

**CORE PRACTICAL – I : BASED ON C1, C2 AND C3**

1. **Demonstration of dissections of any one species (Cockroach/fish) by a faculty member is allowed. (Dissection by the student is not allowed but flag labeling of the parts by the students is allowed)**
2. **Virtual dissections using computer aided programme may be followed.**

**Objective** : To understand the organization of any species.

**1 a) Dissection** : Cockroach : Digestive System, Nervous system reproductive system.

**Mounting** : Cockroach : Mouth Parts

(OR)

**1 b) Dissections** : Fish : Digestive System, Male and female urinogential system.

**Mounting** : Scales

**Spotters :**

1. Classify giving reasons : Paramecium, any coral, obelia Leech, Ascaris chiton, sea cucumber, Balanoglossus Teleost fish, Non-Poisonous snake / Poisonous snake, king fisher, bat.
2. Draw labeled sketches : T.S.of Ascaris, T.S.of Nereis T.S.of Planaria, T.S Thro Pharynx of amphioxus, skull of frog.
3. Biological significance : Gemmules in sponges, Physalia, Limulus, Hippo campus, chamelleon, axolotyl larva, Nautilus.
4. Relate structure and function : Spicules of sponges, scolex of tapeworm, Nereis parapodium, carapace and plastron, placoid scales, quill feather, Electric organ – Narcine.
5. Write descriptive notes of any specimen.

**FIELD TRIP :**

Field trip should be under taken for the students and report should be submitted along with the record.

**QUESTION PAPER PATTERN :**

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|--|-------------------|
| 1. Flag labeling of dissected specimens and draw neat labeled sketch | : 20 marks        |
| 2. Spotters : 5 X 4  | : 20 marks        |
| 3. Record  | : 10 marks        |
| 4. Report of the Field Trip  | : 10 marks        |
| <b>Total</b>   | <b>: 60 marks</b> |

**CORE PRACTICAL III**  
**BASED ON CORE PAPERS V, VI, AND VII**

- 1) Blood grouping in man.
- 2) Squash preparations of onion root tip – to observe the stages of mitosis.
- 3) Drosophila male and female.- Genetic importance
- 4) Homologous and analogous organs – Fore limbs and Hind limbs.
- 5) Qualitative estimation of carbohydrates, Protein and Lipids.
- 6) Detection of urine sugar.
- 7) Compound microscope.
- 8) pH meter.
- 9) Centrifuge.
- 10) Colorimeter/ Spectrophotometer.
- 11) Plasmid (Any two)
- 12) Cosmid
- 13) Phagomid.

**CORE PRACTICAL IV**  
**(BASED ON CORE PAPERS VIII AND IX)**

**Physiology**

1. RBC and WBC count.
2. Qualitative detection of human salivary amylase
3. Study of opercular movement of a fish (Q 10)
4. Oxygen consumption of Fresh water Fish.
5. Analysis of Excretory products – Ammonia, Urea and uric acid.
6. Haemin crystals.
7. Estimation of Hemoglobin.

**Spotters**

1. Kymograph.
2. T.S of Pituitary, Thyroid, Adrenal, Ovary and Testis.
3. Blood of Frog.
4. Haemoglobinometer.
5. RBC & WBC pipette.

**Biotech**

1. Isolation of DNA (Demonstration only)
2. Gram Staining

**Spotters**

1. Spirulina
2. Yeast
3. Penicillin
4. Autoclave
5. Pressure cooker
6. Electrophoresis unit
7. Culture media
8. Stains
9. Azolla
10. WIDAL Kit
11. VDRL Kit
12. Mushroom seeds.