

Ques. Describe the ultra cell structure of meropycean cell (NIOSTOC).

Ans. The class ~~merophy~~ meropycean is also known as cyanophyceae or blue green algae. Merophyceae denote the presence of mucilaginous sheath and cyanophyceae denote cyanin pigment and due to blue green colour which is called blue green algae. About 160 genera and 1500 species of blue green algae are found and about 50% blue green algae are reported from India.

CELL STRUCTURE :-> The

Class merophyceae have wide range of vegetative structures which varies from unicellular to colony and flag filamentous form.

The filaments may be branched or unbranched, which is called trichon

The normal

is prokaryotic type which shows following structure under light microscope.

1) **CELL WALL** :- \rightarrow cell wall is made up by two layers as outer part is cellulose and inner cellulose is absent. inner to cellulose layer plasma membrane is present. the mucoilagenous sheath is then or, thick structures or, may be pigmented or, non-pigmented.

CHROMATOPLAST :- \rightarrow It is pigmented area of protoplast which may be reticular or, alveolar structures. the pigment are chl a, β carotene, phytyl, phytyl, etc. phycoerythrine, xanthophyll, etc. present. but chl b is absent.

CENTROPLASM :- \rightarrow This is the central vesicles which considered as nuclear in mature. The dipinetic nuclear membrane and nucleolus are absent.

ULTRA CELL STRUCTURE :

The ultra cell structure show following structure. →

1) Sheath and cell wall : →
 Sheath is extra-cellular structure present external to the cell wall it is thin or thick made up by fibrils and protective in function. The cell wall is rigid present in between sheath and plasma-lemma made up of four layer, which is called l_1, l_2, l_3, l_4 .

Cytoplasmic membrane is made up by protein layers which is internal to the cell wall and 70 Å thick.

2) PHOTOSYNTHETIC APPARATUS

→ The peripheral layer of protoplasm are elongated plate, disc like structures called ~~thylakoid~~ thylakoid.

They are organized into grana it is made up by two unit membrane which is 70-80 Å thick.

The pigments are chl a, chl b, chl c, chl d, chl e, chl f, chl g, chl h, chl i, chl j, chl k, chl l, chl m, chl n, chl o, chl p, chl q, chl r, chl s, chl t, chl u, chl v, chl w, chl x, chl y, chl z, chl aa, chl ab, chl ac, chl ad, chl ae, chl af, chl ag, chl ah, chl ai, chl aj, chl ak, chl al, chl am, chl an, chl ao, chl ap, chl aq, chl ar, chl as, chl at, chl au, chl av, chl aw, chl ax, chl ay, chl az, chl ba, chl bb, chl bc, chl bd, chl be, chl bf, chl bg, chl bh, chl bi, chl bj, chl bk, chl bl, chl bm, chl bn, chl bo, chl bp, chl bq, chl br, chl bs, chl bt, chl bu, chl bv, chl bw, chl bx, chl by, chl bz, chl ca, chl cb, chl cc, chl cd, chl ce, chl cf, chl cg, chl ch, chl ci, chl cj, chl ck, chl cl, chl cm, chl cn, chl co, chl cp, chl cq, chl cr, chl cs, chl ct, chl cu, chl cv, chl cw, chl cx, chl cy, chl cz, chl da, chl db, chl dc, chl dd, chl de, chl df, chl dg, chl dh, chl di, chl dj, chl dk, chl dl, chl dm, chl dn, chl do, chl dp, chl dq, chl dr, chl ds, chl dt, chl du, chl dv, chl dw, chl dx, chl dy, chl dz, chl ea, chl eb, chl ec, chl ed, chl ee, chl ef, chl eg, chl eh, chl ei, chl ej, chl ek, chl el, chl em, chl en, chl eo, chl ep, chl eq, chl er, chl es, chl et, chl eu, chl ev, chl ew, chl ex, chl ey, chl ez, chl fa, chl fb, chl fc, chl fd, chl fe, chl ff, chl fg, chl fh, chl fi, chl fj, chl fk, chl fl, chl fm, chl fn, chl fo, chl fp, chl fq, chl fr, chl fs, chl ft, chl fu, chl fv, chl fw, chl fx, chl fy, chl fz, chl ga, chl gb, chl gc, chl gd, chl ge, chl gf, chl gg, chl gh, chl gi, chl gj, chl gk, chl gl, chl gm, chl gn, chl go, chl gp, chl gq, chl gr, chl gs, chl gt, chl gu, chl gv, chl gw, chl gx, chl gy, chl gz, chl ha, chl hb, chl hc, chl hd, chl he, chl hf, chl hg, chl hh, chl hi, chl hj, chl hk, chl hl, chl hm, chl hn, chl ho, chl hp, chl hq, chl hr, chl hs, chl ht, chl hu, chl hv, chl hw, chl hx, chl hy, chl hz, chl ia, chl ib, chl ic, chl id, chl ie, chl if, chl ig, chl ih, chl ii, chl ij, chl ik, chl il, chl im, chl in, chl io, chl ip, chl iq, chl ir, chl is, chl it, chl iu, chl iv, chl iw, chl ix, chl iy, chl iz, chl ja, chl jb, chl jc, chl jd, chl je, chl jf, chl jg, chl jh, chl ji, chl jj, chl jk, chl jl, chl jm, chl jn, chl jo, chl jp, chl jq, chl jr, chl js, chl jt, chl ju, chl jv, chl jw, chl jx, chl jy, chl jz, chl ka, chl kb, chl kc, chl kd, chl ke, chl kf, chl kg, chl kh, chl ki, chl kj, chl kk, chl kl, chl km, chl kn, chl ko, chl kp, chl kq, chl kr, chl ks, chl kt, chl ku, chl kv, chl kw, chl kx, chl ky, chl kz, chl la, chl lb, chl lc, chl ld, chl le, chl lf, chl lg, chl lh, chl li, chl lj, chl lk, chl ll, chl lm, chl ln, chl lo, chl lp, chl lq, chl lr, chl ls, chl lt, chl lu, chl lv, chl lw, chl lx, chl ly, chl lz, chl ma, chl mb, chl mc, chl md, chl me, chl mf, chl mg, chl mh, chl mi, chl mj, chl mk, chl ml, chl mm, chl mn, chl mo, chl mp, chl mq, chl mr, chl ms, chl mt, chl mu, chl mv, chl mw, chl mx, chl my, chl mz, chl na, chl nb, chl nc, chl nd, chl ne, chl nf, chl ng, chl nh, chl ni, chl nj, chl nk, chl nl, chl nm, chl nn, chl no, chl np, chl nq, chl nr, chl ns, chl nt, chl nu, chl nv, chl nw, chl nx, chl ny, chl nz, chl oa, chl ob, chl oc, chl od, chl oe, chl of, chl og, chl oh, chl oi, chl oj, chl ok, chl ol, chl om, chl on, chl oo, chl op, chl oq, chl or, chl os, chl ot, chl ou, chl ov, chl ow, chl ox, chl oy, chl oz, chl pa, chl pb, chl pc, chl pd, chl pe, chl pf, chl pg, chl ph, chl pi, chl pj, chl pk, chl pl, chl pm, chl pn, chl po, chl pp, chl pq, chl pr, chl ps, chl pt, chl pu, chl pv, chl pw, chl px, chl py, chl pz, chl qa, chl qb, chl qc, chl qd, chl qe, chl qf, chl qg, chl qh, chl qi, chl qj, chl qk, chl ql, chl qm, chl qn, chl qo, chl qp, chl qq, chl qr, chl qs, chl qt, chl qu, chl qv, chl qw, chl qx, chl qy, chl qz, chl ra, chl rb, chl rc, chl rd, chl re, chl rf, chl rg, chl rh, chl ri, chl rj, chl rk, chl rl, chl rm, chl rn, chl ro, chl rp, chl rq, chl rr, chl rs, chl rt, chl ru, chl rv, chl rw, chl rx, chl ry, chl rz, chl sa, chl sb, chl sc, chl sd, chl se, chl sf, chl sg, chl sh, chl si, chl sj, chl sk, chl sl, chl sm, chl sn, chl so, chl sp, chl sq, chl sr, chl ss, chl st, chl su, chl sv, chl sw, chl sx, chl sy, chl sz, chl ta, chl tb, chl tc, chl td, chl te, chl tf, chl tg, chl th, chl ti, chl tj, chl tk, chl tl, chl tm, chl tn, chl to, chl tp, chl tq, chl tr, chl ts, chl tu, chl tv, chl tw, chl tx, chl ty, chl tz, chl ua, chl ub, chl uc, chl ud, chl ue, chl uf, chl ug, chl uh, chl ui, chl uj, chl uk, chl ul, chl um, chl un, chl uo, chl up, chl uq, chl ur, chl us, chl ut, chl uu, chl uv, chl uw, chl ux, chl uy, chl uz, chl va, chl vb, chl vc, chl vd, chl ve, chl vf, chl vg, chl vh, chl vi, chl vj, chl vk, chl vl, chl vm, chl vn, chl vo, chl vp, chl vq, chl vr, chl vs, chl vt, chl vu, chl vv, chl vw, chl vx, chl vy, chl vz, chl wa, chl wb, chl wc, chl wd, chl we, chl wf, chl wg, chl wh, chl wi, chl wj, chl wk, chl wl, chl wm, chl wn, chl wo, chl wp, chl wq, chl wr, chl ws, chl wt, chl wu, chl wv, chl ww, chl wx, chl wy, chl wz, chl xa, chl xb, chl xc, chl xd, chl xe, chl xf, chl xg, chl xh, chl xi, chl xj, chl xk, chl xl, chl xm, chl xn, chl xo, chl xp, chl xq, chl xr, chl xs, chl xt, chl xu, chl xv, chl xw, chl xx, chl xy, chl xz, chl ya, chl yb, chl yc, chl yd, chl ye, chl yf, chl yg, chl yh, chl yi, chl yj, chl yk, chl yl, chl ym, chl yn, chl yo, chl yp, chl yq, chl yr, chl ys, chl yt, chl yu, chl yv, chl yw, chl yx, chl yy, chl yz, chl za, chl zb, chl zc, chl zd, chl ze, chl zf, chl zg, chl zh, chl zi, chl zj, chl zk, chl zl, chl zm, chl zn, chl zo, chl zp, chl zq, chl zr, chl zs, chl zt, chl zu, chl zv, chl zw, chl zx, chl zy, chl zz.

3) **NUCLEOPLASMS** → nucleus is incipient type which has no definite membrane and a nucleolus. The nucleus is present in the form of DNA fibrils without histone RNA is dispersed in the nucleoplasm. It is also known as genophore.

4) **GRANULES** → Different types of granules as ribosomes, granules, polyhedral bodies, lipid droplets are present. Some time gas vacuoles are also present. fig [93]