KAKATIYA UNIVERSITY
FACULTY OF SCIENCE
B.Sc. III rd Year Zoology Practical Examinations
Paper-III

QUESTION BANK

Time: 3 Hrs) (Max. Marks : 50

SECTION-A

1. Identify carbohydrates in the given test solutions A & B performing Molisch's and Benedict's test. Explain your results with reasons. (12+4+4)

2. Identify carbohydrates in the given test solutions A & B performing Iodine test and Barfoed's test. Explain your results with reasons. (12+4+4)

3. Detect the proteins in the solutions A & B by performing Biuret test and NaOH test. Explain your results with reasons. (12+4+4)

4. Identify yellow colour proteins in the solutions A & B by performing Xanthoprotein test and Millon's test. Explain your results with reasons. (12+4+4)

5. Identify sulpher containing amino acids in the solution A & B by performing Lead acetate test. Explain your results with reasons. (12+4+4)

6. Identify the lipids in the solution A & B by Solubility test and Sudan IV dye test. Explain your results with reasons. (12+4+4)

7. Estimate the Unit oxygen consumption in an aquatic animal. (12+4+4)

8. Estimate the Ammonia and Urea in the given excretory samples by performing Nesslerisation method. (12+4+4)

9. Estimate the salivary α-amylase activity. (12+4+4)

(**Note**: 4 marks for principle, 4 marks for procedure and 12 marks for results)

SECTION-B

1. Identify the A, B and O blood groups in the given A, B & C blood samples. (6+2+2)

2. Problem based on Blood grouping. (5)

3. Problem based on Mendelian inheritance (at least one problem for each for the laws of segregation and law of independent assortment). (5)

4. Identify the spots (any 2) of Genetic Syndromes by describing the salient features. (5)

   a) Down syndrome.
   b) Turners syndrome.
   c) Edwards syndrome.
   d) Patau syndrome.
   e) Cri du chat/Chromosome syndrome.
   f) Klinefelter's syndrome.

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B.Sc. III rd Year Zoology Practical Examinations

Paper-IV

QUESTION BANK

Time: 3 Hrs) (Max. Marks : 50

SECTION-A

1.Enumerate the Red Blood Cells (RBC) in the given blood sample. (10+4)
2.Enumerate the White Blood Cells (WBC) in the given blood sample. (10+4)
3.Estimate the hemoglobin in the given blood sample by Sahli's method. (10+4)
4.Enumerate the Differential Count (DC) in the given blood sample. (10+4)
5.Identify the sugar in given urine samples A & B. Explain your results with reasons. (10+4)

SECTION-B

1. Certified Field Note Book. (4)

2. Identify the spots (fishes & prawns) by mentioning the salient features. Draw a neat and labeled diagram of each. (½ for Identification, ½ for Classification, ½ for Diagram and ½ for Description).

Fishes :

a) *Catla catla*
b) *Cirrhina mrigala*
c) *Cyprinus carpio*
d) *Labeo rohita*
e) *Wallago attu*
f) *Heteropnuestes*
g) *Clarias batrachus*
h) *Channa punctatus*
i) *Channa striatus*
j) *Anabas*

Prawns :

k) *Macrobrachium rosenbergii*
l) *Penaeus monodon*
m) *Panaeus indicus*
n) *Palaemon tenuips*
o) *Metapanaeus monoceros*

3. Identify the spots (Protozoan and Helminthes parasites) by mentioning the salient features. Draw a neat and labeled diagram of each. (½ for Identification, ½ for Classification, ½ for Diagram and ½ for Description).

Protozoan parasites

a) *Entamoeba histolytica*
b) *Giardia intestinalis*
c) *Balantidium coli*
d) *Trypanosoma gombiense*
e) *Plasmodium trophozoite*
f) *Plasmodium schizont*

Helminthes parasites

g) *Ascaris male*
h) *Ascaris female*
i) *Enterobius vermicularis*
j) *Dracanculus medinensis*
k) *Ancylostoma duodenale*

4. Identify the spots (Cloning vectors, Genetic disorders and Transgenic animals). (½ for Identification, ½ for Diagram and 1 for Description).

Cloning Vectors

a) Plasmid
b) Lambda phage
c) Cosmid
d) Yeast Artificial Chromosome (YAC)

Genetic Disorders

e) Cystic fibrosis
f) Haemophilia
g) Sickle-cell disease
h) Tay-Sachs disease
i) Color blindness

Transgenic animals

j) Transgenic Sheep / Goats
k) Transgenic Chickens
l) Transgenic Pigs
m) Transgenic primates
n) Transgenic Mice

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Paper-III

SCHEME OF PRACTICAL EXAMINATION

Time: 3 Hrs) (Max. Marks : 50

SECTION-A

1. Physiology Experiment (Principle 4 marks + Procedure 4 marks + Results 12 marks) - 20 Marks

SECTION-B

1.	Genetics Experiment	-	10 Marks
2.	Genetics Problem	-	05 Marks
3.	Genetics Spotters (2 NoS. x $2^{1/2}$)	-	05 Marks
4.	Viva	-	05 Marks
5.	Certified Practical Record	-	05 Marks

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Paper-IV

SCHEME OF PRACTICAL EXAMINATION

Time: 3 Hrs) (Max. Marks : 50

SECTION-A

1. Clinical Science Experiment (4 marks for Principle, Procedure + 10 marks for Result). - 14 Marks

SECTION-B

1. Certified Field Note Book (Compulsory) ` 04 Marks

2. Spots from Acquaculture. - 08 Marks
   a) Fishes (2 Nos. x 2 = 4).
   b) Prawn (2 Nos. x 2 = 4).

3. Spots from Clinical Science (Parasites). - 08 Marks
   a) Protozoan Parasites (2 No. x 2 = 4)
   b) Helminthes Parasites (2 No. x 2 = 4)

4. Spots from Biotechnology. - 06 Marks
   a) Cloning Vectors (1 No. x 2 = 2)
   b) Genetic Disorders (1 No. x 2 = 2)
   c) Transgenic Animals (1 No. x 2 = 2)

5. Viva - 05 Marks

6. Certified Practical Record - 05 Marks

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