1. Which of the following is **not** an attribute of a population ?

(1) Sex ratio
(2) Natality
(3) Mortality
(4) Species interaction

2. The process of growth is maximum during :

(1) Log phase
(2) Lag phase
(3) Senescence
(4) Dormancy

3. The roots that originate from the base of the stem are :

(1) Fibrous roots
(2) Primary roots
(3) Prop roots
(4) Lateral roots

4. Match the following diseases with the causative organism and select the **correct** option.

	Column - I		**Column - II**
(a)	Typhoid	(i)	*Wuchereria*
(b)	Pneumonia	(ii)	*Plasmodium*
(c)	Filariasis	(iii)	*Salmonella*
(d)	Malaria	(iv)	*Haemophilus*

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(iii)	(ii)	(iv)
(2)	(iii)	(iv)	(i)	(ii)
(3)	(ii)	(i)	(iii)	(iv)
(4)	(iv)	(i)	(ii)	(iii)

5. In which of the following techniques, the embryos are transferred to assist those females who cannot conceive ?

(1) ZIFT and IUT
(2) GIFT and ZIFT
(3) ICSI and ZIFT
(4) GIFT and ICSI

6. Identify the **wrong** statement with reference to the gene 'I' that controls ABO blood groups.

(1) The gene (I) has three alleles.
(2) A person will have only two of the three alleles.
(3) When I^A and I^B are present together, they express same type of sugar.
(4) Allele 'i' does not produce any sugar.

7. Choose the **correct** pair from the following :

(1) Ligases - Join the two DNA molecules
(2) Polymerases - Break the DNA into fragments
(3) Nucleases - Separate the two strands of DNA
(4) Exonucleases - Make cuts at specific positions within DNA

8. Select the **correct** match.

(1) Haemophilia - Y linked
(2) Phenylketonuria - Autosomal dominant trait
(3) Sickle cell anaemia - Autosomal recessive trait, chromosome-11
(4) Thalassemia - X linked

9. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Gregarious, polyphagous pest	(i)	*Asterias*
(b)	Adult with radial symmetry and larva with bilateral symmetry	(ii)	Scorpion
(c)	Book lungs	(iii)	*Ctenoplana*
(d)	Bioluminescence	(iv)	*Locusta*

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(iii)	(ii)	(iv)
(2)	(iv)	(i)	(ii)	(iii)
(3)	(iii)	(ii)	(i)	(iv)
(4)	(ii)	(i)	(iii)	(iv)

10. The infectious stage of *Plasmodium* that enters the human body is :

(1) Trophozoites
(2) Sporozoites
(3) Female gametocytes
(4) Male gametocytes

11. Identify the substances having glycosidic bond and peptide bond, respectively in their structure :

(1) Chitin, cholesterol

(2) Glycerol, trypsin

(3) Cellulose, lecithin

(4) Inulin, insulin

12. The plant parts which consist of two generations - one within the other :

(a) Pollen grains inside the anther

(b) Germinated pollen grain with two male gametes

(c) Seed inside the fruit

(d) Embryo sac inside the ovule

(1) (a) only

(2) (a), (b) and (c)

(3) (c) and (d)

(4) (a) and (d)

13. The product(s) of reaction catalyzed by nitrogenase in root nodules of leguminous plants is/are :

(1) Ammonia alone

(2) Nitrate alone

(3) Ammonia and oxygen

(4) Ammonia and hydrogen

14. Identify the **correct** statement with regard to G_1 phase (Gap 1) of interphase.

(1) DNA synthesis or replication takes place.

(2) Reorganisation of all cell components takes place.

(3) Cell is metabolically active, grows but does not replicate its DNA.

(4) Nuclear Division takes place.

15. Cuboidal epithelium with brush border of microvilli is found in :

(1) lining of intestine

(2) ducts of salivary glands

(3) proximal convoluted tubule of nephron

(4) eustachian tube

16. Which of the following statements about inclusion bodies is **incorrect** ?

(1) They are not bound by any membrane.

(2) These are involved in ingestion of food particles.

(3) They lie free in the cytoplasm.

(4) These represent reserve material in cytoplasm.

17. Which is the important site of formation of glycoproteins and glycolipids in eukaryotic cells ?

(1) Endoplasmic reticulum

(2) Peroxisomes

(3) Golgi bodies

(4) Polysomes

18. In gel electrophoresis, separated DNA fragments can be visualized with the help of :

(1) Acetocarmine in bright blue light

(2) Ethidium bromide in UV radiation

(3) Acetocarmine in UV radiation

(4) Ethidium bromide in infrared radiation

19. Identify the **wrong** statement with reference to transport of oxygen.

(1) Binding of oxygen with haemoglobin is mainly related to partial pressure of O_2.

(2) Partial pressure of CO_2 can interfere with O_2 binding with haemoglobin.

(3) Higher H^+ conc. in alveoli favours the formation of oxyhaemoglobin.

(4) Low pCO_2 in alveoli favours the formation of oxyhaemoglobin.

20. Ray florets have :

(1) Inferior ovary

(2) Superior ovary

(3) Hypogynous ovary

(4) Half inferior ovary

21. The specific palindromic sequence which is recognized by EcoRI is :

(1) 5' - GAATTC - 3'
3' - CTTAAG - 5'

(2) 5' - GGAACC - 3'
3' - CCTTGG - 5'

(3) 5' - CTTAAG - 3'
3' - GAATTC - 5'

(4) 5' - GGATCC - 3'
3' - CCTAGG - 5'

22. Identify the **wrong** statement with regard to Restriction Enzymes.

(1) Each restriction enzyme functions by inspecting the length of a DNA sequence.

(2) They cut the strand of DNA at palindromic sites.

(3) They are useful in genetic engineering.

(4) Sticky ends can be joined by using DNA ligases.

23. Which of the following is put into Anaerobic sludge digester for further sewage treatment ?

(1) Primary sludge

(2) Floating debris

(3) Effluents of primary treatment

(4) Activated sludge

24. Select the **correct** events that occur during inspiration.

(a) Contraction of diaphragm

(b) Contraction of external inter-costal muscles

(c) Pulmonary volume decreases

(d) Intra pulmonary pressure increases

(1) (a) and (b)

(2) (c) and (d)

(3) (a), (b) and (d)

(4) only (d)

25. If the head of cockroach is removed, it may live for few days because :

(1) the supra-oesophageal ganglia of the cockroach are situated in ventral part of abdomen.

(2) the cockroach does not have nervous system.

(3) the head holds a small proportion of a nervous system while the rest is situated along the ventral part of its body.

(4) the head holds a 1/3rd of a nervous system while the rest is situated along the dorsal part of its body.

26. Which of the following statements are **true** for the phylum-Chordata ?

(a) In Urochordata notochord extends from head to tail and it is present throughout their life.

(b) In Vertebrata notochord is present during the embryonic period only.

(c) Central nervous system is dorsal and hollow.

(d) Chordata is divided into 3 subphyla : Hemichordata, Tunicata and Cephalochordata.

(1) (d) and (c)

(2) (c) and (a)

(3) (a) and (b)

(4) (b) and (c)

27. Match the organism with its use in biotechnology.

(a)	*Bacillus thuringiensis*	(i)	Cloning vector
(b)	*Thermus aquaticus*	(ii)	Construction of first rDNA molecule
(c)	*Agrobacterium tumefaciens*	(iii)	DNA polymerase
(d)	*Salmonella typhimurium*	(iv)	Cry proteins

Select the **correct** option from the following :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iv)	(iii)	(i)
(2)	(iv)	(iii)	(i)	(ii)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(iii)	(iv)	(i)	(ii)

28. Match the following concerning essential elements and their functions in plants :

(a)	Iron	(i)	Photolysis of water
(b)	Zinc	(ii)	Pollen germination
(c)	Boron	(iii)	Required for chlorophyll biosynthesis
(d)	Manganese	(iv)	IAA biosynthesis

Select the **correct** option :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(i)	(iv)	(iii)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(iii)	(iv)	(ii)	(i)
(4)	(iv)	(i)	(ii)	(iii)

29. Identify the **incorrect** statement.

(1) Heart wood does not conduct water but gives mechanical support.

(2) Sapwood is involved in conduction of water and minerals from root to leaf.

(3) Sapwood is the innermost secondary xylem and is lighter in colour.

(4) Due to deposition of tannins, resins, oils etc., heart wood is dark in colour.

30. Match the following :

(a)	Inhibitor of catalytic activity	(i)	Ricin
(b)	Possess peptide bonds	(ii)	Malonate
(c)	Cell wall material in fungi	(iii)	Chitin
(d)	Secondary metabolite	(iv)	Collagen

Choose the **correct** option from the following :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iv)	(iii)	(i)
(2)	(iii)	(i)	(iv)	(ii)
(3)	(iii)	(iv)	(i)	(ii)
(4)	(ii)	(iii)	(i)	(iv)

31. Meiotic division of the secondary oocyte is completed :

(1) Prior to ovulation

(2) At the time of copulation

(3) After zygote formation

(4) At the time of fusion of a sperm with an ovum

32. According to Robert May, the global species diversity is about :

(1) 1.5 million

(2) 20 million

(3) 50 million

(4) 7 million

33. The first phase of translation is :

(1) Binding of mRNA to ribosome

(2) Recognition of DNA molecule

(3) Aminoacylation of tRNA

(4) Recognition of an anti-codon

34. Which of the following regions of the globe exhibits highest species diversity ?

(1) Western Ghats of India

(2) Madagascar

(3) Himalayas

(4) Amazon forests

35. Which of the following statements is **not correct** ?

(1) In man insulin is synthesised as a proinsulin.

(2) The proinsulin has an extra peptide called C-peptide.

(3) The functional insulin has A and B chains linked together by hydrogen bonds.

(4) Genetically engineered insulin is produced in *E-Coli*.

36. The transverse section of a plant shows following anatomical features :

(a) Large number of scattered vascular bundles surrounded by bundle sheath.

(b) Large conspicuous parenchymatous ground tissue.

(c) Vascular bundles conjoint and closed.

(d) Phloem parenchyma absent.

Identify the category of plant and its part :

(1) Monocotyledonous stem

(2) Monocotyledonous root

(3) Dicotyledonous stem

(4) Dicotyledonous root

37. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	6 - 15 pairs of gill slits	(i)	*Trygon*
(b)	Heterocercal caudal fin	(ii)	Cyclostomes
(c)	Air Bladder	(iii)	Chondrichthyes
(d)	Poison sting	(iv)	Osteichthyes

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(iii)	(iv)	(i)	(ii)
(3)	(iv)	(ii)	(iii)	(i)
(4)	(i)	(iv)	(iii)	(ii)

38. From his experiments, S.L. Miller produced amino acids by mixing the following in a closed flask :

(1) CH_4, H_2, NH_3 and water vapor at 800°C

(2) CH_3, H_2, NH_4 and water vapor at 800°C

(3) CH_4, H_2, NH_3 and water vapor at 600°C

(4) CH_3, H_2, NH_3 and water vapor at 600°C

39. Embryological support for evolution was disapproved by :

(1) Karl Ernst von Baer

(2) Alfred Wallace

(3) Charles Darwin

(4) Oparin

40. The process responsible for facilitating loss of water in liquid form from the tip of grass blades at night and in early morning is :

(1) Transpiration

(2) Root pressure

(3) Imbibition

(4) Plasmolysis

41. Secondary metabolites such as nicotine, strychnine and caffeine are produced by plants for their :

(1) Nutritive value

(2) Growth response

(3) Defence action

(4) Effect on reproduction

42. The oxygenation activity of RuBisCo enzyme in photorespiration leads to the formation of :

(1) 2 molecules of 3-C compound

(2) 1 molecule of 3-C compound

(3) 1 molecule of 6-C compound

(4) 1 molecule of 4-C compound and 1 molecule of 2-C compound

43. Bt cotton variety that was developed by the introduction of toxin gene of *Bacillus thuringiensis* (Bt) is resistant to :

(1) Insect pests

(2) Fungal diseases

(3) Plant nematodes

(4) Insect predators

44. Which of the following refer to **correct** example(s) of organisms which have evolved due to changes in environment brought about by anthropogenic action ?

(a) Darwin's Finches of Galapagos islands.

(b) Herbicide resistant weeds.

(c) Drug resistant eukaryotes.

(d) Man-created breeds of domesticated animals like dogs.

(1) only (a)

(2) (a) and (c)

(3) (b), (c) and (d)

(4) only (d)

45. Identify the **wrong** statement with reference to immunity.

(1) When exposed to antigen (living or dead) antibodies are produced in the host's body. It is called "Active immunity".

(2) When ready-made antibodies are directly given, it is called "Passive immunity".

(3) Active immunity is quick and gives full response.

(4) Foetus receives some antibodies from mother, it is an example for passive immunity.

46. By which method was a new breed 'Hisardale' of sheep formed by using Bikaneri ewes and Marino rams ?

(1) Out crossing

(2) Mutational breeding

(3) Cross breeding

(4) Inbreeding

47. Identify the **correct** statement with reference to human digestive system.

(1) Ileum opens into small intestine.

(2) Serosa is the innermost layer of the alimentary canal.

(3) Ileum is a highly coiled part.

(4) Vermiform appendix arises from duodenum.

48. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	*Clostridium butylicum*	(i)	Cyclosporin-A
(b)	*Trichoderma polysporum*	(ii)	Butyric Acid
(c)	*Monascus purpureus*	(iii)	Citric Acid
(d)	*Aspergillus niger*	(iv)	Blood cholesterol lowering agent

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(ii)	(i)
(2)	(ii)	(i)	(iv)	(iii)
(3)	(i)	(ii)	(iv)	(iii)
(4)	(iv)	(iii)	(ii)	(i)

49. Presence of which of the following conditions in urine are indicative of Diabetes Mellitus ?

(1) Uremia and Ketonuria

(2) Uremia and Renal Calculi

(3) Ketonuria and Glycosuria

(4) Renal calculi and Hyperglycaemia

50. Floridean starch has structure similar to :

(1) Starch and cellulose

(2) Amylopectin and glycogen

(3) Mannitol and algin

(4) Laminarin and cellulose

51. Select the option including all sexually transmitted diseases.

(1) Gonorrhoea, Syphilis, Genital herpes

(2) Gonorrhoea, Malaria, Genital herpes

(3) AIDS, Malaria, Filaria

(4) Cancer, AIDS, Syphilis

52. Match the following with respect to meiosis :

(a)	Zygotene	(i)	Terminalization
(b)	Pachytene	(ii)	Chiasmata
(c)	Diplotene	(iii)	Crossing over
(d)	Diakinesis	(iv)	Synapsis

Select the **correct** option from the following :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(i)	(ii)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(i)	(ii)	(iv)	(iii)
(4)	(ii)	(iv)	(iii)	(i)

53. Which of the following pairs is of unicellular algae ?

(1) *Laminaria* and *Sargassum*

(2) *Gelidium* and *Gracilaria*

(3) *Anabaena* and *Volvox*

(4) *Chlorella* and *Spirulina*

54. Which of the following hormone levels will cause release of ovum (ovulation) from the graffian follicle ?

(1) High concentration of Estrogen

(2) High concentration of Progesterone

(3) Low concentration of LH

(4) Low concentration of FSH

55. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Bt cotton	(i)	Gene therapy
(b)	Adenosine deaminase deficiency	(ii)	Cellular defence
(c)	RNAi	(iii)	Detection of HIV infection
(d)	PCR	(iv)	*Bacillus thuringiensis*

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(i)	(ii)	(iii)
(2)	(iii)	(ii)	(i)	(iv)
(3)	(ii)	(iii)	(iv)	(i)
(4)	(i)	(ii)	(iii)	(iv)

56. Montreal protocol was signed in 1987 for control of :

(1) Transport of Genetically modified organisms from one country to another

(2) Emission of ozone depleting substances

(3) Release of Green House gases

(4) Disposal of e-wastes

57. Which of the following is **correct** about viroids ?

(1) They have RNA with protein coat.

(2) They have free RNA without protein coat.

(3) They have DNA with protein coat.

(4) They have free DNA without protein coat.

58. The ovary is half inferior in :

(1) Brinjal

(2) Mustard

(3) Sunflower

(4) Plum

59. The enzyme enterokinase helps in conversion of :

(1) protein into polypeptides

(2) trypsinogen into trypsin

(3) caseinogen into casein

(4) pepsinogen into pepsin

60. Match the trophic levels with their **correct** species examples in grassland ecosystem.

(a)	Fourth trophic level	(i)	Crow
(b)	Second trophic level	(ii)	Vulture
(c)	First trophic level	(iii)	Rabbit
(d)	Third trophic level	(iv)	Grass

Select the **correct** option :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(iii)	(ii)	(i)	(iv)
(3)	(iv)	(iii)	(ii)	(i)
(4)	(i)	(ii)	(iii)	(iv)

61. How many true breeding pea plant varieties did Mendel select as pairs, which were similar except in one character with contrasting traits ?

(1) 4

(2) 2

(3) 14

(4) 8

62. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Organ of Corti	(i)	Connects middle ear and pharynx
(b)	Cochlea	(ii)	Coiled part of the labyrinth
(c)	Eustachian tube	(iii)	Attached to the oval window
(d)	Stapes	(iv)	Located on the basilar membrane

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(i)	(iv)
(2)	(iii)	(i)	(iv)	(ii)
(3)	(iv)	(ii)	(i)	(iii)
(4)	(i)	(ii)	(iv)	(iii)

63. In water hyacinth and water lily, pollination takes place by :

(1) insects or wind

(2) water currents only

(3) wind and water

(4) insects and water

64. Name the plant growth regulator which upon spraying on sugarcane crop, increases the length of stem, thus increasing the yield of sugarcane crop.

(1) Cytokinin

(2) Gibberellin

(3) Ethylene

(4) Abscisic acid

65. In light reaction, plastoquinone facilitates the transfer of electrons from :

(1) PS-II to $Cytb_6f$ complex

(2) $Cytb_6f$ complex to PS-I

(3) PS-I to $NADP^+$

(4) PS-I to ATP synthase

66. Which of the following is **not** an inhibitory substance governing seed dormancy ?

(1) Gibberellic acid

(2) Abscisic acid

(3) Phenolic acid

(4) Para-ascorbic acid

67. Name the enzyme that facilitates opening of DNA helix during transcription.

(1) DNA ligase

(2) DNA helicase

(3) DNA polymerase

(4) RNA polymerase

68. Which of the following would help in prevention of diuresis ?

(1) More water reabsorption due to undersecretion of ADH

(2) Reabsorption of Na^+ and water from renal tubules due to aldosterone

(3) Atrial natriuretic factor causes vasoconstriction

(4) Decrease in secretion of renin by JG cells

69. In relation to Gross primary productivity and Net primary productivity of an ecosystem, which one of the following statements is **correct** ?

(1) Gross primary productivity is always less than net primary productivity.

(2) Gross primary productivity is always more than net primary productivity.

(3) Gross primary productivity and Net primary productivity are one and same.

(4) There is no relationship between Gross primary productivity and Net primary productivity.

70. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Placenta	(i)	Androgens
(b)	Zona pellucida	(ii)	Human Chorionic Gonadotropin (hCG)
(c)	Bulbo-urethral glands	(iii)	Layer of the ovum
(d)	Leydig cells	(iv)	Lubrication of the Penis

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(iii)	(i)	(ii)
(2)	(i)	(iv)	(ii)	(iii)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(ii)	(iii)	(iv)	(i)

71. Strobili or cones are found in :

(1) *Salvinia*

(2) *Pteris*

(3) *Marchantia*

(4) *Equisetum*

72. Some dividing cells exit the cell cycle and enter vegetative inactive stage. This is called quiescent stage (G_0). This process occurs at the end of :

(1) M phase

(2) G_1 phase

(3) S phase

(4) G_2 phase

73. Flippers of Penguins and Dolphins are examples of :

(1) Adaptive radiation

(2) Convergent evolution

(3) Industrial melanism

(4) Natural selection

74. If the distance between two consecutive base pairs is 0.34 nm and the total number of base pairs of a DNA double helix in a typical mammalian cell is 6.6×10^9 bp, then the length of the DNA is approximately :

(1) 2.0 meters

(2) 2.5 meters

(3) 2.2 meters

(4) 2.7 meters

75. The QRS complex in a standard ECG represents :

(1) Repolarisation of auricles

(2) Depolarisation of auricles

(3) Depolarisation of ventricles

(4) Repolarisation of ventricles

76. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Eosinophils	(i)	Immune response
(b)	Basophils	(ii)	Phagocytosis
(c)	Neutrophils	(iii)	Release histaminase, destructive enzymes
(d)	Lymphocytes	(iv)	Release granules containing histamine

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(ii)	(i)
(2)	(iv)	(i)	(ii)	(iii)
(3)	(i)	(ii)	(iv)	(iii)
(4)	(ii)	(i)	(iii)	(iv)

77. Which of the following statements is **correct** ?

(1) Adenine pairs with thymine through two H-bonds.

(2) Adenine pairs with thymine through one H-bond.

(3) Adenine pairs with thymine through three H-bonds.

(4) Adenine does not pair with thymine.

78. The sequence that controls the copy number of the linked DNA in the vector, is termed :

(1) Selectable marker

(2) Ori site

(3) Palindromic sequence

(4) Recognition site

79. Identify the basic amino acid from the following.

(1) Tyrosine

(2) Glutamic Acid

(3) Lysine

(4) Valine

80. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Pituitary gland	(i)	Grave's disease
(b)	Thyroid gland	(ii)	Diabetes mellitus
(c)	Adrenal gland	(iii)	Diabetes insipidus
(d)	Pancreas	(iv)	Addison's disease

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(iii)	(i)	(ii)
(2)	(iii)	(ii)	(i)	(iv)
(3)	(iii)	(i)	(iv)	(ii)
(4)	(ii)	(i)	(iv)	(iii)

81. Select the **correct** statement.

(1) Glucocorticoids stimulate gluconeogenesis.

(2) Glucagon is associated with hypoglycemia.

(3) Insulin acts on pancreatic cells and adipocytes.

(4) Insulin is associated with hyperglycemia.

82. Which one of the following is the most abundant protein in the animals ?

(1) Haemoglobin

(2) Collagen

(3) Lectin

(4) Insulin

83. Experimental verification of the chromosomal theory of inheritance was done by :

(1) Mendel

(2) Sutton

(3) Boveri

(4) Morgan

84. Match the following columns and select the **correct** option.

	Column - I		**Column - II**
(a)	Floating Ribs	(i)	Located between second and seventh ribs
(b)	Acromion	(ii)	Head of the Humerus
(c)	Scapula	(iii)	Clavicle
(d)	Glenoid cavity	(iv)	Do not connect with the sternum

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iv)	(i)	(iii)
(2)	(i)	(iii)	(ii)	(iv)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(iv)	(iii)	(i)	(ii)

85. The number of substrate level phosphorylations in one turn of citric acid cycle is :

(1) Zero

(2) One

(3) Two

(4) Three

86. Dissolution of the synaptonemal complex occurs during :

(1) Pachytene

(2) Zygotene

(3) Diplotene

(4) Leptotene

87. Bilaterally symmetrical and acoelomate animals are exemplified by :

(1) Ctenophora

(2) Platyhelminthes

(3) Aschelminthes

(4) Annelida

88. The body of the ovule is fused within the funicle at :

(1) Hilum

(2) Micropyle

(3) Nucellus

(4) Chalaza

89. Goblet cells of alimentary canal are modified from :

(1) Squamous epithelial cells

(2) Columnar epithelial cells

(3) Chondrocytes

(4) Compound epithelial cells

90. Snow-blindness in Antarctic region is due to :

(1) Freezing of fluids in the eye by low temperature

(2) Inflammation of cornea due to high dose of UV-B radiation

(3) High reflection of light from snow

(4) Damage to retina caused by infra-red rays

91. Identify a molecule which does **not** exist.

(1) He_2

(2) Li_2

(3) C_2

(4) O_2

92. Find out the solubility of $Ni(OH)_2$ in 0.1 M NaOH. Given that the ionic product of $Ni(OH)_2$ is 2×10^{-15}.

(1) 2×10^{-13} M

(2) 2×10^{-8} M

(3) 1×10^{-13} M

(4) 1×10^{8} M

93. Identify the **correct** statements from the following :

(a) $CO_2(g)$ is used as refrigerant for ice-cream and frozen food.

(b) The structure of C_{60} contains twelve six carbon rings and twenty five carbon rings.

(c) ZSM-5, a type of zeolite, is used to convert alcohols into gasoline.

(d) CO is colorless and odourless gas.

(1) (a), (b) and (c) only

(2) (a) and (c) only

(3) (b) and (c) only

(4) (c) and (d) only