

Department of Zoology

GOVERNMENT COLLEGE (AUTO), ANGUL.  
LIST OF EQUIPMENTS FOR 2017-18

Equipment	Specification
<p>1. UV-Visible spectrophotometer (1 No.) Make: SYSTRONICS (2202)</p>	<p><b>Optics:</b> Modified Czerny-Turner Monochromator geometry for better aberration correction. Holographic diffraction grating with 1200 lines/mm blazed at 250nm &amp; Advanced Split Beam Technology with PC controlled setting</p> <p><b>Wavelength:</b> Range: 200-1100nm, Accuracy: <math>\pm 0.5</math> nm, Repeatability: <math>\pm 0.2</math> nm, Resolution: 0.1 nm (200-1100 nm), Band width: 2.0 nm</p> <p><b>Photometric:</b> Range: -2.5 to 2.5 Abs (<math>\pm 4.0</math> Abs), Accuracy: <math>\pm 0.005</math> Abs at 1.0 Abs, Repeatability: <math>\pm 0.002</math> Abs at 1.0 Abs. <b>Stray Light:</b> Less than 0.05%T at 220 nm and 370 nm, <b>Sample Holder:</b> Five position automatic positioning 10mm cuvette for sample and one fixed position for reference cuvette. <b>Source:</b> Tungsten-Halogen lamp (320 to 1100 nm), Deuterium lamp (200 to 340 nm). <b>Detector:</b> Two Si-Photodiodes. Order Cut-off filter: Four glass filter, automatically positioned to eliminate grating spectral order interferences.</p> <p><b>Minimum Volume:</b> Without cell riser 500<math>\mu</math>l in 1ml cuvette, 2ml in 4ml cuvette; with Cell riser 250<math>\mu</math>l in 1ml cuvette, 1 ml in 4ml cuvette</p> <p><b>Operating mode:</b> Single wavelength, Multi wavelength, Scan, Time/Kinetic Scan (with derivative facility). <b>Measuring Modes:</b> Absorbance, %Transmittance, Concentration (K factor, multi standard), Multi-component Analysis (Max. 10 components)</p> <p><b>Automatic Calibration/optimisations:</b> Base line, Source optimization, Cell optimization, Wavelength calibration, Electronics calibration, Self-diagnosis. <b>Data Processing:</b> Peak Pick/Point Pick/Vally pick, Expansion/ Compression of spectra, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> Derivative, Averaging of scans, Substraction of first two scans, Three levels of smoothing of spectra, Ratio, corrected ratio, 2 point and 3 point net Abs, Comparison of concentration.</p> <p><b>Data Presentation:</b> Display of graphic and tabular data on hard disk, hard copy of graphic and tabular data on printer</p> <p><b>Computer system:</b> PENTIUM-IV or higher version with colour Monitor, RS-232 port or USB port with WIN-XP Operating System or above <b>RS 232 PORT:</b> PC control (RS-232 or USB to serial). <b>POWER:</b> 230V, <math>\pm 10\%</math>, 50Hz, <b>DIMENSION:</b> 520(W)X500(D)X190(H) mm, <b>Weight:</b> 23kg (Approx); <b>Accessories:</b> 2 matched 10 mm Quartz cuvettes</p>
<p>2. PC/Monitor (1 No.) HP 20WD 19.45-</p>	<p>Screen Size: 19.4 Inches, Maximum Display Resolution: 1600 x 900 pixels, Item Weight: 2.81 Kg, Package Dimensions: 53.8 x 42.4 x 12.4 cm, Item model number: 20wd, Hardware Platform: PC</p>

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Inch LED Backlit Monitor	
3. Digital pH meter (4No) (Hanna Pocket Model, HI98108)	Type: Digital pH Meter, pH Range (pH): 0.0 - 14.0 pH, pH Resolution: 0.01 pH, pH Accuracy: $\pm 0.1$ pH, Temperature Compensation: 0 - 50°C, Calibration: Manual, 2 points, Power: 4 x 1.5 Volt, Weight: 95 g, Temperature Range(C): 0 - 50 °C, Battery Life: approx 200 hours continuous use, Dimensions: 175x41x23 mm
4. Microwave Oven (LG 20 L Solo) MS2043DB, Black	Type: Solo, Capacity (Litre): 20, Color: Black: Anti Bacterial, Control Type: Membrane, Auto Cook Menu: 44, Microwave Frequency(MHZ): 2450, Watts Microwave (Output): 700, Microwave Power Levels: 5, WxHxD: 455x252x320
5. Pocket Weighing Scale (Digital) Weightrolux	Product Type: Digital Scales, Size: 63x120x21 mm, Material: Plastic, Item Display: LCD Display with Backlight Weighing Capacity: 0.5-50 Kg, Capacity: 200 g

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**LIST OF CHEMICALS**  
**MERCK/HIMEDIA/SRL/SIGMA-ALDRICH**

SL. No.	NAME	
01	DNA (calf thymus) 5 unit	SIGMA-ALDRICH
02	Perchloric acid, 250ml	SIGMA/MERCK
03	Sodium citrate (500g)	SIGMA/MERCK
04	Ferric chloride (500g)	SIGMA/MERCK
05	Concentrated Sulphuric acid (500ml)	SIGMA/MERCK
06	Con. Hydrochloric acid (0.1 mol/0.1N) 500 ml	SIGMA/MERCK
07	Copper sulfate (500g)	SIGMA/MERCK
08	Sodium Tartarate dihydrate (500g)	SIGMA/MERCK
09	Folin & Ciocalteu's Phenol Reagent (500ml)	SIGMA/MERCK
10	Ethanol (1Lit)	SIGMA/MERCK
11	Glycerol anhydrous (500ml)	SIGMA/MERCK
12	Hexane (1Lit)	SIGMA/MERCK
13	Acetone (1Lit)	SIGMA/MERCK
14	Trichloroacetic acid (250g)	SIGMA/MERCK
15	Silver Nitrate (25g)	SIGMA/MERCK
16	Starch solution indicator (100ml)	SIGMA/MERCK
17	Phenolphthalein indicator (25g)	SIGMA/MERCK
18	Sodium Hydroxide (100g)	SIGMA/MERCK
19	Luria Bertani HiVeg™ Broth, Miller (500g)	HIMEDIA
20	Luria Bertani HiVeg™ Agar, Miller (500)	HIMEDIA
21	Caustic Soda (500g)	SIGMA/MERCK
22	Oleic acid (500 ml)	SIGMA/MERCK
23	Sudan III, 100g	SIGMA/MERCK
24	Sudan IV, 100g	SIGMA/MERCK
25	pH Paper (wide range)	SIGMA/MERCK
26	Urea 500g	SIGMA/MERCK
27	Urase, 5g	SIGMA/MERCK
28	Uric acid, 100g	SIGMA/MERCK
29	Soyabean powder (250g)	SIGMA/MERCK
30	Sodium potassium tartarate (500g)	SIGMA/MERCK
31	Potassium Iodide (250ml)	SIGMA/MERCK
32	Biuret Reagent (150-1,000 µg/mL protein detection level) (250ml)	SIGMA/MERCK
33	Phenol red (5g)	SIGMA/MERCK
34	Potassium dichromate (500g)	SIGMA/MERCK
35	Orthophosphoric acid (500g)	SIGMA/MERCK
36	Ferrous ammonium sulfate (500g)	SIGMA/MERCK
37	Sodium thiosulphate pentahydrate (250g)	SIGMA/MERCK
38	Manganous Sulphate (250 g)	SIGMA/MERCK
39	Methyl orange (125 ml)	SIGMA/MERCK

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40	Sodium carbonate (250g)	SIGMA/MERCK
41	Sodium Nitrate (250g)	SIGMA/MERCK
42	Boric Acid (500 g)	SIGMA/MERCK
43	Potassium chromate (250g)	SIGMA/MERCK
44	Manganous chloride (250 g)	SIGMA/MERCK
45	Buffer solution (pH.7) 500ml	SIGMA/MERCK
46	Chloroform (500ml)	SIGMA/MERCK
47	MacKonky Agar (500g)	HIMEDIA
48	MacKonky Broth (500g)	HIMEDIA
49	Protein kit Biuret method	SIGMA/MERCK
50	Methylene blue aqueous (125ml)	SIGMA/MERCK
51	Iodine Solution (250ml)	SIGMA/MERCK
52	Sodium Bicarbonate (500g)	SIGMA/MERCK
53	Sodium Carbonate (500g)	SIGMA/MERCK
54	Glacial acetic acid 100%(500ml)	SIGMA/MERCK
55	Molisch's reagent (250ml)	SIGMA/MERCK
56	Sulfo Salicylic acid (100g)	SIGMA/MERCK
57	Ether (500ml)	SIGMA/MERCK
58	Benzene (500ml)	SIGMA/MERCK
59	Ethyl alcohol pure (500ml)	SIGMA/MERCK

#### Miscellaneous (Slides, Models, Bones, Specimen etc)

##### Bones

1. Articulated and disarticulated bones(Rabbit, Frog, Varanus, Fow): 2sets each

##### Model

1. Elbow joint
2. Knee joint
3. Shoulder joint
4. Carapace and plastrons
5. Skull of herbivores and carnivores

##### Charts

1. Poisonous and Nonpoisonous Snake
2. Comparative chart of different bones
3. Fish scale and fins

##### Slides

Entamoeba(W.M.), Taenia (W.M.), Ring worm (W.M.)

##### Taenia (Museum specimen)

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