1. FIBRES

thick walled elongated and pointed cell occurring in groups

2. SCLEREIEDS

spherical , oval , or cylindrical , highly thickened dead cells

3. TRACHEIDS

tube like cells with thick and lignified walls

4. XYLEM PARENCHYMA

only living cells among xylem components , thin walled, store food materials in form of starch or fat

5. COMPANION CELLS

specialised parenchyma cells –closely associated with sieve tube elements – maintain pressure gragient in sieve tube.

6. GUARD CELLS

bean shaped – dicot , dumbbell – monocot , these are cells which enclose the stomatal pore

7. SUBSIDIARY CELLS

epidermal cells in vicinity of guard cells , specialised in shape and size

8. MESOPHYLL

cells in ground tissue consisting of thin walled chloroplast

9. BUNDLE SHEATH CELLS

thick walled surrounding the vascular bundle

10. BULLIFORM CELLS

adaxial epidermal cells along the veins modified into large , empty colourless cells – minimising water loss.

11. GOBLET CELLS

present in alimentary canal odified unicellular columnar gland, they secrete mucus which constitutes intestinal juice or succus entricus.

12. CHONDROCYTES

cells of cartilage

13. OSTEOCYTES

cells of bones

14. NEURONS

excitable cells , structural and functional unit of neural system .

15. PROKARYOTIC CELL

represented by bacteria , blue green algae, mycoplasma and PPLO have a cell wall surrounding cell membrane except in mycoplasma . Naked genetic material not enveloped by nuclear membrane .

16. EUKARYOTIC CELLS

cells whose genetic material is enveloped by a nuclear membrane .

17. HEPATIC CELLS

contained by hepatic cells in form of cords . Secrete bile , present in liver .

18. PARIETAL /OXYNTIC CELLS

secrete HCl and intrinsic factor essential for absorption of vitamin B_{12}.

19. PEPTIC / CHIEF CELLS

secretes proenzyme pepsinogen which on exposure to HCl gets converted to active enzyme Pepsin , the proteolytic enzyme of stomach.

20. MUCUS NECK CELLS

secrete mucus for ptotection from acidic juices of the stomach

21. G cells

secrete gastrin hormone which increase HCl secretion.

22. ERYTHROCYTES

red blood cells most abundant of all cells in the blood. About 5 million to 5.5 million per mm^{-3} in adults red bone marrow . Devoid of nucleus and biconcave in shape. Red iron containing pigment is present called haemoglobin . Life span of 120 days .destroyed in spleen.

23. LEUCOCYTES

white blood cells , colourless due to lack of haemoglobin . Nucleated and 6000 to 8000 per mm^{-3} of blood. Short lived . Two types of leucocytes –

(1) Granulocytes

[basophils , eosinophils , neutrophils]

(2) Agranulocytes

[monocytes , lymphocytes]

24. THROMBOCYTES

blood platelets, cell f ragments produced from megakaryocytes blood norally contains 1,50000 to 3,50,000 platelets per mm^{-3}. Involved in coagulation of blood .

ANMOLSHARMALIVE

25. SCHWANN CELLS

envelope myelinated nerve fibres, form myelin sheath around axon.

26. PHOTORECEPTOR CELLS

cells containing light sensitive proteins called photopigments . They are of 2 types –

(1) Cones – daylight vision [photopic] and colour vision

(2) Rods – twilight vision [scotopic]

27. ALPHA CELLS

secrete hormone glucagon [hyperglycemia]

28. BETA CELLS

secrete insulin [hypoglycemia]

The above 2 cells are in ISLETS OF LANGERHANS

29. MEIOCYTES

gamete mother cell

30. ZYGOTE

single celled , vital link that ensures continuity of species between organism of one generation and the next .

31. POLLEN / MICROSPORE MOTHER CELL

produces microspore by meiosis process called microsporogenesis .

32. VEGETATIVE CELL

bigger, has abundant food reserve and large irregularly shaped nucleus, haploid cell found in pollen grains

33. GENERATIVE CELL

small , floats in the cytoplasm of the vegetative cell , spindle shaped with dense cytoplasm and nucleus.

34. MEGASPORE MOTHER CELL

produces megaspore by meiosis , process called megasprogenesis.

35. MALE GERM CELLS

line the seminiferous tubule, known as spermatogonia [diploid] ungergomeiotic divisions to form sperms

36. SERTOLI CELLS

provide nutrition to germ cells , secrete some factors which help in process of fertilization by action of FSH

37. INTERSTITIAL / LEYDIG CELLS

present in interstitial spaces outside seminiferous tubules, synthesis and secrete testicular hormones called ANDROGENS .

38. INNER CELL MASS

found in blastocyst , pluripotent cells which differentiates into the ectoderm, endoderm and later the mesoderm . It contains stem cells which are capable of giving to rise to all tissues and organs .

ANMOLSHARMALIVE