1. The chlorophyll in photosynthesis is used for
   I. Absorbing light
   II. Breaking down water molecule
   III. No function
   IV. Reduction of CO_2
2. Proteins after digestion are converted into
   I. Carbohydrates
   II. Small globules
   III. Amino acids
   IV. starch
3. Carbohydrates in the plants are stored in the form of
   I. Glycogen
   II. Starch
   III. Glucose
   IV. Maltose
4. Main site of photosynthesis
   I. Leaf
   II. Stem
   III. Chloroplast
   IV. Guard cells
5. The small pores present of leaf's surface are called
   I. Stomata
   II. Chlorophyll
   III. Guard cells
   IV. None of these
6. Photosynthesis is a
   I. Catabolic process
   II. Parabolic process
   III. Amphibolic process
   IV. Photochemical process
7. Opening and closing of pores is a function performed by
   I. Stomata
   II. Chlorophyll
   III. Chloroplast
   IV. Guard cells
8. Which element is used in the synthesis of proteins?
   I. Hydrogen
   II. Oxygen
   III. Nitrogen
   IV. Carbon dioxide
9. Temporary finger like extensions on amoeba are called
   I. Cell membrane
   II. Cell wall
   III. Pseudopodia
   IV. Cilia
10. Bile juice is secreted by
   I. Stomach
   II. Pancreas
   III. Small intestine
   IV. Liver

11.Immunosuppressants such as _____ prevent transplanted organs from being rejected in recipients.

1. Thrombin
2. **Cyclosporine**
3. Aspirin
4. None of the above

12. Both B & T lymphocytes are produced in the bone marrow; however, only the T lymphocytes travel to the _____ and mature there.

1. Spleen
2. **Thymus**
3. Pituitary gland
4. Adrenal gland

13. The _____ is at its largest in children, but with the onset of puberty, it eventually shrinks and gets replaced by fat.

1. **Thymus**
2. Hypothalamus
3. Parathyroid gland
4. None of the above

14.Ascaris lumbricoides is a species of parasitic roundworm that lives in

1. **Humans**
2. Grasshoppers
3. Pigs
4. None of the above

15.Which of the following diseases has been eradicated

1. Smallpox
2. Rinderpest
3. Polio
4. **All of the above**

16. A kind of injury or damage, which results in the premature death of all the nearby cells in a tissue or an organ through autolysis is called

1. Neurosis
2. **Necrosis**
3. Apoptosis

4. Cellular senescence

17. Hypochondria is also termed as_____.

1. **Health anxiety**
2. Sleep apnea
3. Hypnagogia
4. Narcolepsy

18. The immune system comprises_____.

1. Humoral and fibrous systems
2. **Humoral and Cell-mediated systems**
3. Antigens
4. Lymphocytes

19. Which of the following is a viral disease?

1. Diphtheria
2. Filariasis
3. Leprosy
4. **Influenza**

20. Carcinoma arises from the_____.

1. **Epithelial cells**
2. Bone Marrow
3. Pigment containing Cells
4. None of the above

21.Pollination is best defined as

(A) Transfer of pollen from the anther to the stigma
(B) Germination of pollen grains
(C) Growth of pollen tube in ovule
(D) Visiting flowers by insects

22. Plants absorb most part of the water needed by them through their

(A)Embryonic zone

(B) Growing point

(C) Root hairs

(D) Zone of elongation

23. Primary phloem develops from

(A)Lateral meristem

(B) Protoderm

(C) Extrastelar cambium

(D) Provascular tissue

24. Phloem is a tissue found in

(A)Reproductive organs of animals

(B) Plants

(C) Insects

(D) Mammals

25. Plants growing on the sand are called as

(A) Chasmophytes

(B) Oxylophytes

© Lithophytes

(D) Psammophytes

26**.** Osmosis is the flow of solution from higher concentration to a solution of lower concentration through a semi permeable membrane. What is incorrect in this statement?

A) Exact concentration of solution is not given

(B) Character of semi permeable membrane is not given

(C) The flow of solution is not possible through semi-permeable membrane

(D) All are incorrect

27. Organic Substances which, in very small amounts, control growth and development called

(A) Vitamins

(B) Hormones

(C) Enzymes

(D) None of the above

28. Rainwater helps to increase the _____ to some extent.

(A) Phosphorous contents
(B) Nitrogen contents
(C) Calcium contents
(D) Potash contents

29. Ptyalin is an enzyme produced in the

(A) Salivary glands

(B) Pituitary glands

(C) Thyroid glands

(D) Pancreas

30. Radical vascular bundles are those in which

(A)Xylem is surrounded by phloem

(B) Phloem is surrounded by xylem

(C) Xylem and phloem occur on the same radius

(D) Xylem and phloem occur on the different radii

31. In World War II, the fermentation was used for the production of _____
a) Alcohol
b) Antibiotics
c) Wine
d) Beer

32.The small-scale bioreactors have volume of _____
a) 5-10 litres
b) 10-20 litres
c) 1-10 litres
d) 1-20 litres

33. The bioreactor is not capable of _____
a) Producing aseptic conditions
b) Meeting containment regulations
c) Controlling pH
d) Produce electricity

34. Which of the following fermenters are characterized by height to diameter ratio?
a) Tower fermenter
b) Airlift fermenter
c) Hollow fibre
d) Perfusion bioreactor

35. In which of the following fermenters the impellers are replaced by constant flow of gas?
a) Airlift fermenter
b) Tower fermenter
c) Hollow fibre
d) Perfusion bioreactor

36. Which of the following is used to grow anchorage-dependent cells?
a) Airlift fermenter
b) Tower fermenter
c) Hollow fibre chamber
d) Perfusion bioreactor

37. Which of the following bioreactor consists of a vessel replaced by a multilayered bag?
a) Single Use bioreactors
b) Perfusion bioreactors
c) Airlift bioreactor
d) Tower bioreactor

38. What is the function of carbon in stainless steel?
a) Improves resistance to corrosion
b) Improves ductility
c) Reduces sensitization
d) Improves halogen resistance

39. The Borosilicate glass does not contain _____
a) SiO_2
b) B_2O_3
c) Al_2O_3
d) KH_2PO_4

40. Which of the following class consists of microorganisms which are not causative agents?
a) EFB Class 1
b) EFB Class 2
c) EFB Class 3

41. Which of the following class consists of microorganisms which are causing disease in man and are hazardous to workers?
a) EFB Class 3
b) EFB Class 1
c) EFB Class 2
d) EFB Class 4

42. EFB Class 4 consists of _____
a) Low-risk microorganisms
b) High-risk microorganisms
c) Medium-risk microorganisms
d) Environmental-risk microorganisms

43. Which of the following class of microorganisms causes less threat to a man?

a) Low-risk microorganisms
b) High-risk microorganisms
c) Medium-risk microorganisms
d) Environmental-risk microorganisms

44.A micro array is an ordered array of microscopic elements on a planer substrate that allows the specific binding of

A. **gene or gene products**

B. whole genome

C. both (a) and (b)

D. none of these

45. Biochips are made up of

A. **semi-conducting molecules inserted into the protein frame work**

B. conducting molecules inserted into the protein frame work

C. non-conducting molecules inserted into the protein frame work

D. any of the above

46. Hypoxanthine can be measured by

A. **hypoxanthine sensor**

B. amorphous silicon ISFET

C. urea sensor

D. alcohol sensor

47. Which of the following technology is used for micro array manufacturing?

A. **Photolithography**

B. Ink jetting

C. Contact printing

D. All of these

48. Which of the following adaptations would it be desirable for a farmer to breed into a crop of wheat?

A. Early ripening

49. Gene banks conserve stocks of

A. seed only

B. Resistance to disease

B. vegetative material only

C. Resistance to pests

C. **seed and vegetative material both**

D. All of these

D. none of these

50. Microbiosensors are based on

A. ions effect

B. **ionsensitive field effect transistor**

C. piezoelectric effect

D. magnetic effect