1B0520K23 (DAY-1, FIRST SESSION)

ವಿಷಯ ಸಂಕೇತ	ಸಮಯ	ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯ	
		ವರ್ಷನ್ ಕೋಡ್	ಕ್ರಮ ಸಂಖ್ಯೆ
B	ಬೆ. 10.30 ರಿಂದ 11.50 ರ ವರೆಗೆ	B-4	0133534

ಒಟ್ಟು ಅವಧಿ	ಉತ್ತರಿಸಲು ಇರುವ ಗರಿಷ್ಠ ಅವಧಿ	ಗರಿಷ್ಠ ಅಂಕಗಳು	ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳು	ನಿಮ್ಮ ಸೀಟಿನ ಸಂಖ್ಯೆಯನ್ನು ಬರೆಯಿರಿ					
80 ನಿಮಿಷಗಳು	70 ನಿಮಿಷಗಳು	60	60	23UGE					

ಮಾಡಿ

1. ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರಿಂದ ಈ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ನಿಮಗೆ ಬೆ. 10.30 ಆದ ನಂತರ ಕೊಡಲಾಗಿರುತ್ತದೆ.
2. ಅಭ್ಯರ್ಥಿಗಳು ಸೀಟಿನ ಸಂಖ್ಯೆಯನ್ನು ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಬರೆದು ಅದಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವೃತ್ತಗಳನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬಿದ್ದೀರೆಂದು ಖಾತ್ರಿಪಡಿಸಿಕೊಳ್ಳಿ.
3. ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯ ವರ್ಷನ್ ಕೋಡ್ ಅನ್ನು ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಬರೆದು ಅದಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವೃತ್ತಗಳನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ತುಂಬಿರಿ.
4. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ವರ್ಷನ್ ಕೋಡ್ ಮತ್ತು ಕ್ರಮ ಸಂಖ್ಯೆಯನ್ನು ನಾಮಿನಲ್ ರೋಲ್‌ನಲ್ಲಿ ತಪ್ಪಿಲ್ಲದೆ ಬರೆಯಬೇಕು.
5. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯ ಕೆಳಭಾಗದ ನಿಗದಿತ ಜಾಗದಲ್ಲಿ ಪೂರ್ಣ ಸಹಿ ಮಾಡಬೇಕು.

ಮಾಡಬೇಡಿ

1. **ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಮುದ್ರಿತವಾಗಿರುವ ಟೈಮಿಂಗ್ ಮಾರ್ಕ್‌ನ್ನು ಹಿದ್ದಾರದು / ಹಾಳುಮಾಡದಾರದು / ಅಳಿಸದಾರದು.**
2. **ಮೂರನೇ ಬೆಲ್ ಬೆ. 10.40 ಕ್ಕೆ ಆಗುತ್ತದೆ. ಅಲ್ಲಿಯವರೆಗೂ,**
   - ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಬಲಭಾಗದಲ್ಲಿರುವ ಸೀಲ್ ಅನ್ನು ತೆಗೆಯಬಾರದು.
   - ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಒಳಗಡೆ ಇರುವ ಪ್ರಶ್ನೆಗಳನ್ನು ನೋಡಲು ಪ್ರಯತ್ನಿಸಬಾರದು ಅಥವಾ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಉತ್ತರಿಸಲು ಪ್ರಾರಂಭಿಸಬಾರದು.

ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಮುಖ್ಯ ಸೂಚನೆಗಳು

1. ಪ್ರಶ್ನೆಗಳಲ್ಲಿ ಬಳಸಿರುವ SIGNS AND SYMBOLS ಗಳನ್ನು, ಬೇರೆ ರೀತಿಯಲ್ಲಿ ಹೇಳದ ಹೊರತು, ನಿಗದಿತ ಪಠ್ಯಪುಸ್ತಕದಲ್ಲಿನ ಅರ್ಥವನ್ನು ಪರಿಗಣಿಸಬೇಕು.
2. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಒಟ್ಟು 60 ಪ್ರಶ್ನೆಗಳಿದ್ದು, ಪ್ರತಿ ಪ್ರಶ್ನೆಗೂ 4 ಬಹು ಆಯ್ಕೆ ಉತ್ತರಗಳು ಇರುತ್ತವೆ. ಪ್ರತಿ ಪ್ರಶ್ನೆಯ ಕೆಳಗೆ ಕೊಟ್ಟಿರುವ ನಾಲ್ಕು ಬಹು ಆಯ್ಕೆಯ ಉತ್ತರಗಳಲ್ಲಿ ಸರಿಯಾದ ಒಂದು ಉತ್ತರವನ್ನು ಆಯ್ಕೆ ಮಾಡಿ.
3. ಮೂರನೇ ಬೆಲ್ ಅಂದರೆ ಬೆ. 10.40ರ ನಂತರ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಬಲಭಾಗದಲ್ಲಿರುವ ಸೀಲ್ ತೆಗೆದು ಈ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಯಾವುದೇ ಪುಟಗಳು ಮುದ್ರಿತವಾಗಿಲ್ಲದೇ ಇರುವುದು ಕಂಡು ಬಂದಲ್ಲಿ ಅಥವಾ ಹರಿದು ಹೋಗಿದ್ದಲ್ಲಿ ಅಥವಾ ಯಾವುದೇ ಐಟಂಗಳು ಬಿಟ್ಟುಹೋಗಿದೆಯೇ ಎಂಬುದನ್ನು ಖಚಿತಪಡಿಸಿಕೊಂಡು, ಈ ರೀತಿ ಆಗಿದ್ದರೆ ಕೂಡಲೇ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ಬದಲಾಯಿಸಿಕೊಳ್ಳುವುದು ನಂತರ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಉತ್ತರಿಸಲು ಪ್ರಾರಂಭಿಸುವುದು.
4. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿನ ಪ್ರಶ್ನೆಗೆ ಅನುಗುಣವಾಗಿರುವ ಸರಿ ಉತ್ತರವನ್ನು ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಅದೇ ಕ್ರಮ ಸಂಖ್ಯೆಯ ಮುಂದೆ ನೀಡಿರುವ ಸಂಬಂಧಿಸಿದ ವೃತ್ತವನ್ನು **ನೀಲಿ ಅಥವಾ ಕಪ್ಪು** ಶಾಯಿಯ ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್‌ನಿಂದ ಸಂಪೂರ್ಣ ತುಂಬುವುದು.

ಸರಿಯಾದ ಕ್ರಮ CORRECT METHOD	ತಪ್ಪು ಕ್ರಮಗಳು WRONG METHODS
(A) ● (C) (D)	✱ (B) (C) (D) (A) (B) (C) ✓ (A) ● ● (D)
	● (B) (C) (D) (A) ● (C) (D)

5. ಈ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯನ್ನು ಸ್ಕ್ಯಾನ್ ಮಾಡುವ ಸ್ಕ್ಯಾನರ್ ಬಹಳ ಸೂಕ್ಷ್ಮವಾಗಿದ್ದು ಸಣ್ಣ ಗುರುತನ್ನು ಸಹ ದಾಖಲಿಸುತ್ತದೆ. ಆದ್ದರಿಂದ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಉತ್ತರಿಸುವಾಗ ಎಚ್ಚರಿಕೆ ವಹಿಸಿ.
6. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ಕೊಟ್ಟಿರುವ ಖಾಲಿ ಜಾಗವನ್ನು ರಫ್ ಕೆಲಸಕ್ಕೆ ಉಪಯೋಗಿಸಿ. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯನ್ನು ಇದಕ್ಕೆ ಉಪಯೋಗಿಸಬೇಡಿ.
7. ಕೊನೆಯ ಬೆಲ್ ಅಂದರೆ ಬೆ. 11.50 ಆದ ನಂತರ ಉತ್ತರಿಸುವುದನ್ನು ನಿಲ್ಲಿಸಿ.
8. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಪತ್ರಿಕೆಯನ್ನು ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರಿಗೆ ಯಥಾಸ್ಥಿತಿಯಲ್ಲಿ ನೀಡಿರಿ.
9. ಕೊಠಡಿ ಮೇಲ್ವಿಚಾರಕರು ಮೇಲ್ಭಾಗದ ಹಾಳೆಯನ್ನು ಪ್ರತ್ಯೇಕಿಸಿ (ಕಚೇರಿ ಪ್ರತಿ) ತನ್ನ ವಶದಲ್ಲಿ ಇಟ್ಟುಕೊಂಡು ತಳಬದಿಯ ಯಥಾಪ್ರತಿಯನ್ನು (Candidate's Copy) ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಕೊಡುತ್ತಾರೆ.

ಸೂಚನೆ: ಕನ್ನಡ ಆವೃತ್ತಿಯ ಪ್ರಶ್ನೆಗಳಲ್ಲಿ ಉತ್ತರಿಸುವ ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಕನ್ನಡದಲ್ಲಿ ಮುದ್ರಿತವಾಗಿರುವ ಪ್ರಶ್ನೆಗಳ ಬಗ್ಗೆ ಏನಾದರೂ ಸಂದೇಹವಿದ್ದಲ್ಲಿ ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಯ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ನೋಡಬಹುದು. ಏನಾದರೂ ವ್ಯತ್ಯಾಸ ಕಂಡುಬಂದಲ್ಲಿ ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಯನ್ನು ಅಂತಿಮ ಎಂದು ಪರಿಗಣಿಸಲಾಗುವುದು.

BIOLOGY

1. The Lac-Operon model was elucidated by
   (A) Jacob and Crick
   (B) Watson and Crick
   (C) Francois Jacob and Jaques Monad
   (D) Hershey and Chase

2. Which of these is NOT an example for Adaptive radiation ?
   (A) Long-necked Giraffe
   (B) Darwin's finches
   (C) Australian marsupials
   (D) Placental mammals

3. In a population of 800 rabbits showing Hardy-Weinberg equilibrium, the frequency of recessive individuals was 0.16. What is the frequency of heterozygous individuals ?
   (A) 0.36
   (B) 0.4
   (C) 0.48
   (D) 0.84

4. In male heterogametic type of sex determination
   (A) Males do not produce gametes.
   (B) Male parent produces similar gametes.
   (C) Female parent produces dissimilar gametes.
   (D) Male parent produces dissimilar gametes.

5. In one of the hybridisation experiments, a homozygous dominant parent and a homozygous recessive parent are crossed for a trait. (Plant shows Mendelian inheritance pattern)
   (A) Dominant parent trait appears in F_2 generation and recessive parent trait appears only in F_1 generation.
   (B) Dominant parent trait appears in F_1 generation and recessive parent trait appears in F_2 generation.
   (C) Dominant parent trait appears in both F_1 & F_2 generations, recessive parent trait appears in only F_2 generation.
   (D) Dominant parent trait appears in F_1 generation and recessive parent trait appears in F_1 and F_2 generations.

6. Histone proteins are positively charged because they are rich in basic amino acid residues
   (A) Arginine and Proline
   (B) Arginine and Alanine
   (C) Arginine and Lysine
   (D) Arginine and Phenylalanine

7. Eukaryotic genes are monocistronic but they are split genes because
   (A) Introns are interrupted with Mutons.
   (B) they contain Exons only.
   (C) they contain Introns only.
   (D) Exons are interrupted by Introns.

Space For Rough Work

8. Identify from the following a pair of better yielding semi dwarf varieties of rice developed in India.

(A) Kalyan Sona and Sonalika
(B) Jaya and Ratna
(C) Sonalika and Ratna
(D) Jaya and Kalyan Sona

9. In MoET technique fertilized eggs are transferred into surrogate mother in which of the following stage ?

(A) 16-32 celled stage (B) 2-4 celled stage (C) 8-16 celled stage (D) 8-32 celled stage

10. Roquefort cheese is ripened by

(A) Yeast (B) Bacterium (C) Fungi (D) Virus

11. Four students were assigned a science project to find out the pollution levels of lakes in their surrounding. After analysing the quality of water samples, the BOD values were found as follows :

Which among the following water samples is highly polluted ?

(A) 0.16 mg/L (B) 0.6 mg/L (C) 0.06 mg/L (D) 6 mg/L

12. The toxic substance 'haemozoin' responsible for high fever and chill, is released in which of the following diseases ?

(A) Typhoid (B) Dengue (C) Pneumonia (D) Malaria

13. Identify the symptoms of pneumonia.

(A) High fever, weakness, stomach pain, loss of appetite
(B) Difficulty in breathing, fever, chills, cough, headache
(C) Nasal congestion and discharge, cough, sore throat, headache
(D) Constipation, Abdominal pain, cramps, blood clots

14. The variety of Okra, *Pusa Sawani* is resistant to which of the following insect pests ?

(A) Cereal leaf beetle
(B) Aphids
(C) Jassids
(D) Shoot & Fruit borer

15. With respect to Inbreeding, which among the following is not true ?

(A) It helps to evolve a pure line in an animal.
(B) Inbreeding decreases homozygosity.
(C) It helps in accumulation of superior genes.
(D) It helps in elimination of less desirable genes.

Space For Rough Work

16. Generally, bears avoid winter by undergoing
(A) Migration (B) Diapause (C) Hibernation (D) Aestivation

17. Match Column-I with Column-II. Select the option with correct combination.

Column-I		Column-II
1. Standing state	p.	Mass of living material at a given time.
2. Pioneer species	q.	Amount of nutrients in the soil at a given time.
3. Detritivores	r.	Species that invade a bare area.
4. Standing crop	s.	Breakdown detritus into smaller particles.

(A) 1-p, 2-s, 3-r, 4-q
(B) 1-q, 2-r, 3-p, 4-s
(C) 1-p, 2-r, 3-s, 4-q
(D) 1-q, 2-r, 3-s, 4-p

18. PCR is used for
(A) DNA amplification (B) DNA isolation
(C) DNA ligation (D) DNA digestion

19. Which of these is NOT a method to make host cells 'competent' to take up DNA ?
(A) Use of disarmed pathogen vectors (B) Micro-injection
(C) Elution (D) Biolistics

20. Select the correct statement from the following :
(A) DNA from one organism will not band to DNA from other organism.
(B) Genetic engineering works only on animals and not yet successfully used on plants.
(C) There are no risk factors associated with r-DNA technology.
(D) The first step in PCR is heating which is used to separate both the strands of gene of interest.

21. Choose the incorrect statement with reference to Kangaroo rat.
(A) eliminates dilute urine.
(B) found in North American desert.
(C) meets its water requirements through internal fat oxidation.
(D) uses minimal water to remove excretory products.

Space For Rough Work

22. During transcription the DNA strand with 3' → 5' polarity of the structural gene always acts as a template because

(A) Nucleotides of DNA strand with 5' → 3' are transferred to mRNA.

(B) Enzyme DNA dependent RNA polymerase always catalyse the polymerisation in 5' → 3' direction.

(C) Enzyme DNA dependent RNA polymerase always catalyse the polymerisation in 3' → 5' direction.

(D) Enzyme DNA dependent RNA polymerase always catalyse polymerisation in both the directions.

23. According to David Tilman's long term ecosystem experiments, the total biomass in plots with more species shows,

(A) No variation from year-to-year.

(B) Less variation from year-to-year.

(C) High variation from year-to-year.

(D) Average variation from year-to-year.

24. The toxic heavy metals from various industries which cause water pollution, normally have a density

(A) more than 12.5 g/cm^3

(B) more than 5 g/cm^3

(C) more than 15 g/cm^3

(D) more than 7.5 g/cm^3

25. Identify the correct option showing the relative contribution of different green house gases to the total global warming.

(A) CFC-14%, CO_2-60%, Methane-6%, N_2O-20%.

(B) CFC-14%, CO_2-60%, Methane-20%, N_2O-6%.

(C) CFC-20%, CO_2-60%, Methane-14%, N_2O-6%.

(D) CFC-6%, CO_2-60%, Methane-20%, N_2O-14%.

26. A flower has 10 stamens each having bilobed dithecous anther. If each microsporangium has 5 pollen mother cells, how many pollen grains would be produced by the flower ?

(A) 1600 (B) 200 (C) 400 (D) 800

Space For Rough Work

27. From the following tools / techniques of genetic engineering, identify those which are required for cloning a bacterial gene in animal cells and choose the correct option :

I. Endonuclease
II. Ligase
III. A. tumefaciens
IV. Microinjection
V. Gene gun
VI. Lysozyme
VII. Cellulase
VIII. Electrophoresis

(A) II, III, IV, VI, VII, VIII
(B) II, III, V, VII, VIII
(C) I, II, IV, VI, VIII
(D) I, III, IV, V, VII

28. Identify the incorrect statement regarding the flow of energy between various components of the food chain.

(A) Each trophic level loses some energy as heat to the environment.
(B) The amount of energy available at each trophic level is 10% of previous trophic level.
(C) Energy flow is unidirectional.
(D) Green plants capture about 10% of the solar energy that falls on leaves.

29. Find out the correct match.

	Disease	Pathogen	Main organ affected
(A)	Dysentery	Protozoa	Liver
(B)	Ringworm	Fungus	Skin
(C)	Typhoid	Bacteria	Lungs
(D)	Filariasis	Common round worm	Small intestine

30. Match the following columns and choose the correct option :

	Column-I		Column-II
1.	Haemophilus influenzae	p.	Malignant malaria
2.	Entamoeba histolytica	q.	Elephantiasis
3.	Plasmodium falciparum	r.	Pneumonia
4.	Wuchereria bancrofti	s.	Amoebiasis

	1	2	3	4
(A)	r	p	q	s
(B)	q	r	s	p
(C)	r	s	p	q
(D)	s	p	q	r

Space For Rough Work

31. When the vascular cambium is present between the xylem and phloem, then the vascular bundle is called,
(A) Closed (B) Exarch (C) Open (D) Endarch

32. The function of Typhlosole in earthworm is
(A) Increasing the effective area of absorption in the intestine
(B) Grinding of soil particles
(C) Grinding of decaying leaves
(D) Transportation

33. Select the correctly matched pair of organisms with their order.
(A) Mangifera, indica : Primata
(B) Triticum, aestivum : Sapindales
(C) Musa, domestica : Diptera
(D) Homo, sapiens : Poales

34. Match the column-I with column-II and choose the correct option from the following :

	Column-I (Plant groups)		Column-II (Examples)
1.	Bryophyta	p.	Pinus
2.	Gymnosperm	q.	Adiantum
3.	Algae	r.	Sphagnum
4.	Pteridophyta	s.	Ectocarpus

	1	2	3	4
(A)	q	s	p	r
(B)	s	r	q	p
(C)	r	p	s	q
(D)	q	p	s	r

35. Flame cells present in the members of platyhelminthes are specialized to perform,
(A) Respiration and Osmoregulation
(B) Osmoregulation and Circulation
(C) Osmoregulation and Excretion
(D) Respiration and Excretion

36. Identify the floral formula of plant belonging to potato family.
(A) ♀, $K_{(5)}$, C_5, $A_{(9)+1}$, G_1
(B) ♀, $K_{(5)}$, $\overset{\frown}{C_{(5)}\,A_5}$, $\underline{G}_{(2)}$
(C) ♀, K_{10}, C_{10}, A_{10}, $\bar{G}_2$
(D) ♀, P_{3+3}, A_{3+3}, $G_{(3)}$

Space For Rough Work

37. Toxicity of which micronutrient induces deficiency of iron, magnesium and calcium ?
(A) Boron (B) Zinc (C) Molybdenum (D) Manganese

38. Considering the stroke volume of an adult healthy human being is 70 mL, identify the cardiac output in one hour from the following :
(A) 50.40 Lit/hour (B) 504.0 Lit/hour (C) 30.24 Lit/hour (D) 302.4 Lit/hour

39. Function of contractile vacuole in Amoeba is
(A) Digestion and excretion
(B) Excretion and osmoregulation
(C) Digestion and respiration
(D) Osmoregulation and movements

40. Match List-I and List-II with respect to proteins and their functions and select the correct option.

	List-I		List-II
1.	Collagen	p.	Fights infectious agents
2.	Trypsin	q.	Hormone
3.	Insulin	r.	Enzyme
4.	Antibody	s.	Intercellular ground substance

(A) 1-s, 2-p, 3-r, 4-p
(B) 1-q, 2-r, 3-q, 4-s
(C) 1-s, 2-q, 3-r, 4-p
(D) 1-s, 2-r, 3-q, 4-p

41. The complex formed by a pair of synapsed homologous chromosomes is called,
(A) Univalent (B) Pentavalent (C) Triad (D) Bivalent

42. Match column-I with column-II. Select the option with correct combination.

	Column-I		Column-II
1.	Hypertonic	p.	Two molecules move in the same direction across the membrane.
2.	Capillarity	q.	External solution is more concentrated than cell sap.
3.	Symport	r.	Water loss in the form of droplets.
4.	Guttation	s.	Ability of water to rise in thin tubes.

(A) 1-q, 2-s, 3-p, 4-r
(B) 1-q, 2-s, 3-r, 4-p
(C) 1-q, 2-r, 3-p, 4-s
(D) 1-q, 2-p, 3-s, 4-r

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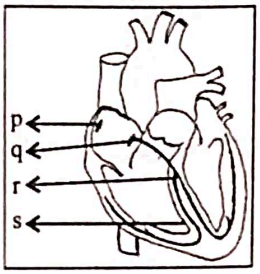
43. In Bryophyllum, the adventitious buds arise from

(A) Leaf base
(B) Leaf axil
(C) Notches in the leaf margin
(D) Shoot apex

44. Primary endosperm nucleus is formed by fusion of

(A) Two polar nuclei and two male gametes
(B) Two polar nuclei and one male gamete
(C) Ovum and male gamete
(D) One polar nucleus and male gamete

45. Identify the option showing the correct labelling for p, q, r and s with reference to the conducting system of the human heart.



(A) p- Interventricular septum, q-AVN, r-Bundle of His, s-SAN
(B) p-SAN, q-AVN, r-Bundle of His, s-Interventricular septum
(C) p-AVN, q-SAN, r-Interventricular septum, s-Bundle of His
(D) p-Bundle of His, q-SAN, r-Interventricular septum, s-AVN

46. Atrial Natriuretic Factor (ANF) acts as a

(A) Hypertension inducer
(B) Check on Renin-Angiotensin mechanism
(C) Promoter on Renin-Angiotensin mechanism
(D) Vasoconstricter

47. The vibrations from the ear drum are transmitted through ear ossicles to

(A) Auditory nerves
(B) Cochlea
(C) Oval window
(D) Tectorial membrane

48. Bamboo species flowers

(A) Twice in 50-100 years
(B) Every year
(C) Once in 12 years
(D) Once in lifetime

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49. With reference to human sperm, match the List-I with List-II.

	List-I		List-II
1.	Head	p.	Filled with enzyme
2.	Acrosome	q.	Contains mitochondria
3.	Middle piece	r.	Sperm motility
4.	Tail	s.	Contains haploid nucleus

Choose the correct option from the following :

(A) 1-r, 2-q, 3-s, 4-p

(B) 1-s, 2-p, 3-q, 4-r

(C) 1-s, 2-r, 3-p, 4-q

(D) 1-q, 2-s, 3-r, 4-p

50. Which pair of the following cells in the embryo sac are destined to change their ploidy after fertilization ?

(A) Egg cell and central cell

(B) Antipodals and synergids

(C) Synergids and egg cell

(D) Central cell and antipodals

51. In the female reproductive system, a tiny finger like structure which lies at the upper junction of the two labia minora above the urethral opening is called

(A) Vagina (B) Hymen (C) Mons pubis (D) Clitoris

52. Consider the following statements with reference to female reproduction system :

Statement 1. The presence or absence of hymen is not a reliable indicator of virginity or sexual experience.

Statement 2. The sex of the foetus is determined by the father and not by the mother.

Choose the correct option from the following :

(A) Both the Statement 1 and Statement 2 are wrong.

(B) Statement 1 is correct and Statement 2 is wrong.

(C) Both the Statement 1 and Statement 2 are correct.

(D) Statement 1 is wrong and Statement 2 is correct.

53. The male sex accessory ducts include,

(A) Rete testis, vasa efferentia, epididymis and vas deferens

(B) Rete testis, vasa efferentia, epididymis and seminal vesicle

(C) Rete testis, urethra, epididymis and vas deferens

(D) Rete testis, vasa efferentia, seminal vesicle and vas deferens

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54. Which of the following statements is correct ?
(A) Female carrier for haemophilia may transmit the disease to sons.
(B) Thalassemia is a qualitative problem.
(C) Change in whole set of chromosomes is called aneuploidy.
(D) Sickle cell anaemia is a quantitative problem.

55. 'Gene-mapping' technology was developed by
(A) Mendel (B) Tschermak (C) Correns (D) Sturtvent

56. Find the correct statement.
(1) Generally a gene regulates a trait, but sometimes one gene has effect on multiple traits.
(2) The trait AB-blood group of man is regulated by one dominant allele and another recessive allele. Hence it is co-dominant.
(A) Both the Statements are wrong.
(B) Statement (1) is correct.
(C) Statement (2) is correct.
(D) Both Statements (1) and (2) are correct.

57. From the following table, select the option that correctly characterizes various phases of menstrual cycle :

	Menstruation phase	Follicular phase	Luteal phase
(A)	Regeneration of endometrium	High level of progesterone	Developing corpus luteum
(B)	Matured follicle	Regression of corpus luteum	Ovulation
(C)	Menses	Developing corpus luteum	Follicle maturation
(D)	Menses	L.H. Surge	Regeneration of endometrium

58. Which of the following is abbreviated as ZIFT ?
(A) Zygote Inter Fallopian Tube
(B) Zygote Intra Fallopian Transfer
(C) Zygote Inter Fallopian Transfer
(D) Zygote Intra Fallopian Tube

59. An example for hormone releasing IUD is
(A) Implant (B) LNG – 20 (C) Multiload 375 (D) Lippes loop

60. MTPs are considered relatively safe during
(A) First trimester
(B) Second trimester
(C) 24 weeks of pregnancy
(D) 180 days of pregnancy

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