11th standard Bio-Zoology Practical notes

Name:_____
Reg.No:_____
Subject:_____
Class:_____Section_____
Date:_____Batch_____
Session:_____Time_____

Identification

Q.No.	Topic
	I. A. Specimens
I. A	
	II. B. Slides
II. B	
	III.C. Model / Pictures
III. C	
	IV.D. Pictures
IV. D	
	V.E. Test for Samples
V. E	
	V.F. Experiments
V. F	
	VI.G. Economic Importance
VI. G	

Content

Bio-Zoology Practical Question Paper

Time: 75 Min **Marks: 10**

I. Identify the given animal 'A' (picture/specimen) draw and write any two diagnostic features.
(Identification and Diagram-½, Any two diagnostic features-½) 1mark

II. Identify the given animal tissue 'B' (slide/photograph/picture) and write any two comments.
(Identification-½, Any two comments-½) 1mark

III. Identify and comment on the given bone/joint 'C'
(Identification-½, Any two comments-½) 1mark

IV. Identify the deficiency disease/disorder in the given picture/photograph 'D'. Write any two symptoms.
(Identification-½, Any two symptoms-½) 1mark

V. 1. Identify the given sample solution 'E' for the presence of Ammonia (or) Urea (or) salivary amylase
(Procedure-½, Experiment-½, Result-½) 1½ mark

2. Observe and write about the given experiment/specimen/picture 'F'.
(Identification-½, Result or Reason-½) 1mark

VI. Identify the photograph/picture and write its economic importance 'G'.
(Identification-½, Economic importance-½) 1mark

Total: 7½ mark
Record: 1½ mark
Skil: 1 mark
Maximum marks: 10

I.A – Specimens

A1. Spongilla

Identification: The given slide is identified as Spongilla.

Diagnostic Features:

1. It is a pore bearing animal.
2. It is an aquatic and multicellular animal.
3. The special flagellated cells are called choanocytes.

A2. Sea Anemone

Identification: The given slide is identified as Sea Anemone.

Diagnostic Features:

1. It is a diploblastic animal.
2. The central vascular cavity is called coelenteron.
3. Nervous system is formed by diffused nerve net.

A3. Pleurobrachia

Identification: The given slide is identified as Pleurobrachia.

Diagnostic Features:

1. It is a marine and diploblastic animal.
2. It contains amoebocytes and smooth muscle cells.
3. It commonly called as comb jellies or sea walnuts.

A4. Tapeworm

Identification: The given slide is identified as Tapeworm.

Diagnostic Features:

1. It is an endoparasites.
2. Hooks and Suckers act as organs of attachment.
3. Excretion is carried out by specialized cells called flame cells.

A5. Ascaris

Identification: The given specimen is identified as Ascaris.

Diagnostic Features:

1. Ascaris is a round worm because it is circular in cross section.
2. It is a triploblastic, pseudocoelomate animal.

A6. Earthworm

Identification: The given specimen is identified as Earthworm.

Diagnostic Features:

1. Earthworm is a triploblastic, schizocoelomate animal.
2. Its elongated body is segmented.

A7. Cockroach

Identification: The given slide is identified as Cockroach.

Diagnostic Features:

1. It is a triploblastic animal.
2. It has jointed appaendages which are used for locomotion.
3. Respiration through trachea.

A8. Pila

Identification: The given specimen is identified as Pila.

Diagnostic Features:

1. It is triploblastic, coelomate animal.
2. Body is covered by calcareous shell.
3. Excretory organs are the nephridia.

A9. Starfish
Identification: The given specimen is identified as Starfish.
Diagnostic Features:
1. It has spiny skin.
2. It has water vascular system.
3. Tube feet help in locomotion.

A10. Balanoglossus
Identification: The given specimen is identified as Balanoglossus.
Diagnostic Features:
1. It is a marine and bilaterally symmetrical animal.
2. Excretion by a single proboscis gland.
3. It is a intermediate animal between invertebrates and chordates.

A11. Rat
Identification: The given specimen is identified as Rat.
Diagnostic Features:
1. It is a homeothermic and viviparous animal.
2. It has two pairs of limbs.
3. Heart is four chambered.

II.B – Slides

B1. Squamous Epithelium
Identification: The given slide is identified as Squamous Epithelium.
Diagnostic Features:
1. Squamous epitheium is a type of simple epithelium.
2. It is made of a single thin layer of lattened cells.
3. It is involved in diffusion and filtration.

B2. Columnar Epithelium
Identification: The given slide is identified as Columnar Epithelium.
Diagnostic Features:
1. It is a simple epithelium.
2. It is composed of a single layer of tall cells.
3. It is involved in absorption and secretion.

B3. RBC
Identification: The given slide is identified as RBC.
Diagnostic Features:
1. The red colour of the RBC is due to the presence of a respiratory pigment Haemoglobin.
2. Haemoglobin plays an important role in the transport of respiratiory gases.
3. The average life span of an RBC in a healthy individual is about 120 days.

B4. WBC
Identification: The given slide is identified as WBC.
Diagnostic Features:
1. Leucocytes are colourless, amoeboid, nucleated cells devoid of haemoglobin and other pigments.
2. WBC are involved in protecting the body against pathogens.
3. The life span of a white blood cell ranges from 13 to 20 days.

III.C. Model / Pictures

C1. Humerus Bone
Identification: The given model is identified as Humerus bone.
Diagnostic Features:
1. It is found between the shoulder and elbow.
2. The head of humerus articulates with the glenoid cavity of the pectoral girdle.
3. The other end of the humerous articulates with the two forearm bones namely the radius and ulna.

C2. Pelvic Girdle
Identification: The given model is identified as Pelvic Girdle.
Diagnostic Features:
1. It is a heavy structure specialized for weight bearing.
2. Each coxal bone consists of three fused bones.
3. At the point of fusion of the three bones, a socket called acetabulum is present.

C3. Human Rib cage
Identification: The given model is identified as Human Rib cage.
Diagnostic Features:
1. There are 12 pairs of ribs.
2. Each rib is connected dorsally to the vertebral column and ventrally to the sternum.
3. The first 7 pairs of ribs are called true ribs.

C4. Ball and Socket joint
Identification: The given model is identified as Ball and socket joint.
Diagnostic Features:
1. It is a type of synovial joint.
2. In this type, the ball shaped rounded bone fits into the cup like depression of another bone.
3. It allows multi directional movements and rotation.

IV.D. Pictures

D1. Addison's Disease
Identification: The given picture is identified as Addison's disease.
Comments:
1. It is disorder in which the adrenal glands do not produce enough hormones.
2. It is caused due to hyposercretion of gluco corticoids and mineral corticoids from the adrenal cortex.
3. Muscular weakness, low BP, loss of appetite, vomiting, hyper pigmentation of the skin are the symptoms of Addison's disease.

D2. Marasmus
Identification: The given picture is identified as Marasmus disease.
Comments:
1. It is a disorder due to protein deficiency in children.
2. It is an acute form of protein malnutrition.
3. This is due to a diet with inadequate carbohydrate and protein.

D3. Exopthalmic Goitre
Identification: The given picture is identified as Exopthalmic Goitre.
Comments:
1. The hyper function of thyroid gland results in exopthalmic goiter disease.
2. It is characterized by increased BMR with increased pulmonary ventilation and protusion of eye balls from the sockets.
3. Elevated respiratory and excretory rate with in creased body temperature are the general symptoms.

V.E. Test for Samples

E1. Test for Ammonia

Aim	Material Required	Solution Required	Procedure	Result
To test the presence of Ammonia in the given solution.	Test tube, Holder.	Sample solution, Nessler's Reagent.	i) 2ml sample solution + few drops of Nessler's reagent ii) Appearance of dark yellow or brown colour.	Ammonia is present in the given solution

E2. Test for Urea

Aim	Material Required	Solution Required	Procedure	Result
To test the presence of Urea in the given solution.	Test tube, Holder, dropper.	Sample solution, Phenol red, Horse gram powder.	i) 2ml sample solution + few drops of Phenol red + pinch of horse gram powder. ii) Appearance of dark pinkish colour.	Urea is present in the given solution.

E3. Test for Salivary amylase

Aim	Material Required	Solution Required	Procedure	Result
To test the presence of Amylase enzyme in the human	Test tube, potato, Mortar and Pestle.	Iodine solution, Human saliva.	i) Mashed potato + warm water + iodine solution. ii) Take few drops of saliva in a clean test tube. iii) Transfer the saliva in to sample solution test tube. iv) Leave it for 5 minutes and observe the colour change. v) The solution gradually becomes colourless.	Human saliva contains the enzyme amylase that digests the starch.

V.F. Experiments

F1. Determine your blind spot

Identification: The given experiment is identified as determine your blind spot.

Procedure:

1. Cover your left eye.
2. Hold the figure shown about 50 to 60 cm away from your face and directly in front of your right eye.
3. Stare at the cross in the shown figure. You can also see the circle.
4. Continue to stare and slowly bring the figure nearer to your eye.
5. Note the point at which the circle will seem to disappear. This is called blind spot.

Result:

1. Blind spot of my right eye is 1 cm.
2. Blind spot of my left eye is 1.5 cm.

F2. Male cockroach

Identification: The given experiment is identified as Male cockroach.

Reason:

1. Abdomen long and narrow.
2. Anal styles are Present.
3. 7th tergum covers 8th tergum.

F2. Female cockroach

Identification: The given experiment is identified as Female cockroach.

Reason:

1. Abdomen Short and broad.
2. Anal styles are absent.
3. 7th tergum covers 8th and 9th terga.

VI.G. Economic Importance

G1. Kangayam Bull

Identification: The given photograph is identified as Kangayam Bull.

Diagnostic Features:

1. It is originated from the place of Kangayam in Tamilnadu.
2. This breed is meant for pulling carts and ploughing fields etc.
3. It is a best example for a draught breed.

G2. Aquaponics

Identification: The given photograph is identified as Aquaponics.

Diagnostic Features:

1. Aquaponics is a technique which is a combination of Aquaculture and Hydroponics.
2. It maintains balanced ecosystem by recycling the waste and excretory products produced by the fish.
3. Cultivable fishes like Tilapia, Gold fish and cultivable plants like tomato and pepper.

G3. Honey bee

Identification: The given photograph is identified as Honey bee.

Economic importance:

1. The chief products of bee keeping industry are honey and bee wax.
2. Honey is the healthier substitute for sugar.
3. It is used as an antiseptic, laxative and as a sedative.

G4. Bombyx mori

Identification: The given photograph is identified as silkworm Bombyx mori.

Economic importance:

1. Silk fibre produced by this silkworm is called mulberry silk.
2. It mainly feeds on mulberry leaves.
3. It is used in manufacturing silk cloths, fishing fibres and tyres.

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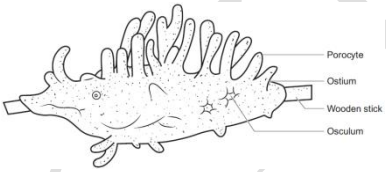
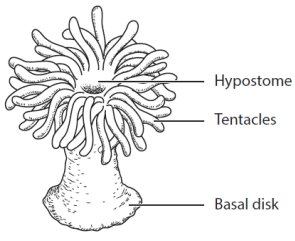
Diagrams

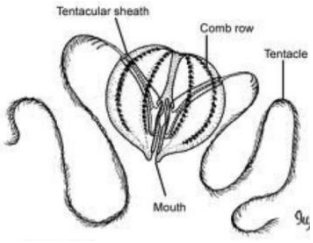
A1. Spongilla



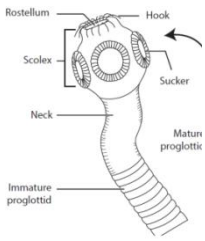
A2. Sea Anemone



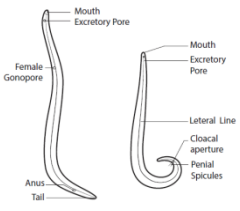
A3. Pleurobrachia



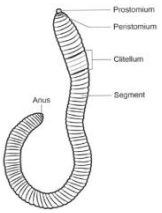
A4. Tapeworm



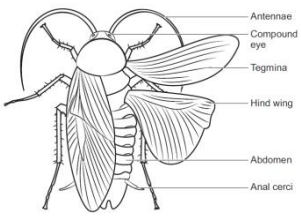
A5. Ascaris



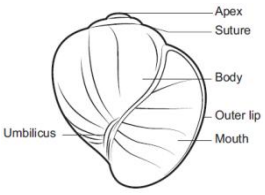
A6. Earthworm



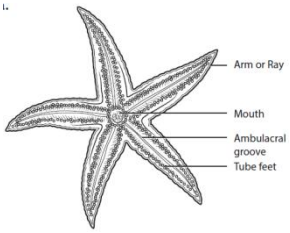
A7. Cockroach



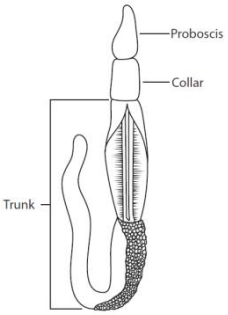
A8. Pila



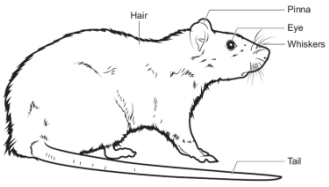
A9. Starfish



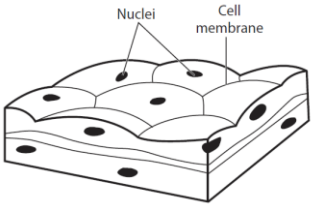
A10. Balanoglossus



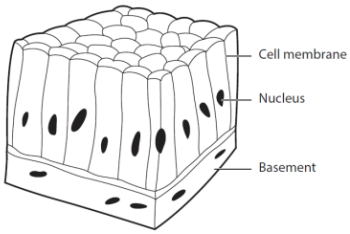
A11. Rat



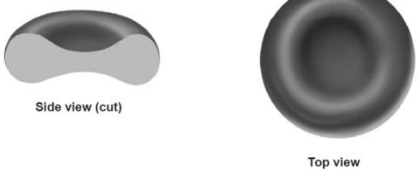
B1. Squamous Epithelium



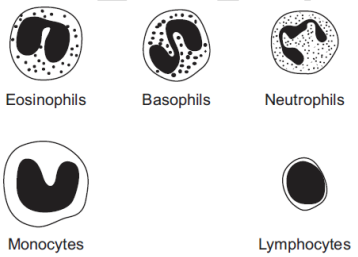
B2. Columnar Epithelium



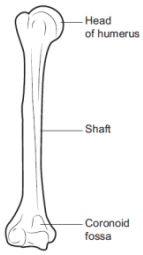
B3. RBC



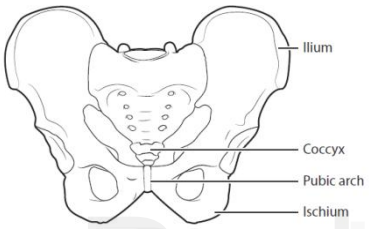
B4. WBC



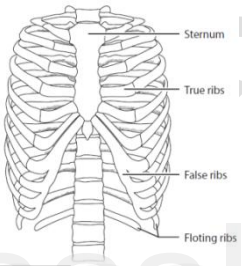
C1. Humerus Bone



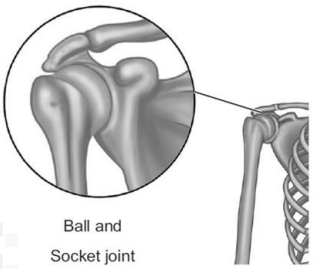
C2. Pelvic Girdle



C3. Human Rib cage



C4. Ball and Socket joint

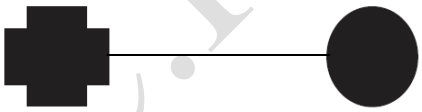


D1. Addison's Disease

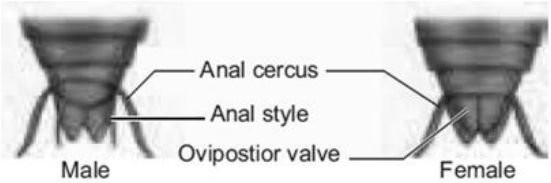
D2. Marasmus

D3. Exopthalmic Goitre

F1. Determine your blind spot

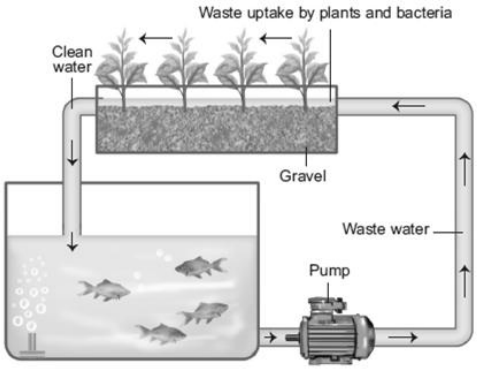


F2. Male cockroach and Female cockroach

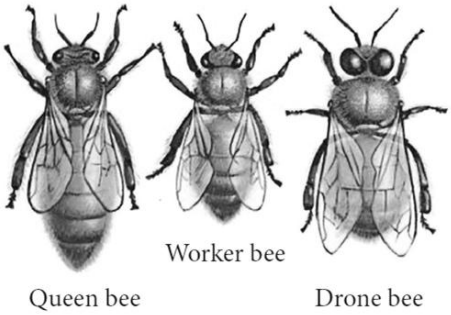


G1. Kangayam Bull

G2. Aquaponics



G3. Honey bee



G4. Bombyx mori

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