

Paper-109-

Answer Q.1 and Q.2 is compulsory
Whereas Answer any three, not more two from
Gr B & Gr-C.

Q1. Choose the correct Answer out of the following - 1x10 = 10

(a) Due to less amount of iodine in water
metamorphosis of frog's tadpole is

- (i) Stopped (ii) delayed
(iii) accelerated (iv) Not affected

(b) Mitochondrial DNA is present in

- (i) Prokaryotic cell
(ii) Eukaryotic cell
(iii) Both (a) & (b)
(iv) None

(c) In which of the following is a DNA repair
mechanism

- (i) Base excision repair (BER)
(ii) Nucleotide excision repair (NER)
(iii) Mismatch repair (MMR) (iv) All of these

(d) Who found the phenomenon of linkage first -

- (i) T.H Morgan (ii) Gregor Mendel (iii) Tschermak
(iv) Louis Pasteur

(e) The stem cells have already been applied

Successfully for -

- (i) Acute and Chronic Leukemia
(ii) Sickle Cell Anaemia
(iii) SCID
(iv) All of the above

(f) How many kinds of mutation are found in
DNA which includes mutation of only one base

- (i) 1 (ii) 2 (iii) 3 (iv) 4

- (g) Grey crescent in the precursor of
 (i) Ectoderm (ii) Mesoderm (iii) Endoderm
 (iv) All of the above.
- (h) Cleavage is an unique form of mitotic division in which
 (i) The nucleus does not participate
 (ii) There is no growth in the cells
 (iii) No spindle apparatus to guide the chromosome
 (iv) Plasma membrane of the daughter cells don't separate
- (i) Fertilizin is released by
 (i) Tip of Acrosome (ii) Middle of Sperm
 (iii) Mature egg (iv) Polar bodies
- (j) Meroblastic cleavage is
 (i) Total
 (ii) Spiral
 (iii) partial/Incomplete
 (iv) horizontal

Q2. Write short notes on any three of the following - $15 \times 3 = 15$

- (a) Bouce effect.
 (b) Multiple allelism.
 (c) DNA-repair.
 (d) Complete Linkage.
 (e) Gastrulation
 (f) IVF
 (g) Hormonal effect on the metamorphosis of Amphibian Limb.
 (h)

- Q3. What do you mean by Oestrous cycle or uterine cycle? Describe the Oestrous cycle and its hormonal application. (15)
- Q4. What is Regeneration? Describe the types (15) or forms of regeneration. Describe the process of regeneration of Amphibian Limb.
- Q5. What is Gastrulation. Describe the (15) process of gastrulation in detail.
- Q6. Explain how sterility arises due to (15) hormonal defects either in Male or female.

Gr-C.

- Q7. Describe the Mendelism with the help of (15) Monohybrid and Dihybrid cross.
- Q8. What is induced mutation? Describe the (15) methods for detection of induced mutation. How it differs from Gene-mutation.
- Q9. What do you understand by Linkage? Explain (15) Linkage with the help of Complete & incomplete test cross. (Complete & incomplete Linkage)

Ans.
 (a) - (i)
 (b) - (ii)
 (c) - (iv)
 (d) - (i)
 (e) - (iv)
 (f) - (ii)

Answers of Multiple Choice
Answer
 (g) (i)
 (h) (i)
 (i) (i)
 (j) (iii)

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