog.

15. Two cocks A and B are bred to two hens C and D. All four birds are feathered legged and pea-combed. Cock A with both hens produces offspring that are all feathered and pea-combed. Cock B with hen C produces both feathered and clean but all pea-combed. With hen D he produces all feathered but both pea- and single-combed. Find out the genotypes of the parents and offsprings.

[Note: In poultry, feathered legs (F) is dominant over clean legs (f), Pea comb (P) is dominant over single comb (p)].

16. Define hormone. Explain the origin, function and regulation of steroidal hormones.

17. Give a comparison and comment on the significance between Mitosis and Meiosis.
PART B

Answer each question in about 100 words. Each question carries 10 marks.


3. Explain Chloride shift.

4. Give the reasons for considering Pineal gland as the master-switch of life.

5. What are fat soluble vitamins? Give the source and deficiency diseases caused by them.

6. Comment on the mechanism and control of osmoregulation in migratory fishes.

7. Describe the basic principle involved in the transfusion of blood.


9. Differentiate between the following:
   (a) Colourblindness and Nightblindness.
   (b) Sickle cell anaemia and Leukaemia.

10. Trace the fate of mesodermal germ layer and their derivatives in vertebrates.

11. What is Hardy-Weinberg law? Explain its significance.
PART A

Answer each question in about 50 words. Each question carries 5 marks.

1. (a) Explain transcription and translation.

(b) List out the functions of placenta in mammals.$\gamma$

(c) In a medico-legal case of disputed parenthood, mother belongs to blood group B, the child is group O. One possible father belongs to group A and the other to AB. Who could be the father of the child ?

(d) What are conjugated proteins? Classify with examples.
2011

ಅನುಮಾನ ಭಾಷೆ

ಅಗುಂಬೆ 1

ಮೊದಲೆ : 3 ಕಾಲೇಖ

[ಪ್ರತಿಯೊಂದು ಕಾಲೇಖ: 300]

ಮೊದಲೆಸಾಧನ

ಒಂದು ಅತ್ಯುತ್ತಮ ಅಭಿಮಾನ ಕಾರ್ಯ ರೂಪದೊಂದು ಮಹತ್ವದಲ್ಲಿದೆ.

ಭಾರತೀಯ ಪ್ರತಿಪಾದಿಸಿದ ಪ್ರಮುಖ ವಿಧೇಯ (ಅಧ್ಯಯನಗಳ ಅಧ್ಯಯನ) ರೀತಿಯೊಂದು ಮಾಧ್ಯಮವಾಗಿ, ಭಾರತೀಯ ಪ್ರತಿಪಾದಿಸಿದ ಪ್ರಮುಖ ವಿಧೇಯಗಳಲ್ಲಿ ಸೂಚಿಸಲಾಗುವ ಬಗ್ಗೆ ಮಾಧ್ಯಮಗಳು ಒಂದು ಸಮೀಕ್ಷಾ ಒಂದು ಸಮೀಕ್ಷಾ ಸಮಾನಂತರ ಸಮಾನಂತರ ನುಡಿಯಲ್ಲಿ ಪ್ರತಿದರ್ಶಿಸಲಾಗುತ್ತದೆ. ಭಾರತೀಯ ಪ್ರತಿಪಾದಿಸಿದ ಪ್ರಮುಖ ವಿಧೇಯ ಓಂದು ಸಮಾನಂತರ ನುಡಿಯಲ್ಲಿ ಅಭಿಮಾನ ಗರಿಯುತ್ತದೆ.

ಆ ಅಭಿಮಾನದಲ್ಲಿ ಲೇಖನ ಮೂಲಕ ನಮ್ಮಗೆ:

A 20 ಎಲ್ಲಾದ ರೇಖೆ
B 100 ಎಲ್ಲಾದ ರೇಖೆ
C 90 ಎಲ್ಲಾದ ರೇಖೆ
D 90 ಎಲ್ಲಾದ ರೇಖೆ

ಭಾರತೀಯ ಪ್ರತಿಪಾದಿಸಿದ ಪ್ರಮುಖ ವಿಧೇಯವು ನುಡಿಯಲ್ಲಿ ಮೂಲತಃ ಒಂದು ಸೂಚಿಸಿದ ಸಮಾನಂತರ ಸಮಾನಂತರ ಸಮಾನಂತರ ಸಮಗ್ರತ್ವದಲ್ಲಿ ಸಮಾನಂತರ ಸಮಗ್ರತ್ವದಲ್ಲಿ.

ನೆಲೆ A, B ಮತ್ತು C ಮೂಲತಃ ನುಡಿಯಲ್ಲಿ ಸೂಚಿಸಿದ ಸಮಾನಂತರ ಸಮಗ್ರತ್ವದಲ್ಲಿ.

ನೆಲೆ D ಮೂಲತಃ ಒಂದು ಸಮಗ್ರತ್ವದಲ್ಲಿ ಸೂಚಿಸಿದ ಸಮಗ್ರತ್ವದಲ್ಲಿ.

ಮೂಲತಃ ಬೆಳೆಯುವುದು ಸೂಚಿಸಿದಂತೆ ಯೋಗ್ಯ.

Note: The English version of the instructions is printed on the front cover of this question paper.
PART D

Answer any three of the following questions, each in about 300 words. Each question carries 30 marks.

18. Classify Animalia on the basis of symmetry and coelomic cavity up to Phyla, with examples. Define the terms Symmetry and Body cavities.

19. Define adaptive radiation. Describe the convergent adaption of vertebrates to aquatic life.

20. Discuss the reasons for Arthropods being the most successful group of animals in the Animal kingdom.

21. Discuss the consequences of constructing a road, a dam or an atomic energy plant in National parks or Wildlife sanctuaries.

22. Explain the positive and negative interspecific relationships with one example for each.
PART C

Answer each question in about 150 words. Each question carries 15 marks.

12. Describe the different types of fission in Protozoa with examples.

13. Describe the mechanism of respiration in fresh water mussel.

14. Discuss the effect of light on the living systems and its role in biosphere.

15. In a monohybrid cross yellow colour (Y) is dominant over green (y). When a breeder crossed green coloured seed producing plants with yellow, he obtained 790 yellow and 225 green plants of the total 1015. The Mendelian monohybrid ratio is 3 : 1. Using the standard error method, show whether it is within the purview of the statistical significance. Suppose you have to apply Chi-square method, what is the formula applied?

16. With a neat, labelled diagram, describe the structure and function of water vascular system in starfish.

17. Trace the major evolutionary trends in the development of heart in vertebrates.
PART B

Answer each question in about 100 words. Each question carries 10 marks.

2. Describe the formation and structure of a corallite. Classify the types of coral and mention the primary types of coral reefs.

3. Explain the role of Limnaea in the life cycle of *Fasciola hepatica*.

4. Describe the structure and function of air bladder in teleosts.

5. Illustrate the typical thermal stratification in lakes during different seasons. Mention the reason for survival of aquatic animals at the bottom even when it is frozen on the surface.

6. What are mean, mode and median? Find out the median of the following experimental data collected by a researcher on the effect of special diet on the weight of fishes in grams:

   14, 17, 15, 16, 15, 20, 18, 18, 17, 15, 16, 20, 18, 13, 13

7. Describe the social life of honey bees.

8. Explain hydrological cycle. Comment on its significance.

9. Give the zoogeographical distribution of Ratitae. List out the salient features of this group.

10. Explain the morphological and functional differentiation of dentition in mammals.

11. Define tropism and taxis. Explain the different kinds with examples.
PART A

Answer each question in about 50 words. Each question carries 5 marks.

1. (a) Differentiate between egestion and excretion. Explain the two processes with reference to amoeba.

(b) Differentiate between syndactyly and zygodactyly. Give one example for each.

(c) Explain the concept of sign stimulus in stickleback.

(d) List out any five important economic values of fishes.